

# Design for All

## MANY PERSPECTIVES: DESIGN FOR AUTISM SPECTRUM DISORDER

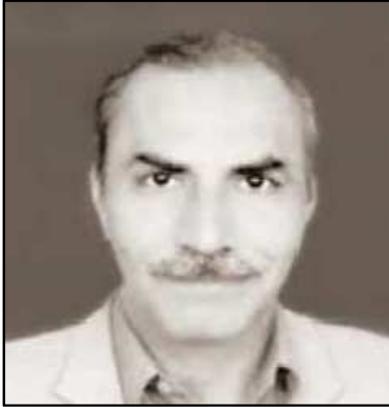
Guest Editor: Julie E. N. Irish  
December 2015

*A Publication of the  
Design for All  
Institute of India*

## Table of Contents

<b>Letter from the Chairman’s Desk .....</b>	<b>4</b>
<b>Forthcoming Issues .....</b>	<b>12</b>
<b>Letter from the Guest Editor .....</b>	<b>17</b>
<b>What is Autism Spectrum Disorder (ASD)? .....</b>	<b>22</b>
<b>Biography: Julie E. N. Irish.....</b>	<b>25</b>
<b>Designing Sensory Friendly Environments for Children with Autism Spectrum Disorder (ASD) .....</b>	<b>26</b>
<b>Biography: Winnie Dunn PhD OTR FAOTA .....</b>	<b>33</b>
<b>Biography: Lauren Little PhD OTR .....</b>	<b>35</b>
<b>Supporting Students with Autism: 10 Ideas for Inclusive Classrooms .....</b>	<b>36</b>
<b>Biography: Paula Kluth PhD .....</b>	<b>43</b>
<b>Autism Around the World .....</b>	<b>44</b>
<b>Biography: Christopher Beaver .....</b>	<b>52</b>
<b>A Critical Analysis of Sensory-Sensitive and “Neuro-Typical” Simulated Architectural Design in Schools for Autism .....</b>	<b>53</b>
<b>Biography: Christopher Henry .....</b>	<b>67</b>

<b>Design Empathy for Children with Autism .....</b>	<b>68</b>
<b>Biography: A. J. Paron-Wildes .....</b>	<b>74</b>
<b>Designing All-Inclusive Outdoor Environments for Children with Special Needs .....</b>	<b>76</b>
<b>Biography: Tara Vincenta.....</b>	<b>84</b>
<b>New Books .....</b>	<b>86</b>
<b>Appeals .....</b>	<b>97</b>
<b>News .....</b>	<b>99</b>
<b>Programme and Events .....</b>	<b>104</b>
<b>Job Openings .....</b>	<b>116</b>
<b>Contact Design for All Institute of India .....</b>	<b>122</b>



## **Letter from the Chairman's Desk**

**By Sunil Bhatia PhD**

**There is folklore that 'treasure hidden for safety under the earth will no longer remain in same place but changes its position within twelve years.' I do not know the meaning what does it indicate? I am sure it was defining movement- change in place and our ancestors were aware about movement of earth but could not scientifically explain. There was a belief before the Galileo that earth surface is flat and its movement was beyond their imagination. It was the Galileo who tried to educate the people of his time that earth was moving and in sphere shape but his arguments were unacceptable to those who were living with past set of minds and he failed to convince them even after sacrificing his life.**

**Mathematician Euclid who tried in compiling different forms of logic under different heads and made progress scientific term for explaining movement but his writings were lost and few pieces are available that through light on his thought about movement. How to define the place someone thought about concept of point. Point has zero dimensions and has no length, no width and no height. When it changes position that locus of path is known as line. If it moves under specific conditions it is called straight line. That changing position of point takes us to different world of movements. Some of**

these are under control and predictable while others are free and these are governed under unknown forces which are difficult to predict. Weather movement comes under this category and difficult to predict. Control does not confine with human factors but it is beyond that. Such movements were with inbuilt control and some were under function of external factors. Control movement of human behavior leads to discipline where uncontrolled movement of human is called differently abled. Design of cup and saucer is wonderful design by using discipline human body movement. Cup was designed to hold the hot and should function for sip movement. They added handle to the cup keeping in mind the function of human fingers and hand for holding to move to lips for sip. Resting warm cup was problem on flat surface. They designed saucer where cup could rest but introducing the handle in saucer was difficult proposition and was not practical for movement and flat plate was difficult to lift by hand if it was resting on flat surface. Designers introduced curved surface that was raised from ground and easily help in lifting the saucer. They realized hot cup resting on saucer would be unstable in design. They introduced raised circle at the bottom of saucer for making it stabilized. If I wish to hold the cup under my normal training I do not face any challenge and fail to do so I come under challenged category.

Normal products are those where designer design by keeping those people in mind who are disciplined for movement. We did basic mistakes of assuming normal distribution and exceptional are ignored. Concept of Design for All/ Universal design is bridging this gap of movement. A worldwide movement promoting design as a support for independence and participation has evolved in response to an expanding demographic and social reality: more people living

**with a wide array of disabilities and chronic health conditions than ever before and the longest lifespans in history. Universal Design is the design of products, environments, and communication to be usable by all people, to the largest extent possible, without adaptation or say specialized design. The message is the same: if it works well for people across the spectrum of functional ability, it works better for all.**

**Adam was wandering in paradise and his mind was blank and he kept changing his place without any objective. Once he ate the apple his movement turned to some purpose. His all struggle for survival was focused around available elements for making his life safe. 'Movement is possible when there is some purpose.' Humans used air for movement and designed kite, sailing boats and to separate waste for segregation from foods, water for sailing boat and ship, as they learnt the art of management of fire they designed balloon and smoke, steam pressure for movement of automobiles. We know there are ways to perform movements like jumping or running or walking. Some are discrete and rest is continuous. Ancient people were aware about these movements and knew how to transform them from one another. They experienced jumping movement when irregular plank was rolling for movement and realized there edges are problems. Other side log was easily rolled by fewer efforts and that gave them to make it round and it turned out to be wheel. Wheel is biggest and simplest design product by man. Modern people cannot imagine the present world without wheel.**

**What is the affects of movement in person? It definitely charges our body. A running person who wishes to cover distance for reaching desired destination with high speed movement feels exhausted other side a high speed of vehicle thrills the driver where combination**

with zigzag movement instill fears and where old age allows the limited mobility frustrate the person and above all a young person enjoys the rhythmic movement of adult person's back and it prove reason for attraction for opposite sex and helps for movement of generations. Roller coaster movement is designed for fun by allowing the secretion of hormones under artificial movements. Our cells in bodies are experiencing affects of movement in various forms. These cells are destroying and restructuring and being replaced by new one is one kind of movement. Metal basic structure is quantum particles and they never at rest. They keep moving and when provide energy it jumps from one orbit to higher one and generate movement. In simple way elements expand with heat and contract in cold is nothing but movement and if we do not care for such knowledge it can invite disaster. We leave space between two iron track to provide space of for accommodating heat expansion.

Early lessons of acquiring knowledge come from the movement of hands and legs in a child. Muscles in its body are soft and cannot bear the load of the body and movements prepare it for future for standing and running. It is the movement that is responsible for evolution in humans as well progress of civilization. Man is born with involuntarily movement of blinking eyelids and beating of hearts but he has voluntary movement and trained for control movement like movement of legs, hands and other body parts. We progress by using both movements for our benefits and wish to control both by using yoga, breath control and try to bring under discipline by other exercises.

Motion picture has come in to the existence when people came to know that our minds create motion if we provide movement in certain number of still frames in specific time. In fact it is illusion

**that works as motion. All illusionist or trick players entertain us by distracting our eye attention to other area and as our mind busy in focusing on that area they do trick in between. Web designer should understand the movement of human eye before designing the page. Artist illustrates movement by drawing lines at distance to reduce the gaps of subsequent lines .We would have not transformed to modern person if we were not under in movement. Human progress foundation is movement.**

**At some later stage of human development we learnt that we did not enjoy freedom but lives under physiological and psychological compulsion. These compulsions are responsible for our movement. Early stage of life man struggled was for survival and food and water was essential and to hunt he was matching physical movement of running animals and to satisfy his water needs he started living close to water like rivers, lakes or ponds . Where it was unavailable he devised many products for lifting it from other sources. To satisfy these needs he learnt the art of movement. He observed that extension of linear movement is some form of circular and ancient people designed various applications with this knowledge. He used this movement for lifting water from well or river by designing pulley with rope one end tie with container or water wheel or Persian wheel or rahat . Even for preparing bread he designed the circular movement by rolling pin and we call "belan" or to extract butter used manual as well as with rope churner for circular but random movement. Design of clock is nothing but controlled circular movement that we call simple harmonic motion. Designs of hinges are used for circular motion with the application of linear force. Latches and locks are design to prevent movement. A spring or spring leaf in automobiles are basically designed to absorb the**

unexpected movement that may prove reason of damage of products. A navigator uses the air pressure for changing direction of sailing boats for reaching desired destination. Electric fan was designed to translate linear to circular movement and in hydel energy flow water is used for as perennial force for continuous movement of turbine for generating electricity.

When man understood self that created movement to prove 'I am right' .Living in group was compulsion for physical safety but how to be safer led to difference of opinion and those disagreed separated them for living in different groups prove to be reason of movement. This movement allowed to others thinks who was right and survived and those were wrong vanished. They designed various products to enhance physical strength to meet the challenges of enemies. Attacking person was aware where hitting could finish enemies and he had learnt by observing anatomy of humans as well as animals. Man can be killed if profusely he bleeds or he breaks his neck for at once death or use physical assault or fire or chemical for desired damage. Systematic movement of body parts has given mankind performing arts. In earlier stage of human development performing arts were around skills of battle fighting and we call martial arts. Later it switched to mythological characters as well their heroic stories in performing arts acts as an example for society.

Man's biggest challenge is fear. At time it helped him in exploring new knowledge and allowed some active movement to venture to unexplored areas and some time it freeze movement turns to standstill. Man experienced extreme fears and he could not perform any movement to save his life. He was dumb and freeze. This instinct is in animal also and I found a cat was struck in such place where jumping may prove fatal. Out of fear she was refusing to

**jump. She was aware about forward as well backward movement and man used this in his handling enemies when to move forward in attacking and when to retreat as backward movement in defense. I observed that plants bear fruits and attract the living beings who can perform movement. They use their selfishness for their own benefits. They ate fruits and throw the seeds and plants achieve its purpose of movement for germination of seeds away from parent plant or allow insects to enjoy their foods or use wind or even people and in turn help in pollination. Plants moves in search of light and water by growing in that direction where it is available. Plants moves in response of stimulus. Rapid plant movement traps the insects in few milliseconds.**

**There are various movements in man. Sometime he walks, runs and at a time unable to move. Man has designed various products to make life easy and effortless. He designed shoes, athlete shoes and various assistive products clutches, wheelchair and other products.**

**This issue is edited by Ph.D. student Julie Irish who has designed as well as edited this special issue. She did her job of Guest Editor with utmost sincerity, dedication and invited authors of her choice for contribution and all these ingredients of her is reflected in this special issue. She is an interior designer with long experience in both the public and private sectors in the UK specializing in universal design. She has an M.Sc. in Inclusive Environments from the University of Reading, England.**

**Our monthly publication started with the aim of popularizing the social movement of Universal design/Design for All/ Accessibility/ Barrier free design and completing 10years of publication without missing single issue. It is successes to all who selflessly wish to**

**participate in this social cause and made a success story. Thanks to all who believed in our sincere selfless efforts. It is selfless service and who joined this movement are utmost core of the heart selfless. I salute all and wish they will continue to shower their love and affection as they did in past ten years. Once again thanks and permit us to enter in 11 years of publication in January 2016 Vol-11 No-1 with Guest Editor Prof Peter Gibilisco of Melbourne University.**

*'A new year on the way, and the possibilities are endless-  
Anonymous'*

*With regards*

*Dr. Sunil Bhatia*

*Design for All Institute of India*

[\*www.designforall.in\*](http://www.designforall.in)

[\*dr\\_subha@yahoo.com\*](mailto:dr_subha@yahoo.com)

*Tel: 91-11-27853470®*



## Forthcoming Issues

### January 2016 Vol-11 No-1

**Dr Peter Gibilisco** graduated with a PhD in Sociology and since then he has researched as an honorary fellow at the University of Melbourne, writing over 50 articles. Peter Gibilisco, B Bus (Acc) Ph.D. (Melb).

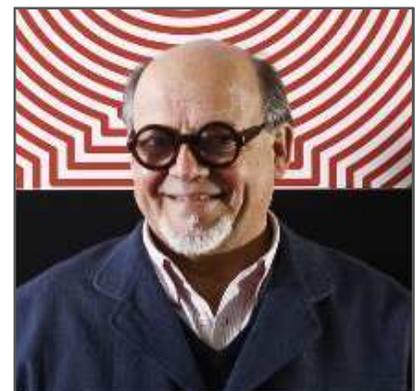
**Honorary Fellow University of Melbourne. His New Book: The Politics of Disability** is out and available in market. See my web-site

<http://petergibilisco.com.au/> He will be Guest Editor for our inaugural issue of 2016



### February 2016 Vol-11 No-2

**Professor Jan Staël von Holstein** Visiting Professor at Hong Kong Polytechnic London, UK will be the Guest Editor



## March 2016 Vol-11 No-3

**Dr. Shatarupa Thakurta Roy** is presently an Assistant Professor at the Indian Institute of Technology Kanpur. She is associated with the discipline of Fine Arts in the Department of Humanities and Social Sciences offering courses in Art Appreciation and Criticism and History of Art. She has been jointly associated with the Design Programme at IIT Kanpur teaching courses on Design Theory, Graphic Design, and several other courses on visual communication. She completed her art education in Kala Bhavana, Visva Bharati University, Shantiniketan followed by a PhD in Design from IIT Guwahati.



## *April 2016 Vol-11 No-4*

**Prof Beth Tauke** is an associate professor in the Department of Architecture at the University at Buffalo-SUNY, and project director in the Center for Inclusive Design and Environmental Access (IDEA), the leading research center on universal design in the built environment in the U.S. Her research focuses on design education and inclusive design, especially the empowerment of minority groups through design. Tauke was principal investigator of the Universal Design Identity Program and Increasing Access to Universal Design to Meet the Needs of African American



**Communities, both sponsored by the U.S and Prof Korydon Smith is an associate professor and associate dean in the School of Architecture and Planning at the University at Buffalo-SUNY, USA.**

## **May 2016 Vol-11 No-5**

**Prof PekkaHarni Artist, Professor; architect and designer at Harni - Takahashi Ltd will be the Guest Editor. He is an architect MSc. and industrial designer MA, who works widely on applied art, furniture design and architecture.**



**He has been teaching at the University of Art and Design (now Aalto University) in Helsinki since 1988. He has been a visiting lecturer in several European design universities and a leader of several design workshops in Europe and in Mexico.**

**His study about morphological “object categories”, delves into the possibility of dividing basic home objects into seven main categories, that correspond to different functional and morphological categories of objects, has already been applied in several European design schools. This study is published by Aalto University in his book “Object Categories” 2010.**

**In 1999, he received the Design Plus Award from the Ambiente Frankfurt Fair. In 2011 he was awarded as “the industrial designer of the year” by the Finnish Designers association. Since 2012, he is Artist Professor for 10 years, appointed by the Arts Council of Finland.**

## **June 2016 Vol-11 No-6**

**GAATES (GLOBAL ALLIANCE ON ACCESSIBLE TECHNOLOGIES AND ENVIRONMENTS) Mukhtar Al Shibani – President will be the Guest Editor for special issue**



## **July 2016 Vol-11 No-7**

**Prof Cigdem Kaya Associate Professor at Istanbul Technical University, Turkey will be the Guest Editor.**



## **August 2016 Vol-11 No-8**

**Asst. Professor Yasmeen Abid Maan In charge Architecture Program, LCWU, Lahore Pakistan.(Associate MIAP, MPCATP) will be the Guest Editor**



## **September 2016 Vol-11 No-9**

**PROFESSOR YRJÖ SOTAMAAPRESIDENT EMERITUS University of Art and Design Helsinki and Cumulus Association, ADVISORY DEAN AND PROFESSOR College of Design and Innovation,Tongji University and DEAN LOU Yongqi of Tongii University will be the guest Editor**



## **October 2016 Vol-11 No-10**

**David Berman** Accessible design thinker, expert speaker, author (*Do Good Design*), UN advisor on IT accessibility, GDC ethics chair. Communications strongly believes that we can design a better world that leaves no one behind. We've been leaders in the online accessibility field for over 15 years, and we're



eager to help you gain from the benefits of inclusive design. David is a senior strategic consultant to the Canadian government, as well as other governments on four continents

## **November 2016 Vol-11 No-11**

**Prof Niraja Tikku and Associate Prof Kriya Gera** of Industrial Design of School of Planning and Architecture Delhi will be the Guest Editor





## Letter from the Guest Editor

### By Julie E. N. Irish

**I've enjoyed reading *Design for All* for many years and have long wished to reciprocate by putting together an issue. I'm grateful to Dr. Bhatia for the opportunity.**

**To give you some background, I worked as an interior designer in the UK for many years. It was while designing a school there for children with disabilities that I became fully aware of Autism Spectrum Disorder (ASD). My training, a MSc. in Inclusive Environments from Reading University, had prepared me to design spaces for all users incorporating universal design principles. I was prepared to design for people who use wheelchairs, for people with hearing or visual impairments and for a range of other users with diverse needs and abilities but my training had not adequately prepared me how to design for children with ASD.**

**So I began trying to find out how to design for ASD. I read official UK government school design guides but ASD was rarely mentioned. I scoured professional interior design magazines but there was almost nothing. Advocacy websites gave me information about the condition of ASD but seldom provided "how to" design advice. Internet searches yielded some information but not the detailed design guidance I was looking for. As a working interior designer rather than a professor or a researcher I did not have access to the**

research databases and search facilities of a university where I would have found additional information to help me. Instead, I met with educational professionals and teachers to gain first-hand advice. I visited other schools that had been designed for children with ASD to investigate best practice. I spoke to specialist suppliers of sensory products and furniture to gather valuable knowledge.

As I reflected on all the advice I had been given, the task of designing seemed at times overwhelming. Be careful of the type of lighting you specify as flickering lights can disturb children. Don't install surface temperature radiators as children who are insensitive to heat could burn themselves. Create an area in every room as a quiet, safe space. Make sure there are security measures in place so that children with a limited sense of danger can't run off. Muted colours work best to calm children. The list went on. Eventually, with the advice and information received, I designed a scheme that seemed to meet the needs of the children and staff (you can read about my experience in *Ty Gwyn: Documenting the Design of a Special School in Wales* available from <http://scholarworks.iu.edu/journals/index.php/ijdl/article/viewFile/3661/3664>).

Long after I completed the scheme I contemplated how I could help other designers like myself design suitable environments for children with ASD. This eventually led to me giving up my job and travelling with my family to the University of Minnesota, USA, to pursue a PhD focusing on that topic. With the facilities available at a top research university I have been able to find a small field of designers and researchers who are studying and writing about this topic. I am delighted that, for this issue of *Design for All*, many

well-known authors, whose work I have read during my studies, have submitted articles.

When I considered the emphasis for this issue I wanted it to be about designing for children with ASD but I wanted to consider design in its broadest sense. The *Merriam-Webster* dictionary defines design as “to create, fashion, execute, or construct according to plan.” It seems, then, that the act of designing is not exclusive to architects and interior designers and their like but that other professionals carry out “design” elements in their work. To give a few examples as they relate to ASD, educationalists who design interventions, therapists who design treatment programmes, and teachers who design school curricula, all are creating a designed product.

With this broad interpretation of design in mind, Dr. Winnie Dunn, through her renowned work in sensory profiling, and her colleague, Dr. Lauren Little, give us an insight into the sensitivities that children with ASD can experience. They describe how strategies and routines can be designed into daily life activities to support children with these sensitivities.

Dr. Paula Kluth has written extensively about the importance of inclusive schooling. Included here are some of her suggestions for educators as to how classroom practices and strategies could be designed to support learners with ASD. These insights are also useful for design practitioners.

Two authors writing in different continents provide an architectural perspective, Christopher Beaver in Europe and Christopher Henry in North America, reflecting the reality that ASD is a worldwide issue. In that world context, architect Christopher Beaver provides us with

**an understanding of some of the global and cultural issues surrounding design for ASD. His experience adds another layer of complexity to an already complex design task. Meanwhile, Christopher Henry takes a critical look at architectural design strategy and compares two very different approaches for school design for children with ASD, sensory-sensitive and neuro-typical. The implications of both strategies are far-reaching.**

**Interior designer A. J. Paron-Wildes gives us a glimpse of the human side of ASD and how it affects not only the child with ASD but his or her family and the wider community. Her first-hand experience of the subtle effects of the designed environment on her son is as moving as it is enlightening.**

**Lastly, in recognition of the importance of our connection to nature and the outdoor environment, landscape architect Tara Vincenta offers some guidance on the many ways of designing thoughtful, satisfying outdoor spaces for children with ASD.**

**It is gratifying to read that so many people from different professions, coming at the problem from different angles, are doing so much to further our understanding of ASD and how design, in all its guises, can help support children with ASD. Although there is still much work to be done it gives a feeling of promise for the future. It is my hope that, by considering these many perspectives, we will be able to design better environments for children with ASD.**

**Finally, I would like to dedicate this issue to two friends of mine, the late Vikas Sharma, who did so much to promote accessible design, particularly in India, and his extraordinary wife, Shivani Gupta, who continues the work.**

**I hope you enjoy this special issue and please feel free to e mail me if you have any comments [irish026@umn.edu](mailto:irish026@umn.edu).**

*Julie*

**Julie E. N. Irish  
Doctoral Candidate  
College of Design  
University of Minnesota**

# ASD?

## What is Autism Spectrum Disorder (ASD)?

By Julie E. N. Irish

For readers who may not be familiar with Autism Spectrum Disorder (ASD) this brief guide outlines some of the major points:

- *The World Health Organization estimates that 1:160 children worldwide are affected by ASD but admit that data collection methods are inconsistent so this figure may be inaccurate.*
- *The Centers for Disease Control & Prevention (CDC), a US government department, has carried out more detailed data collection over several years and currently estimates that the number of children diagnosed with ASD in the United States is 1:68.*
- *The CDC also reports that, for reasons not fully understood, five times as many males are diagnosed with the disorder as females.*
- *The American Psychiatric Association defines ASD as a neurological disorder characterized by difficulties in communication, difficulties in socializing and concentrating on a narrow field of repetitive behaviour.*
- *Another common characteristic described by the American Psychiatric Association is a heightened sensitivity to the environment. The authors in this publication discuss this phenomenon.*

- ***ASD is known as a spectrum because people with the condition can function at higher or lower ends of a continuum on an individual basis.***
- ***The degree to which any one person is affected by the condition varies considerably from person to person.***
- ***ASD cannot be diagnosed by a physical examination, by a blood test or a body scan. It is diagnosed by behavioural observations of the child and an interview or questionnaire, or both, with the parents or carers.***
- ***The causes of ASD have not been established but theories include a genetic link, a dysfunction in the brain, environmental factors or a combination of these. (See Dr. S. Baron-Cohen's work for further discussion on this topic).***
- ***There has been much controversy that ASD is caused by the Measles Mumps and Rubella (MMR) vaccination, routinely administered to young children in developed countries to prevent these diseases. After analyzing various research studies concerning this claim, earlier this year the CDC reported emphatically "vaccines do not cause ASD."***
- ***Most experts believe that individuals cannot be cured of ASD but that they can be helped with interventions, that is, supportive treatments and therapies.***

## References

**American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders, (5th ed.)*. Washington, DC: Author.**

**Baio, J. (Corresponding author). (2014). *Prevalence of autism spectrum disorder among children ages 8 years - Autism and Developmental Disabilities Monitoring network, 11 sites, United States, 2010*. Centers for Disease Control and Prevention Morbidity and Mortality Weekly Report Surveillance Summaries, 63(2), 1-21.**

**Baron-Cohen, S. (2008). *Autism and Asperger Syndrome: The facts*. Oxford, England: Oxford University Press.**

**Centers for Disease Control & Prevention.(2015a). *Autism Spectrum Disorder (ASD) data and statistics*.Retrieved from <http://www.cdc.gov/ncbddd/autism/data.html>**

**Centers for Disease Control & Prevention. (2015b). *Vaccines & autism: A summary of CDC conducted or sponsored studies*.Retrieved from [http://www.cdc.gov/vaccinesafety/00\\_pdf/CDCStudiesonVaccinesandAutism.pdf](http://www.cdc.gov/vaccinesafety/00_pdf/CDCStudiesonVaccinesandAutism.pdf)**

**Frith, U. (2003). *Autism explaining the enigma (2<sup>nd</sup>ed.)*. Malden, MA: Blackwell Publishing.**

**World Health Organization. (2013). *Questions and answers about autism spectrum disorders (ASD)*. Retrieved from <http://www.who.int/features/qa/85/en/>**

### ***Biographies by Individuals with ASD***

**Gerland, G. (2003). *A real person: Life on the outside*. London, England: Souvenir Press.**

**Grandin, T. (2006). *Thinking in pictures: My life with autism (2<sup>nd</sup>ed.)*. New York, NY: Vintage Books.**

**Higashida, N. (2013). *The reason I jump (K. A. Yoshida & D. Mitchell)*. New York, NY: Random House.**

**Tammet, D. (2007). *Born on a blue day: Inside the extraordinary mind of an autistic savant*. New York, NY: Simon and Schuster.**



## Biography

### Julie E. N. Irish

***Julie Irish is an interior designer with long experience in both the public and private sectors in the UK specialising in universal design. She has an MSc in Inclusive Environments from the University of Reading, England. Julie currently lives in the USA where she is studying for a PhD at the University of Minnesota. As a graduate instructor she also teaches at the university's College of Design.***

***Julie's research interest considers how the built environment could be designed to support children with autism spectrum disorder (ASD), particularly in the educational setting. In her work she is a strong advocate for evidence-based design. She is also interested in virtual environments and how they could be used to benefit children and youth with ASD.***

***Julie is a student member of the Interior Design Educator's Council, USA, and the National Register of Access Consultants, UK.***



# Designing Sensory Friendly Environments for Children with Autism Spectrum Disorder (ASD)

By Winnie Dunn PhD OTR FAOTA  
and

Lauren Little PhD OTR

*The concert is about to start. Although you have a seat, you are standing in a very crowded aisle, and everyone is jumping, swaying and chanting for the band to start. The person next to you is wearing cologne you recognize from your past, and several people around you are flashing their smart phones as they record the moment.*

For some of you reading this, the scenario brings back fond memories; for others, the idea of being in this situation makes you anxious and you break out in a sweat. This scenario illustrates an intense sensory event: touch, movement, sound, visual and smell input simultaneously. Some of us welcome these intense life experiences as rich memories. Some of us rarely choose a concert venue of this sort because the sensory experience is too much to handle. Given such individual difference in how we experience the same event, how can we find the best activities and settings for ourselves, our friends and loved ones?

People understand the world through their senses. Whatever our senses tell us about a place becomes our reality about being in that place. Therefore, when people get intense messages from their senses, they associate those intense feelings with the activities, the people and the objects that are present along with the intense

**sensory input. Understanding how the sensory systems operate makes it possible to adjust sensory input when necessary so everyone can enjoy experiences together. The idea of making the world more 'friendly' to sensory needs is particularly important for families who have a member with Autism Spectrum Disorder (ASD).**

**Empirical evidence as well as the lived experiences for people with ASD, their families and educators indicates that people who have ASD experience the world differently through their senses. Individuals with ASD may experience some events as more intense than their peers; while other individuals with ASD may not seem to notice some sensory information in certain settings. Some authors talk about sensory processing differences as a deficit or symptom; we like to think about sensory processing patterns as part of the person's characteristics, part of what makes the person who they are. From the latter perspective, we can understand and embrace everyone's sensory processing patterns (not just the person with ASD), and plan activities and environments that are respectful of sensory needs.**

**There are 4 basic patterns of sensory processing based on work by Dunn and others; they each reflect the unique ways that our bodies and brains receive and make meaning out of the sensory input we experience throughout the day. Seekers need a lot of sensory input, and they like having input so they try to get more. People who hum, tap, jiggle their legs, touch things are all acting like seekers; the regular experience is not enough for them, so they find ways to make every experience more dense with sensory input. The concert scenario above would be delightful for a seeker.**

**Avoiders are easily overwhelmed by sensory input and they try to get away from sensory experiences. Crowds provide sound, touch input, a visually messy place and sometimes various smells from perfume, soap etc.; for avoiders, this flood of sensory experiences is too much and so to reduce the input, they might hang back from the crowd, or refuse invitations of this sort. The concert scenario above would be a highly unlikely choice for the avoider, opting instead for watching the concert on TV. When people are very particular about sensory input, they are called Sensors. They notice every detail, such as texture, spices or temperature of food, and only certain textures, etc. are acceptable. A sensor can detect a different brand of popcorn, or a different spice. This discerning ability can extend to fabrics, noises in a building (e.g., a squeak in the next room) or parts of a musical score. Sensors can be demanding about the precise way they want a meal, a room or their clothing. The concert scenario above would be very challenging for the sensor; perhaps the sensor would find a place on the periphery to enjoy the concert.**

**Finally, Bystanders miss sensory input that others notice, and so have an easy time being in many types of places. Bystanders are not distracted by small inputs, and can concentrate even in busy places that might be challenging for others. Bystanders might also miss sensory input such as someone calling their name; they may seem oblivious to the inputs that others notice easily. Bystanders would be perfectly content at the concert above, and may not notice that someone spilled their drink on them.**

**You might be asking: "What about the sensory systems themselves? I am sensitive to sounds but not to textures of my foods." This is an important point. People do not usually react to all the sensory inputs in the same way. We can seek movement and be sensitive to**

**touch, or reject all 'goeey' foods, but be fine with a busy visual environment. Each person has their own particular responses to each sensory system; knowing this pattern makes it possible to create more friendly environments and activities for everyone.**

**People who have ASD are more likely to find touch and sound challenging inputs. Think about activities and places that contain a lot of touch and/or sound: unstructured class time at school, family gatherings, family recreational events such as ball games and birthday parties. So how could we make these intense experiences more 'friendly' towards a person with ASD who has a low tolerance for touch and sound? Let's use family gatherings as our example. We could make sure the person who finds touch and sound input intense has a special and separate place for greeting family members. This change reduces the chance for bumping into others, and with less people at a time, sound would be less as well. We could also choose seating at meals to be in a smaller area, or at the end of the tables rather than in the middle. We could find 'get away' places so the person can rest and regroup from intense exposure, and we could structure some activities for smaller groups of people to provide an acceptable alternative. When the family understands they are meeting someone's needs, their level of understanding can be much higher than if they think a person is reclusive, or antisocial.**

**When designing sensory friendly environments for children with ASD, parent-report measures can provide valuable structure for understanding the child's patterns. We can also observe how the child participates in different environments because each environment has unique sensory features. A child might handle a one to one play date better than a large group interactive activity because of sound levels or amount of movement in the play space.**

**Generally strategies for each situation emphasize**

***a) reducing or enhancing the sensory stimuli of the situation and/or***

***b) providing the child with cognitive strategies to regulate their responses to the situation.***

**For example, for children that act as avoiders or sensors in a crowded lunchroom, it may be helpful to support the child to choose a less crowded place to sit (emphasizing strategy a above) or create a social storybook that illustrates possible responses during lunch that the child can review ahead of time (emphasizing strategy b above). The school as a whole could dim the lights or limit noise with sound baffles as well, making the lunch room context easier for everyone.**

**When working with children that act as bystanders, it may be helpful to provide them with activities that enhance sensory stimuli, such as providing physical or verbal prompts (e.g., a tap on the shoulder to get attention; “Look at that!”). It may also be helpful to offer movement activities that increase awareness (e.g., carrying books back to the library, moving furniture within the classroom). At home, we can involve the children in family routines that provide similar sensory input. For example, children can carry baskets of laundry, help carry in and put away the groceries, or set the table for a meal. All of these activities provide a more intense sensory experience to keep the child with bystander characteristics engaged in family routines.**

**Children that act as seekers in certain situations likely need opportunities for intense sensory stimuli. These children will find**

**ways to get more sensory input when we provide too little. For example, children might dart around the house while parents are trying to get them dressed in the morning. The running might signal a need for movement input, so building movement into getting dressed can help. Put the child's shoes in a new location necessitating moving around to get them. Children who seek visual input can sit close to or face an interesting bulletin board at school. The goal is to provide the input the child seeks within the daily routines so the child does not have to 'escape' the activity to get sensory needs met.**

**Remember all of us have sensory patterns; accommodating a friend, ourselves or another student is equally helpful. If you want to read further, *Living Sensationally understanding your senses* is available from book purveyors and has hundreds more ideas and great stories about sensory patterns in everyday life.**

## References

**Baranek, G. T., Little, L. M., Diane Parham, L., Ausderau, K. K., & Sabatos-DeVito, M. G. (2014). *Sensory features in autism spectrum disorders. Handbook of Autism and Pervasive Developmental Disorders, Fourth Edition.***

**Baron-Cohen, S., Ashwin, E., Ashwin, C., Tavassoli, T., & Chakrabarti, B. (2009). *Talent in autism: hyper-systemizing, hyper-attention to detail and sensory hypersensitivity. Philosophical Transactions of the Royal Society, 364, 1377-1383.***

**Ben-Sasson, A., Hen, L., Fluss, R., Cermak, S., Engel-Yeger, B., & Gal, E. (2009). *A meta-analysis of sensory modulation symptoms in individuals with autism spectrum disorders. Journal of Autism and Developmental Disorders, 39, 1-11.***

**Dunn, W. (2001). *The sensations of everyday life: Empirical, theoretical, and pragmatic considerations. American Journal of Occupational Therapy, 55, 608-620.***

**Dunn, W. (1997). *The impact of sensory processing abilities on the daily lives of young children and their families: A conceptual model. Infants and Young Children, 9(4); 23-35.***

**Dunn, W. (2007). *Living sensorially: Understanding your senses.* Jessica Kingsley Publishers.**



## **Biography**

### **Winnie Dunn PhD OTR**

### **FAOTA**

***Dr. Dunn is Professor and Chair of the Department of Occupational Therapy Education at the University of Kansas. She is an internationally known expert for her studies about sensory processing in everyday life. She has published more than 100 research articles, book chapters and books, and has spoken around the world about her work. She is the author/ coauthor of all of the Sensory Profile measures; these assessments have been translated into dozens of languages and are used for both practice and research. She has received the top honors in her field, including the Award of Merit for outstanding overall contributions, and the Eleanor Clark Slagle Lectureship for outstanding academic contributions; she is a member of the Academy of Research for the American Occupational Therapy Foundation and has received the A. Jean Ayres research award. She has also received awards for innovative and engaging teaching, including the Chancellor's Excellence in Teaching Award, the Kemper Teaching Fellowship and in 2011 she received the Chancellor's Distinguished Professorship from the University of Kansas. Most recently she has written a book for the public about her research entitled Living Sensationally understanding your senses, which has been featured in Time magazine, Cosmopolitan magazine, Canadian Public Radio and the London Times newspaper among others. In July 2009, Living***

***Sensationally received the Seal of Excellence from the Children of the New Earth magazine for parents, professionals and other caregivers.***



## Biography

### Lauren Little PhD OTR

***Dr. Little is an assistant professor in the Department of Occupational Therapy Education at the University of Kansas. Her program of research focuses on the interplay between sensory processing and children's activity participation in families of children with autism spectrum disorders (ASD). She has research and clinical experience in early intervention for families of children with ASD. Dr. Little is passionate about research that translates the underlying mechanisms of sensory processing to everyday activities of children with ASD.***



# Supporting Students with Autism: 10 Ideas for Inclusive Classrooms

By Paula Kluth PhD

*This article is adapted from: P. Kluth (2010). "You're Going to Love This Kid!": Teaching Students with Autism in the Inclusive Classroom (Rev. ed.). Baltimore: Brookes. This article is from the website of Dr. Paula Kluth. It, along with many others on inclusive schooling, differentiated instruction, and literacy can be found at [www.PaulaKluth.com](http://www.PaulaKluth.com). Visit now to read her Tip of the Day, read dozens of free articles, and learn more about supporting diverse learners in K-12 classrooms.*

**While most educators agree that no recipe exists for teaching any individual student or group of students, there are certainly some guidelines that can be helpful for supporting students with certain labels. Students with autism may have unique needs with learning, social skills, and communication, therefore, teachers will need strategies to address each one of these areas. These ten simple ideas will help teachers address some of the aforementioned needs and provide guidance for bringing out the best in learners with autism labels.**

## **1) Learn About the Learner From the Learner**

**Oftentimes, educators needing information about a student will study the individual's educational records. While these documents are certainly one source of information, they are seldom the most helpful source of information. Teachers wanting to know more about a student with autism should ask that student to provide information. Some students will be quite willing and able to share**

**information while others may need coaxing or support from family members. Teachers might ask for this information in a myriad of ways. For instance, they might ask the student to take a short survey or sit for an informal interview. One teacher asked his student with autism, to create a list of teaching tips that might help kids with learning differences. The teacher then published the guide and gave it out to all educators in the school.**

**If the student with autism is unable to communicate in a reliable way, teachers can go to families for help. Parents can share the teaching tips they have found most useful in the home or provide video of the learner engaged in different family and community activities. These types of materials tend to give educators ideas that are more useful and concrete than do traditional educational reports and assessments.**

## **2) Teach to Fascinations**

**Whenever possible, educators should use interests, strengths, skills, areas of expertise, and gifts as tools for teaching. Can a passion for GPS be used to inspire more reading (operations manuals), new math skills (be a “human GPS”-calculate shortest route between two places), or fun social studies questions (“How would the world be different today if Christopher Columbus had GPS?”). [For more on using fascinations to support students with autism see *Just Give Him the Whale*, a book I wrote on this topic with my colleague, Patrick Schwarz.]**

## **3) Get Them Talking**

**In some classrooms, a handful of students dominate small-group conversations and whole-class discussions. While it is important for**

**these verbal and outgoing students to have a voice in the classroom, it is equally important for other students—including shy and quiet students, students using English as a second language, and students with disabilities—to have opportunities to share and challenge ideas, ask and answer questions, and exchange thoughts. To ensure that all students have opportunities to communicate, teachers need to put structures and activities in place that allow for interaction.**

**In one classroom, students were asked to “turn and talk” to each other at various points in the day. A high school history teacher used this strategy throughout the year to break up his lectures and to give students time to teach the material to each other. After giving mini-lectures of fifteen minutes, he asked students to turn to a partner and answer a specific question or re-explain a concept he had taught. For instance, after giving a short lecture on the Presidency, he asked students to discuss, “What qualities do Americans seem to want in a President?” and “How has this list of desired qualities changed over time?” A student with Asperger’s syndrome who needed practice with skills such as staying on topic and turn taking was able to practice them daily.**

**Teachers can also provide opportunities for communication by giving all students “airtime” during whole-class discussion. One way to do this is to ask for physical whole-class responses to certain prompts. For instance, instead of asking, “Who can tell me a fraction that equals one half?”, the teacher might say, “Stand up if you think you can name a fraction that equals one half”. This strategy not only gives all learners a chance to give an answer, but it allows for some teacher-sanctioned movement, something often welcomed by students with autism. Whole-class physical responses are also**

appropriate for students who are non-verbal, making it a perfect choice for the diverse, inclusive classroom.

#### **4) Give Choices**

Choice may not only give students a feeling of control in their lives, but an opportunity to learn about themselves as workers and learners. Choice may be especially helpful for students with autism who have special needs when it comes to learning environment, lesson materials, and communication. Choice can be built into almost any part of the school day. Students can choose which assessments to complete, which role to take in a cooperative group, and how to receive personal assistance and supports. Examples of choices that can be offered in classrooms include:

- *Solve five of the ten problems assigned*
- *Work alone or with a small group*
- *Read quietly or with a friend*
- *Use a pencil, pen, or the computer*
- *Conduct your research in the library or in the resource room*
- *Take notes using words or pictures*

#### **5) Consider Handwriting Alternatives**

Writing can be a major source of tension and struggle for students with autism. Some students cannot write at all and others who can write, may have a difficult time doing so.

In order to support a student struggling with writing, a teacher may try to give the child gentle encouragement as he or she attempts to do some writing- a word, a sentence, or a few lines. Teachers might also allow the student to use a computer, word processor, or even an old typewriter for some or for all lessons. For some learners, being able to use a word processor when writing helps them focus

on the task at hand (content) instead of on their motor skills (process).

## **6) Help with Organizing**

While some students with autism are ultra-organized, others need support to find materials, keep their locker and desk areas neat, and remember to bring their assignments home at the end of the day. Consider implementing support strategies that all students might find useful. For instance, teachers can have all students copy down assignments, pack book bags, put materials away, and clean work spaces together. Structuring this time daily will give all learners the opportunity to be organized and thoughtful about how they prepare to transition from school to home. Specific skills can even be taught during this time (e.g., creating to-do lists, prioritizing tasks).

## **7) Support Transitions**

Some students with autism struggle with transitions. Some are uncomfortable changing from environment to environment, while others have problems moving from activity to activity. Individuals with autism report that changes can be extremely difficult causing stress and feelings of disorientation. Teachers can minimize the discomfort students may feel when transitioning by:

- *Giving reminders to the whole class before any transition.*
- *Use a visual timer so students can manage time on their own throughout an activity.*
- *Providing the student or entire class with a transitional activity such as writing in a homework notebook or for younger students, singing a short song about "cleaning up".*
- *Asking peers to help in supporting transition time. In elementary classrooms, teachers can ask all students to move from place to*

*place with a partner. In middle and high school classrooms, students might choose a peer to walk with during passing time.*

- *Provide a transition aid (a toy, object, or picture).*

## **8) Create a Comfortable Classroom**

Sometimes students are unsuccessful because they are uncomfortable or feel unsafe or even afraid in their educational environment. Providing an appropriate learning environment can be as central to a student's success as any teaching strategy or educational tool. Students with autism will be the most prepared to learn in places where they can relax and feel secure. Ideas for making the classroom more comfortable include providing seating options (e.g., beanbag chairs, rocking chairs); reducing direct light when possible (e.g., using upward projecting light, providing a visor to a student who is especially sensitive); and minimizing distracting noises (e.g., providing earplugs or headphones during certain activities).

## **9) Take a Break**

Some students work best when they can pause between tasks and take a break of some kind (walk around, stretch, or simply stop working). Some learners will need walking breaks – these breaks can last anywhere from a few seconds to fifteen or twenty minutes. Some students will need to walk up and down a hallway once or twice, others will be fine if allowed to wander around in the classroom.

A teacher who realized the importance of these instructional pauses decided to offer them to all learners. He regularly gave students a prompt to discuss (e.g., What do you know about probability?) and then directed them to "talk and walk" with a partner.

## **10) Include**

**If students are to learn appropriate behaviors, they will need to be in the inclusive environment to see and hear how their peers talk and act. If students are to learn social skills, they will need to be in a space where they can listen to and learn from others who are socializing. If students will need specialized supports to succeed academically, then teachers need to see the learner functioning in the inclusive classroom to know whattypes of supports will be needed.**

**If it is true that we learn by doing, then the best way to learn about supporting students with autism in inclusive schools is to include them.**



## Biography

### Paula Kluth PhD

***Dr. Paula Kluth is a consultant, teacher, author, advocate, and independent scholar who works with teachers and families to provide inclusive opportunities for students with disabilities, and to create more responsive and engaging schooling experiences for all learners. Paula is a former special educator who has served as a classroom teacher and inclusion facilitator. Her professional interests include differentiating instruction, active learning, and inclusive schooling.***

***She is the author or co-author of more than ten books including "Don't We Already Do Inclusion": 100 Ways to Improve Inclusive Schools, "From Text Maps to Memory Caps": 100 More Ways to Differentiate Instruction in K-12 Inclusive Classrooms", and "You're Going to Love This Kid": Teaching Students with Autism in Inclusive Classrooms. Paula is also the director of a documentary film titled "We Thought You'd Never Ask": Voices of People with Autism.***



# **Autism Around the World**

**By Christopher Beaver**

**When I was asked to write this article, I was about to go to Saudi Arabia to advise a client on an Autism Centre which was thought to have various inherent problems. It did as it turned out but I was also faced with a number of cultural issues some of which I have found in other countries, the USA and Italy for example. We often think our own experience is common around the world but the more I travel to other countries and talk to people about autism, the more I realise that it is not so. In Myanmar, for example, I am told that autism does not exist; there is not even a word for it in the language. Maybe that is because it goes under some other name and is passed over as once it was in the UK where people (unknowingly on the spectrum) were sent to psychiatric institutions. In countries such as India and Italy where the family is the centre of day to day life, it is considered 'unseemly' to send a child into some kind of care away from the family and is regarded as an abdication of family duty and responsibility.**

**In cold countries, parts of the USA and Canada for example, due to the extreme heat in summer and extreme cold in winter, just about all buildings are air-conditioned. This raises particular design issues for the architect which I will come back to. In Saudi Arabia it is not acceptable to educate boys and girls in a mixed environment beyond the age of eight. So the sexes have separate entrances, their own**

**sensory rooms, swimming pools, classrooms etc and are kept apart in every respect. It doesn't stop there; the teaching staff are also segregated which means that male teachers cannot enter a classroom being taught by female teachers unless the female 'covers up' which she would not normally do whilst teaching as the pupils cannot then see her face. In such countries as India and Pakistan it is common to have outdoor classrooms because of the extreme heat and the lack of finance to pay for air-conditioning and the energy it requires. So this must raise serious concerns in regard to security and a teacher's ability to keep track of pupils prone to wandering or escape to put it more bluntly.**

**I am certainly not suggesting those any of the cultural issues to which I allude are wrong or should be changed; I mention them only because anyone seeking to design autism-friendly environments needs to know about them. My first example of this cultural awareness was in Chicago where I was shown an air-conditioned building designed for children on the spectrum. I was told that the air-conditioning required grilles in the floor for circulating cooled air and I couldn't escape the constant hum of the fan-coil units built into the suspended ceiling. Both of these are to be avoided at all costs; the hum is a constant aggravation to many on the spectrum and those grilles will just be filled up with sweet papers, discarded food, vomit, urine and just about anything else in no time at all.**

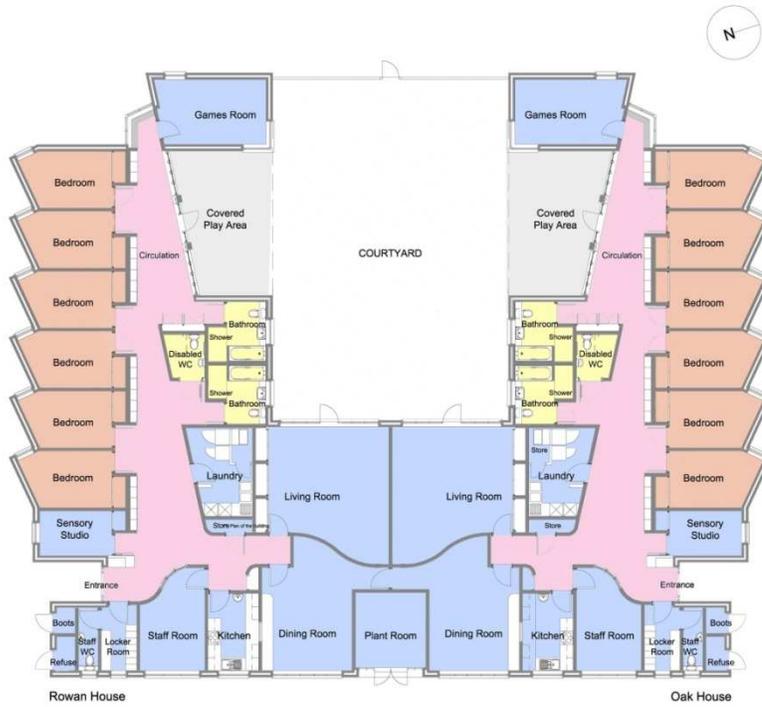
**But notwithstanding these obstacles, we need to find solutions that work for those on the spectrum, whether a child or an adult and wherever they happen to live. Many of the features that make an autism-friendly building are not influenced by climate or segregation of the sexes; a plan that has a clear and simple geography, good acoustics, adequate personal space, non-reflective surfaces and low-**

**arousal finishes and colours for example. It is surely well established by now that a well designed autism-friendly building will engender a sense of well-being amongst its occupants, whether a residential or an educational environment, and lead to less challenging behaviour. The individual on the spectrum is happier and more content and the carer or teacher benefits as a result.**

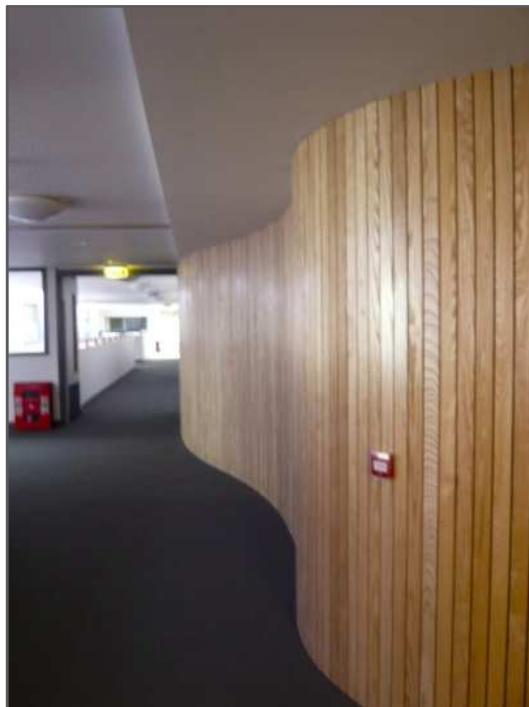
**No parent wants to deprive their child of a normal family life but many parents struggle to cope with a highly challenging child; and it has to be remembered that children grow into adults. A burly sixteen year old can do serious damage in the home and inflict bodily injuries unless properly managed. The fact is that most parents are not trained to deal with such individuals and as a result the pressure can mount and the family suffers. The reluctance of a family to consider full-time care for their child, whether culturally motivated or for some other reason, can work against both the child and the family. The family fails to cope and can be torn apart and the child is deprived of a more suitable environment under the guidance of trained and understanding carers. This choice will always be a dilemma for parents.**

**So what is an autism-friendly environment? The notes below list what I regard as the principal design issues that need to be addressed:**

**Layout: a simple geography with generous circulation spaces rather than corridors so that there is plenty of personal space. The use of curved walls and the avoidance of large spaces that all too readily become running opportunities for those so inclined.**



**SIMPLE GEOGRAPHY: CIRCULATION SPACE IN PINK**



***USE OF CURVED WALL IN SCHOOL ENVIRONMENT***

**Acoustics:** a calm environment with no shiny surfaces to reflect sound. Absorbent materials, such as carpet, should be used where possible. There is a myth that carpets are taboo because they cannot be cleaned. This is not so; we have found a product that can stand up to the worst possible treatment.



***ACOUSTIC CEILING***

**Heating:** under floor heating is preferred with radiators avoided at all costs. Radiators are bulky, often have sharp corners and invariably have slots or spaces behind which are opportunities for 'posting' a variety of clothes, toys, sweet papers and just about anything else.

**Natural daylight and ventilation:** too much natural light can be overwhelming particularly glare which is disturbing to those on the spectrum. Our solution is to specify integral blinds; this is where the

blinds are in between the layers of glass and so protected from damage. They can be operated by remote control.

**Mechanical ventilation and air-conditioning:** the major issue here is the constant hum of fans and fan coil units which can be disturbing particularly when they cut in and out as dictated by the thermostat. It requires thoughtful design on the part of the architect and mechanical engineer working together to come up with solutions. Ventilation of bathrooms in residential environments can be designed with a remote extract unit to which all the bathrooms are separately ducted.

**Finishes:** the emphasis should be on a low arousal approach avoiding fussy and complicated patterns and decoration. Thought should also be given to materials that do not offer an opportunity for self-harming. We have developed a colour palette of appropriate colours that are calming and low arousal; this was the result of research involving children on the spectrum.



***LOW AROUSAL COLOUR PALETTE***

**Doors:** the door might at first glance seem a simple element in a building but there are a lot of decisions that need to be made concerning its composure. Door closers, vision panels handles and locks are all things that can lead to problems if not specified correctly.

**Security:** this is always paramount in any building for children or adults on the spectrum. Running and jumping opportunities have to be designed out; for example stair handrails that can be climbed on and ledges or window cills that can be reached for the same purpose. Above all, there has to be a security regime for the site as a whole. I am referring here to containment to prevent intruders getting in and escapers getting out. Boundary fences need to be of an appropriate height and non-climbable.



***INDIRECT PERIMETER LIGHTING***

**Lighting:** we have found lighting the single most difficult element to get right in an autism-friendly environment. Dimming facilities can be a great asset for mood changing but the light fittings industry is not geared to robust non-breakable fittings unless made especially for prisons. Where possible we favour indirect lighting around the perimeter where the light source is not readily visible. But this inevitably has to be augmented by flush ceiling lights to given an even light coverage.

**Landscaping:** I end with landscaping because this is where cultural or regional considerations creep in again. Outdoor space is essential to us all and in residential environments it can be of enormous benefit to the individual to have some private outdoor space such as a small patio or garden. In educational environments it is the outdoor classroom that provides this benefit. However, in very hot environments outdoor space can be intolerable unless provided with shade.

So to conclude, in designing environments for children and adults on the spectrum, we have to be sensitive to the cultural and regional circumstances that prevail in the part of the world in which we are designing as well as the particular needs of the individuals who will spend part of their lives in that environment. Every individual is different and those on the spectrum display challenging behaviour in different ways. It is impossible to design for every eventuality. But we should seek to build buildings that provide a warm, low arousal and calm environment and accept that there will be occasions where adaptation will be needed to meet the specific needs of certain individuals.



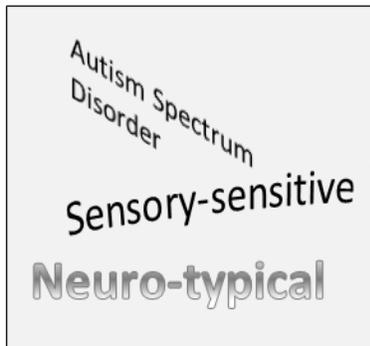
## Biography

### Christopher Beaver

***Christopher is the founding partner of GA Architects. He has worked in most industry sectors of architectural design and is a highly experienced designer and project manager.***

***After completing his first autism project in 1996, he decided to specialize in this field and as a result of a successful first project, many new commissions came his way. GA Architects, the practice he founded, is now widely recognized as a leader in this specialist field and Christopher continues to apply an innovative approach to designing environments for ASD and broadening awareness of the need for thoughtful buildings. He and his partner, Maria Assirelli, regularly speak at conferences in the UK and Overseas and are often approached by organizations and individuals from around the world seeking advice on the design of autism-friendly buildings.***

***Christopher is a member of the RIBA and the Chartered Institute of Arbitrators. Email: [c.beaver@ga-architects.com](mailto:c.beaver@ga-architects.com)***



# **A critical analysis of sensory-sensitive and “neuro-typical” simulated architectural design in schools for autism**

**By Christopher Henry**

## **Introduction**

**When it comes to autism, architects tend to subdue the sensory environment in an effort to address the sensory-perceptual abnormalities often associated with autism. The hope is that a calming environment will lead to better skill acquisition (Humphreys, 2005; Khare & Mullick, 2009; McAllister & Maguire, 2012; Mostafa, 2008; Myler et al., 2003; Tufvesson, 2009). This is by far the dominant approach as evident by a recent systematic review of peer-reviewed publications on environmental design interventions (Martin, 2014). There is, however, a completely different philosophical and practical approach toward designing for people with autism, the “neuro-typical” approach (Henry, 2011c; Marion, 2006; Wallis, 2006). This approach focuses on the poor generalization skills associated with autism. Rather than creating a subdued sensory environment, the “neuro-typical” approach results in schools that simulate the “real-world.” Advocates of this approach claim that these types of environments will help individuals gain greater access to mainstream settings by making the transition from the school to the outside world less intimidating (Marion, 2006).**

**There are internal disagreements among architects *within* each approach. For example, some sensory-sensitive advocates argue for**

large spatial volumes to address the fears some individuals with autism express about being in small spaces with other people (Henry, 2011b). Meanwhile, other sensory sensitive advocates contend small spatial volumes are better because some individuals with autism struggle understanding their body in space and thus fear large spaces (Henry, 2011b; Myler et al., 2003).

Likewise, the design of some “neuro-typically” simulated schools, like Celebrate the Children School in Stanhope New Jersey, simply mimic the features of mainstream schools (Wallis, 2006). Other schools try to create environments that are samplings of the wider community. For example, USA Architects designed the main corridor of the 167,000 square-foot Developmental Learning Center in Warren, New Jersey as a “replica of a typical American main street.” This “street” includes the Commerce Bank, Warrentville and Berkeley Hardware Store, Carmen’s Baber Shop, Ferratti’s Plant Nursery, Towne Deli Diner, Manufacturing lab, ShopRite, and a mock apartment complete with living and dining room, kitchen, bedroom, laundry and game rooms (Marion, 2006).

The internal differences *within* each respective approach are important in completing a cost-benefit analysis. For example, the design and construction of schools like the Developmental Learning Center require far more funds than simple mimicry of mainstream schools as seen at Celebrate the Children. This review, however, focuses on the larger differences *between* the two approaches. This zoomed out view of the two approaches allows for a more robust discussion on the fundamental question of feasibility without being distracted and bogged down with details such as ceiling heights, acoustical levels, types of windows, color palates, etc.

## **Do Sensory Interventions Work?**

**The sensory-sensitive approach relies on the assumption that sensory interventions are effective and the effects are large enough to justify the sometimes drastic and costly architectural interventions (Beaver, 2012; Helfich & Adrian, 2008; Humphreys, 2005; Libassi, 2009; Mostafa, 2008; Myler et al., 2003; Young, 2004; Whitehurst, 2006). This assumption, however, is based on particularly flawed sensory research data.**

**The research surrounding sensory-perceptual abnormalities is plagued with methodological shortcomings. Yet, this is the foundation all sensory interventions, whether architectural, educational or occupational, stand on. Much of the research is comprised of small sample sizes, anecdotal evidence, and caregiver questionnaires (Ben-Sasson et al., 2009; O'Neil & Jones, 1997; Rogers & Ozonoff, 2005). The methodological weaknesses have resulted in confusing, inconsistent, and contradictory evidence and claims (Rogers & Ozonoff, 2005; O'Neil & Jones 1997). Researchers have found sensory abnormalities to be fairly common among individuals with autism, but the abnormalities are not helpful in differentiating autism from other developmental disabilities (Ben-Sasson et al., 2009; Geraldine & Watling, 2000; Kern et al., 2007; Rogers & Ozonoff, 2005). Additionally, little is known about the symptoms' frequency, severity, topography, and the course over a lifespan (Rogers & Ozonoff, 2005). Sensory-abnormalities may be universal, but perhaps the frequency and/or severity for most individuals is manageable without drastic architectural changes.**

**With these inconsistencies highlighted, it should not be surprising that sensory integration therapy (SIT) has not been shown to be**

**effective evidence-based interventions (Dawson & Watling, 2000; Lang et al., 2012). SIT, used by occupational therapists and teachers, operates under the idea that delivering the appropriate amount and type of sensory stimulation will lead to better behavior for people with sensory abnormalities (Lang et al., 2012). A recent systematic review of SIT found only three of 25 studies to have positive results. What's more, due to the methodology, the three positive studies were given a certainty level of suggestive (the lowest level assigned in the review). Meanwhile, 14 studies found no benefit and 8 showed mixed results (Lang et al., 2012). Lang et al point out that there is an obvious reason that peer-reviewed lists of evidenced-based practices for children with autism omit SIT (2012).**

**As methodologically flawed as SIT research is, it has been more intensely studied than sensory-sensitive architecture. For the most part sensory-sensitive architecture research is based on anecdote and professional perception surveys/questionnaires. The few experimental studies that do exist have too small of sample sizes to be informative (Martin, 2014). This is a worrying state of affairs for architects invested in the sensory-sensitive approach. Even without sufficient direct evidence, architects that claim there are effects large enough to justify their costs should at the very least expect researchers to find conclusive positive results for SIT.**

**If one considers the staff in autism schools, the questionable sensory research about severity and frequency, the ineffectiveness of SIT, and lacking architecture research then only a small number may benefit from a sensory-sensitive approach. Yet, the burdens placed on the majority could easily negate any benefits. For example, several autism schools and researchers have either chosen or advocated to nearly eliminate all exterior views and limit natural**

light (Henry, 2011a, 2012; McAllister & Maguire, 2012; Myler et al., 2003). No studies have demonstrated that individuals with autism benefit from these interventions (Henry, 2011a, 2012; Martin, 2014). Yet, numerous studies have found natural light and certain types of exterior views to improve overall health, increase productivity, and reduce sick days and attrition rates for the general population (Kaplan, 1993; Loftness & Snyder, 2008; Hescong Mahone Group, 1999; Ulrich, 2008). Architectural interventions that exacerbate the already high-turnover rate in special education staff probably should be avoided (Billingsley, 2004). It is worrisome that architects have shown they are willing to jettison these established findings and implement design measures that negatively impact the general population in favor of an untested autism design hypothesis that may positively affect very few users.

### **Can Architecture Address Generalization?**

With these serious questions raised about the sensory-sensitive approach, “neuro-typical” advocates believe their approach addresses a more salient and common struggle faced by individuals with autism. There is little controversy over the fact that individuals with autism struggle applying previously learned skills in new situations (Froehlich et al., 2012; Klinger & Dawson 2001; Rincover&Koegel 1975). For instance, if an individual learns appropriate restroom behavior in a residential bathroom s/he might not transfer that skill to a variety of bathroom settings found in public.

The reasons for the poor generalization skills are unknown and currently debated. The struggles may be due to individuals with autism exhibiting heightened discrimination of similar stimuli

**(Plaisted et al., 1998) that prevents them from either forming a prototype over a wide range of stimuli (Klinger & Dawson, 2001) or being unable to generalize a prototype to a wide range of contexts (Frith, 2003, 159-164; Froehlich et al., 2012). Therefore, as in the restroom example, an individual may perceive each setting as wholly different and not understand that s/he has already learned the rules to navigate the situation. Learning in sensory havens might only make this more difficult. In contrast, individuals given the opportunity to practice skills in “neuro-typically” simulated environments may more easily transfer those skills.**

**Therefore sensory-sensitive schools might negatively impact more individuals than they help (Henry, 2011c). Additionally, architectural interventions that promote skill generalization may decrease individuals’ seclusion from society by making the transition from these specialty schools to the mainstream environments less dramatic and abrupt (Wallis, 2006). Therefore simulating “neuro-typical” environments may have a more meaningful/practical impact for a larger percentage of the building’s users than sensory-sensitive designs (Wallis, 2006; Marion, 2006).**

**The arguments favoring the “neuro-typical” approach over the sensory-sensitive approach are compelling, but before it can be considered a viable alternative its proponents must address four major criticisms. Is the emphasis on generalization skills meaningful if individuals with autism struggle far more in first acquiring the skill in a “neuro-typically” simulated environment than in a sensory-sensitive environment? Should architects simulate “real-world” environments even if the environments fail typically developing individuals? Does simulating “real-world” environments actually increase generalization skills? Are the associated costs balanced by**

**the gains of increased skill generalization? These are the same basic questions that have been previously raised against the “neuro-typical” approach, but here they are organized from the least to greatest practical applicability (Henry, 2011c).**

### ***Skill Acquisition***

**If proponents of the sensory-sensitive approach are proven correct then individuals with autism may need sensory-sensitive environments to acquire certain skills in the first place. Individuals can only generalize skills that they possess. If individuals cannot acquire or experience extreme difficulty learning a skill in a “neuro-typical” simulated setting then the “neuro-typical” argument is a hard sell (Mostafa, 2008). Again, this second criticism depends on the assumption that over-arousal is severe enough and prevalent along the autism spectrum.**

### ***Simulating Environments that “Neuro-typicals” should or do have***

**If current “real-world” environments do not represent optimal learning environments for the general population then proponents of the “neuro-typical” approach are awkwardly advocating for environments that might fail both mainstream students and individuals with autism (Henry, 2011c). In parts of California, for example, “many of the classrooms built since the 1960’s have little day lighting. Windows are commonly built with “black glass” that allows views out, but no useful daylight in. Numerous schools have been built with no windows at all” (Heschong Mahone Group, 1999). Yet, as previously mentioned, sunlight and certain types of exterior views improve overall health, increase productivity, and reduce sick days and attrition rates. If architects create the environments that**

**“neuro-typical” individuals *should have* rather than what they actually have then the argument that replication helps generalization does not apply (Henry, 2011c).**

### ***Does Replication Lead to Generalization***

**It could be argued that settings like the Developmental Learning Center in Warren, New Jersey do not improve generalization skills, but merely mask poor ones. Being able to generalize skills does not mean being able to only function in substandard “neuro-typical” environments. It means being able to use a skill in good, mediocre, and bad environments. “Neuro-typical” schools appear to simulate the “real-world” so individuals with autism never actually have to generalize skills. Mastering a skill in a singular bank or grocery store built in an autism specific school does not guarantee that an individual will transfer those skills to a variety of banks or grocery stores (Haring et al., 1987). Perhaps schools would have to provide at least two types of each setting. That proposition of course brings up the issue of costs.**

### ***Costs***

**There is reason to believe that building schools with their own mock banks, dentist offices, grocery stores and apartments is not cost effective. For instance, video modeling and reenacting situations with puppets or dolls are inexpensive techniques that are often used to teach a range of skills to individuals with autism (Charlop & Milstein, 1989; Charlop-Christy et al., 2000; Marzullo-Kerth et al., 2011; Schrandt et al., 2009; Tetreault & Lerman, 2010). Video modeling of skills performed in multiple settings has been shown to be as or more effective in teaching skill generalization than individuals learning in a single prototypical setting (Bellini &**

**Akullian 2011; Haring, 1987). For example, individuals with autism were not able to generalize purchasing skills to three different community stores after learning the skills in a single store. However, the individuals were able to generalize the skills after watching a video of the skills being performed in all three stores. This proved far more cost effective than providing the transportation and staff to teach each skill at all of the different types of settings an individual could encounter (Haring et al., 1987). Likewise, a building with prototypical settings may not be beneficial enough to justify the costs.**

## **Conclusion**

**There are considerable costs and/or risks associated with both the sensory-sensitive architectural design approach and “neuro-typical” architectural design approach. Without studies comparing the life outcomes of students attending these different types of schools to each other and to a control, the benefits will remain highly conjectural. The “neuro-typical” approach does not appear any less viable than the sensory sensitive approach, but due to flaws in the sensory research, financial costs, and plausibility concerns, neither approach currently appears to be an evidence based intervention or conducive to large-scale implementation. Perhaps parts of each approach could be implemented on a small scale and then monitored for effectiveness.**

**Perhaps the more conservative approach favors using the teachers and staff as the design default. This would result in autism schools that follow the best building practices of mainstream schools. Designing schools according to the current mainstream best practice standards requires neither extra funding than what would be**

**expected for the general population nor does it impose possibly harmful measures like eliminating natural light and exterior views, nor does it force students to learn in environments that have been found to be substandard for the general population.**

## References

**Beaver, C. (2012). More than bricks and Mortar. Learning Disability Today. June/July: 12-13.**

**Ben-Sasson A, Hen L, Fluss R, Cermak S, Engel-Yeger B & Gal E (2009) A Meta-Analysis of Sensory Modulation Symptoms in Individuals with Autism Spectrum Disorders. Journal of Autism and Developmental Disorders. 39: 1-11.**

**Bellini S & Akullian J (2011) A Meta-Analysis of Video Modeling and Video Self-Modeling Interventions for Children and Adolescents with Autism Spectrum Disorders. Exceptional Children. 73(3): 264-287.**

**Billingsley B (2004) Special Education Teacher Retention and Attrition: A Critical Analysis of the Research Literature The Journal of Special Education 38(1): 39-55.**

**Charlop M & Milstein J (1989) Teaching autistic children conversational speech using video modeling. Journal of Applied Behavior Analysis. 22(3): 275-285.**

**Charlop-Christy M, Le L, & Freeman K (2000) A Comparison of Video Modeling with In Vivo Modeling for Teaching Children with Autism. Journal of Autism and Developmental Disorders 30(6): 537-552.**

**Dawson G & Watling R (2000) Interventions to Facilitate Auditory, Visual, and Motor Integration in Autism: A Review of the Evidence', Journal of Autism and Developmental Disorders 30(5): 415-421.**

**Frith, Uta, Autism: Explaining the Enigma 2<sup>nd</sup> edition, Oxford, (Blackwell) 2003.**

**Froelich A, Anderson J, Bigler E, Miller T, Lange N, Dubray M, Cooperrider J, Cariello A, Nielsen, & Lainhart J (2012) Intact Prototype Formation but Impaired Generalization in Autism. Research in Autism Spectrum Disorders. 6(2): 921-930.**

**Haring T, Kennedy C, Adams M, & Pitts-Conway (1987) Teaching generalization of purchasing skills across community settings to autistic youth using videotape modeling. Journal of Applied Behavior Analysis. 20(1): 89-96.**

**Helfrich D & Marcus A (2008) Comfort, Clarity and Calm: Architecture for Autism. Autism Advocate. 52(3): 50-52.**

**Henry C (2011a) Designing for Autism: Lighting. Archdaily. Available at <http://www.archdaily.com/177293/designing-for-autism-lighting/> (accessed 11 March 2014).**

**Henry C (2011b) Designing for Autism: Spatial Considerations. Archdaily. Available at <http://www.archdaily.com/179359/designing-for-autism-spatial-considerations/> (accessed 11 March 2014).**

**Henry C (2011c) Designing for Autism: The 'Neuro-Typical' Approach. Archdaily. Available at <http://www.archdaily.com/181402/designing-for-autism-the-neuro-typical-approach/> (accessed 11 March 2014).**

**Henry C (2012) Architecture for Autism: Exterior Views. Arch daily. Available at <http://www.archdaily.com/223076/architecture-for-autism-exterior-views/> (accessed 11 March 2014).**

**HeschongMahone Group (1999) Daylighting in Schools: An Investigation into the Relationship between Day lighting and Human Performance. The Pacific Gas and Electric Company on behalf of the California Board for Energy Efficiency Third Party Program, Fair Oaks, CA. Available at <http://www.h-m-g.com/downloads/Daylighting/schoolc.pdf> (accessed 11 March 2014).**

**Humphreys S (2005) Architecture for Autism. Available at: [http://www.autismlondon.org.uk/pdf-files/bulletin\\_feb-mar\\_2005.pdf](http://www.autismlondon.org.uk/pdf-files/bulletin_feb-mar_2005.pdf) (accessed 11 March 2014).**

**Kaplan R (1993) The Role of Nature in the Context of the Workplace. *Landscape and Urban Planning*. 26:193-201.**

**Khare, R., & Mullick, A. (2009). Incorporating the behavioral dimension in designing inclusive learning environment for autism. *ArchNet-IJAR*, 3(3).**

**Klinger L and Dawson G (2001) Prototype formation in autism. *Journal of Development and Psychopathology*. 13: 111–124.**

**Kern J, Trivedi M, Garver C, Grannemann B, Andrews A, Savla J, Johnson D, Mehta J, Schroeder J (2007) Sensory correlations in autism. *Autism*. 11(2): 123-134.**

**Lang, R., O'Reilly, M., Healy, O., Rispoli, M., Lydon, H., Streusand, W., Davis, T., Kang, S., Sigafos, J., Lancioni, G., Didden, R., & Giesbers, S. (2012). Sensory integration therapy for autism spectrum**

**disorders: A systematic review. *Research in Autism Spectrum Disorders*, 6(3), 1004-1018.**

**Libassi P (2009) *Formulating a plan: Developing the Debra November Wing of the Lerner School for Autism at Cleveland Clinic Children's Hospital Center for Autism. Healthcare Design*. 9(7): 47-55.**

**Loftness V & Snyder M (2008) *Where Windows Become Doors*. In: Kellert S, Heerwagen J, and Mador M (eds) *Biophilic Design*. Hoboken, New Jersey: John Wiley and Sons.**

**Marion M (2006) *Bringing The World to the Classroom*. *EP Magazine*. April: 32-35.**

**Martin, C. S. (2014). *Exploring the impact of the design of the physical classroom environment on young children with autism spectrum disorder (ASD)*. *Journal of Research in Special Educational Needs*.**

**Marzullo-Kerth D, Reeve S, Reeve K, (2011) *Using multiple-exemplar training to teach generalized repertoire of sharing to children with autism*. *Journal of Behavior Analysis*. 44(2): 279-294.**

**McAllister, K., & Maguire, B. (2012). *A design model: The autism spectrum disorder classroom design kit*. *British Journal of Special Education*, 39(4), 201-208.**

**Mostafa, M (2008) *An Architecture for Autism: Concepts of Design Intervention for the Autistic User*. *International Journal of Architectural Research*. 2(1): 189-204.**

**Myler P, Fantacone T, Merritt E (2003) *Eliminating Distractions: The educational needs of autistic children challenge ordinary approaches to school design*. *School and University*. 1 November. Available at [http://asumag.com/mag/university\\_eliminating\\_distractions](http://asumag.com/mag/university_eliminating_distractions)(accessed 11 March 2014).**

**O'Neil M & Jones R (1997) *Sensory-Perceptual Abnormalities in Autism: A Case for More Research*. *Journal of Autism and Development Disorders*. 27(3): 283-93.**

**Plaisted K, O'Riordan M, & Baron-Cohen S (1998) *Enhanced discrimination of novel, highly similar stimuli by adults with autism during perceptual learning task*. *Journal of Child Psychology and Psychiatry*. 39(5): 765-775.**

**Rincover A & Koegel R (1975) Setting generality and stimulus control in autistic children. *Journal of Applied Behavior Analysis*.8(3): 235-246.**

**Rogers S and Ozonoff S, (2005) What do we know about sensory dysfunction in autism? A critical review of the empirical evidence. *Journal of Child Psychology and Psychiatry*. 46(12): 1255–1268.**

**Schrandt J, Townsend D, & Poulson C (2009) Teaching Empathy Skills to Children with Autism. *Journal of Applied Behavior Analysis*. 42(1): 17-32.**

**TetreaultA & Lerman D (2010) Teaching Social Skills to Children with Autism using Point-of-View Video Modeling. *Education and Treatment of Children*. 33(3): 395-419.**

**Tufvesson, C., &Tufvesson, J. (2009).The building process as a tool towards an all-inclusive school.A Swedish example focusing on children with defined concentration difficulties such as ADHD, autism and Down’s syndrome.*Journal of Housing and the Built Environment*, 24(1), 47-66.**

**Ulrich, R (2008) Biophilic Theory and Research for Healthcare Design. In: Kellert S, Heerwagen J, and Mador M (eds) *Biophilic Design*. Hoboken, New Jersey: John Wiley and Sons.**

**Whitehurst, T (2006) The impact of building design on children with autism spectrum disorders. *Good Autism Practice*. 7 (1): 31–38.**

**Wallis C (2006) A Tale of Two Schools. *Time Magazine*.15 May: 50. (check page number)**

**Young, E (2004) Special deeds. *RIBA Journal* 111(7): 58-60.**



## Biography

### Christopher Henry

***Since 2005 Christopher Henry, the founder of Autism Design Consultants, has been researching and writing about architecture for autism. His experience is as varied as it is extensive. It ranges from the academic setting of the Danish Building Research Institute to working direct care at Bittersweet Farms, a residential and vocational facility for adults with autism. He is currently studying for his Doctor of Medicine (MD) at the Virginia Commonwealth University School of Medicine and is working on research projects that will provide more insight into the questions brought up in this paper.***



## **Design Empathy for Children with Autism**

**By A.J. Paron-Wildes LEED AP ID+C**

**When my son was born in 1995, it was a day of celebration for all in our family. As the first grandchild on both sides there was a lot of attention paid to my son Devin. I remember specifically him holding up his head at one day old and all of the aunts couldn't believe how advanced he was. My son thrived and was healthy. He was in the 110% for height and 95% for weight (see picture overleaf). As a young baby he met all of his milestones, turning over, crawling, walking, all ahead of schedule for children his age. Of course we thought he was exceptional and had hopes and dreams of him becoming the next President, or winning a Nobel peace prize. Little did we know or understand what was around the corner.**

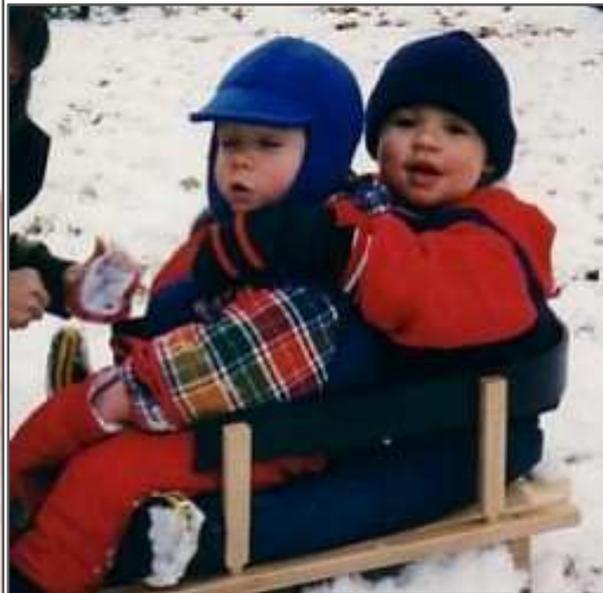
**It was around his fifteenth month milestone that we noticed his language kind of stalling. He wasn't talking as much or saying words he could a few weeks back (see picture at top of page). We didn't know what was wrong with him but understood something was a little off. Before his two-year-old birthday it was evident he had a strong speech delay. Our neighbor's son Wheeler, who was the same age as Devin, was talking in full paragraphs and even using language to try and manipulate what he was trying to get (see picture overleaf). People told us that all kids develop at their own**

pace, but the 10 word list on our refrigerator of the words he said did not grow and at many times diminished all together.

Between ages 2 and 3 we went through rounds and rounds of evaluations. Devin definitely had some issues but I honestly didn't think he had autism. My definition of autism looked like *Rainman* from the movie with Dustin Hoffman. I didn't understand his lack of eye contacts, incessant tantrums, and obsessive compulsive routines were a part of autism in a young child. At that time there were long waiting lists for diagnosis and treatment and only a few options. Now children can be evaluated as young as 3 months old for early detection of autism signs. Devin's full diagnosis did not happen until age 3 and then the challenge was getting him into services as fast as possible.



***DEVIN AS A BABY***



***DEVIN AGED 2***

**Our life was insane. We had a child that was out of control. We didn't know when we could get him help and most importantly we didn't know how to help him. I had no experience with speech therapy, or occupational therapy, or behavior therapy and I certainly wasn't a medical researcher or doctor. I was an interior designer and had no idea how that would help.**

**Then one day I read the book *Thinking in Pictures* by Temple Grandin. Light bulbs were going off in my head and suddenly I started looking at my son in a whole new way. His strange behaviors all had meaning. He just took cues from his built environment very differently. I started connecting the dots and realized interior design had a big role in helping him to succeed.**

**Very young children with autism many times have little to no receptive or expressive language. This means that not only can they not talk but they do not understand what others are saying to them. Many times their only clue to what is going on around them is their physical environment. Once you understand that concept a lot of things start to make sense. If a table cloth was on the table when they last were served a favorite treat, they may obsess having the table cloth always on the table. Or throw tantrums and fits that can last for hours when no one understands why he wants the table cloth on the table. Simple everyday things can be mountains for a child with autism and some feel like an alien living on another planet.**

**Design cannot cure a child with autism, but a well-designed space can break down the barriers and that may mean the child learns to speak or stays mainstreamed in a school, so the stakes are high. We once had a speech therapist who worked with my son at age 3½ say**

**that he may just never speak at all and they were going to release him from speech therapy. When I asked her where they were doing the therapy she informed me it was in the gym with other kids running around. Somehow I convinced her to do his next session in a closet so he would pay attention to her and not to all of the other kids running around screaming. His success in the next session where he actually said a word validated it was not my child's problem but his environment.**

**Design empathy is the term I've been using for designers and architects to do their best to try and climb into that child's mind to experience what they are experiencing. If you were dropped in a foreign land and you didn't know the language but needed to express to people what you needed, you would have tantrums and bite yourself in frustration too. Young children with autism pay attention to non-essential details of their environment because that is the only way they can figure out their world.**

**Devin is now 20 years old(see picture overleaf). He talks but not a lot. He can have short conversations and can communicate his basic needs and wants very well. As I am writing this, he and I are on a flight home from a red-carpet event in Los Angeles. Devin's dazzling smile and his effort to answer the press' questions won them all over and he was the star. I am so very proud of how far he's come. Devin may not become the President of the United States but he has developed into a nice young man with special skills and he is happy. This outcome would not have happened if we hadn't continuously tried to remove the barriers and empathize what he was experiencing.**

**Design can't cure these children but it can it make their life a lot better.**



***DEVIN AGED 20***

## **Bibliography**

***Grandin, T. (2010).Thinking in pictures, expanded edition: My life with autism. 2<sup>nd</sup>ed. New York: Vintage Books.***



## Biography

### A.J. Paron-Wildes

LEED AP ID+C, Allied ASID,  
Associate Member IIDA,  
Associate Member AIA

***A.J. Paron-Wildes has acquired significant experience working in the design/build industry. She has created and led a multi-million dollar award-winning design/build firm, developed national programs for ASID, developed and funded design research programs for the University of Minnesota, and pioneered various charitable programs.***

***A.J. has been a design consultant for interiors in healthcare and education, specifically dealing with autism and ADHD. From school settings and therapy environments to her most noted work on the building of the MIND Institute in Sacramento, California. A.J. has used her skills as a designer and blended them with her experience of raising a son with autism.***

***Ms. Paron-Wildes has had articles of her completed projects published in over twenty publications. She has served as a design judge for several professional design organizations. These efforts have not gone overlooked; A.J. has been honored with accolades from numerous organizations like NKBA, NARI, Chrysalis Awards, Professional Remodeler Magazine, Remodeling Magazine, USGBC, IIDA and ASID. She recently completed her co-chair term on the Minnesota State Autism Legislative Task Force. She continues to work with government organizations, school districts, and the***

***community at large to help individuals on the Autism Spectrum Disorder.***

***In 2013, Ms. Paron-Wildes completed a trilogy e-book series on Interior Design for Autism for Wiley publications. She continues to lecture and teach design principles that help others design in a more empathetic way for individuals with autism.***



# Designing All-Inclusive Outdoor Environments for Children with Special Needs

By Tara Vincenta

Many special needs children, including those with autism spectrum disorder, Down syndrome, developmental delay, cerebral palsy, spina bifida, sensory disorders, and vision and auditory deficiencies share a broad range of common challenges. These may include motor and neuromuscular challenges; cognitive sensory and communication issues; and visual and auditory impairment.

Design professionals, are in a unique position to evolve outdoor environments for the special needs community beyond basic accessibility issues and address the less apparent challenges faced by these kids, their families and caregivers. With consideration, and thoughtful, creative design, the issues of this ever growing population of children can be accommodated; where children of *all abilities* can come together to have fun in safe and accepting outdoor environments.

Through research, reference materials, personal interviews and observations, we have developed the following guidelines for your consideration in the design of outdoor spaces for children with special needs.



- **CONTEXT AND LOCATION** - Select a location that is tranquil and quiet, with the least amount of distractions possible. Noise from air conditioning compressors, adjacent traffic, and high-pitched or humming noise can be overwhelming to kids with sensory issues.

- **SAFETY AND SECURITY** - Include 6'-0" minimum height fencing that cannot be easily climbed to prevent children from straying outside the area's boundaries, ensuring safety and security. Avoid specifying materials, including toxic plants, that are easily ingested, as all children at some time explore their world through taste.



- **SMOOTH WIDE PATHWAYS WITH CLEAR EDGES** - Provide smooth, wide pathways and surfaces to eliminate the feeling of crowding. Provide a clear edge along pathways so that visually-impaired persons are aware of the edge of the path surface. In addition, smooth non-glare paving provides a proper surface for children with mobility issues and is important for children with ASDs, many of whom are sensitive to textures and bright light.

- **ORIENTATION MAPS** - Provide Orientation maps that illustrate a layout of the garden or play space so users know where they are and what to expect next. Surprises can create anxiety in persons with ASDs.

- **PROVIDE NON-VERBAL VISUAL AIDS** - Provide plenty of visual aids and signage. Include Braille for visually impaired persons and sign language skill- building to encourage communication between verbal and nonverbal children.

Up to 50% of persons with ASD are nonverbal. Some children with autism use a picture exchange system (PICT) to aid their communication with family members and teachers. Therefore, in designing outdoor environments, incorporating signage with clear, simple pictures to communicate ideas or intended use of certain play and learning elements is an important consideration.



- **OPPORTUNITIES TO OVERCOME SENSORY ISSUES** - Provide opportunities to overcome sensory issues, as many persons with ASDs have an over- or under-responsive sensory system and react differently to sounds, textures, or visual stimuli. Kids with visual and auditory issues enjoy and benefit from a rich textural environment and tonal/ vibrational elements. Look beyond the five senses and include activities that provide for vestibular and proprioceptive stimulation. Swinging, spinning, jumping, pushing, pulling, digging, heavy lifting. Gardening activities are a great way to provide digging, lifting, pushing, pulling and familiarizing kids with different textures and scents of plants in a controlled manner.

- **PROVIDE TRANSITIONS BETWEEN SPACES/ACTIVITIES** - Provide transitions between spaces/activities to allow individuals to orient themselves before experiencing something new. Children with ASDs are uncomfortable with change, and providing space between

different activities, accompanied by an orientation map, can help them anticipate these changes.

- **SEQUENCE ACTIVITIES** - Sequence activities to introduce elements and ideas slowly and build upon skills and comfort levels.

- **INCLUDE ELEMENTS OF CONSISTENCY** - Include some elements of consistency such as a hedge, stone wall, or an element that creates a comforting, predictable pattern.

- **PROVIDE FIXED AND NON-FIXED ELEMENTS** - Provide fixed and non-fixed elements - unpredictable or changeable elements such as furniture locations, for example, can be disconcerting for persons with ASDs. Create a sequence where the fixed element is experienced first for a sense of security, and further on, areas that are changeable to create a challenge that children have the opportunity to overcome.

- **COMMUNICATION AND SOCIALIZATION** - Provide opportunities for increased socialization such as gardening, that encourage one-on-one interaction.

- **PROVIDE OBSERVATION POINTS** - As many kids prefer to observe before engaging.

- **PROVIDE SOOTHING AREAS TO RE-CENTER** - Provide



soothing areas for the user to escape and re-center when overwhelmed, or to watch activities from a distance until comfortable enough to participate —a bamboo tunnel, a

low growing tree to hide beneath, or a fence panel with viewing holes.

- **“TIGHT FIT” PLACES** - hammocks or hammock swings - Provide hammocks or hammock swings for a sense of comfort by being held tightly by something and to be soothed by the swinging motion.



- **FOSTER IMAGINATIVE PLAY** - As many children on the spectrum have trouble with pretend play.

- **OPPORTUNITIES TO DEVELOP FINE AND GROSS MOTOR SKILLS, EXERCISE, COORDINATION AND BALANCE** - Provide opportunities for exercise and for increasing motor skills, coordination, and balance. Beyond play structures, consider adding a walk challenge path or exercise loop. Gardening activities help to increase fine and gross motor skills, body awareness, and motion in addition to providing a calming connection to nature.

- **PROVIDE CHOICES** - To create a sense of control and opportunities for varying levels of comfort and ability.

- **BUILD IN CHALLENGES** - Build in challenges to help generalize skills to a real-world environment. It is important to provide a level of comfort but also to encourage kids to overcome common fears. A simple example of this is to sequence a concept, such as transition areas, so they gradually become shorter, or gradually present more directional options for the user.

- **PROVIDE PLENTY OF SHADE** - Provide plenty of shade, both with trees and shade structures, as kids with special needs are often photosensitive.

- **PROVIDE HEALTHY FOOD OPTIONS** -Many kids with special needs have sensitive digestive systems and food allergies. Consider food options that include Gluten-Free and healthy whole food snack options.



- **INCLUDE VOCATIONAL PROGRAMS AT SCHOOLS, DAY CENTERS AND GROUP HOMES**

## References

**Armstrong, Thomas (2010). *Neurodiversity: Discovering the Extraordinary Gifts of Autism, ADHD, Dyslexia, and Other Brain Differences*. Philadelphia: Da Capo Press, 2010. Print.**

**Attwood, T. (2008). *The Complete Guide to Asperger's Syndrome*. Arlington, TX: Future Horizons.**

**Ayres, J. (2005). *Sensory Integration and the Child: Understanding Hidden Sensory Challenges*. Los Angeles: Western Psychological Services.**

**Bialer, D.S., & Miller, L.J. (2011). *No Longer A SECRET: Unique, Common Sense Strategies for Children with Sensory or Motor Challenges*. Arlington, TX: Sensory World.**

**Biel, L., & Peske, N. (2009). *Raising a Sensory Smart Child: The Definitive Handbook for Helping Your Child with Sensory Processing Issues*. New York: Penguin.**

**Exkorn, Karen Siff (2005). *The Autism Sourcebook*. New York, NY: HarperCollins Publishers, Inc.**

**Grandin, Temple. *The Way I See It: A Personal Look at Autism and Asperger's*. Arlington, TX: Future Horizons, Inc., 2008. Print.**

**Haddon, Mark (2003). *The Curious Incident of the Dog in the Night-Time*. New York, NY: Vintage Contemporaries.**

**Johnson, Lauri Macmillan and Duffek, Kim (2008). *Creating Outdoor Classrooms: Schoolyard Habitats and Gardens for the Southwest*. Austin, TX: University of Texas Press.**

**Louv, Richard (2008). *Last Child in the Woods*. Chapel Hill, NC: Algonquin Books of Chapel Hill.**

**MacAlpine, Michelle Lewis .*Brain Training: New Hope for Children with***

***Delayed Development. US: M.L. MacAlpine, 2004. Print.***

***May-Benson, T., J.A. Koomar, & A. Teasdale (2009).Incidence of pre-, peri-, and post-natal birth and developmental of children with SPD and children with autism spectrum disorder.Frontiers in Integrative Neuroscience, 3(31).***

***[www.ncbi.nlm.nih.gov/pmc/articles/PMC2779100/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2779100/)***

***Myles, B.S., Cook, K.T., Miller, N.E., Rinner, L., & Robbins, L. (2002).Asperger Syndrome and Sensory Issues: Practical Solutions for Making Sense of the World. Shawnee Mission, Kansas: Autism Asperger Publishing.***

***Notbohm, Ellen (2005). Ten Things Every Child with Autism Wishes You Knew. Arlington, TX: Future Horizons, Inc.***

***Notbohm, Ellen and Zysk, Veronica (2004).1001 Great Ideas: for Teaching and Raising Children with Autism Spectrum Disorders. Arlington, TX: Future Horizons, Inc.***

***Robinson, John Elder (2007). Look Me In The Eye. New York, NY: Crown Publishers.***

***Saslow, Rachel (April 6, 2010). An interview with animal scientist Temple Grandin. Washington, DC: The Washington Post.***

***Shore, S.M. (2003).Beyond the Wall: Personal Experiences with Autism and Asperger Syndrome. Shawnee Mission, Kansas: Autism Asperger Publishing.***

***Simpson, Richard L. (2005). Autism Spectrum Disorders: Interventions and Treatments for Children and Youth. Thousand Oaks, CA: Corwin Press.***

***Tammet, Daniel (2006). Born on A Blue Day. New York, NY: Free Press.***



## Biography

### Tara Vincenta

***As Principal and founder, of Artemis Landscape Architects, Tara M. Vincenta brings 30 years of experience and leadership in designing diverse landscapes including environmental and regional planning studies, multi-family housing, corporate, institutional and private residential work. She plays a major role on every project from schematic design through construction administration. Her excellence in design, graphic skills, communications, and horticultural expertise has set her apart and under her direction the firm has won an Honor Award and numerous Awards of Merit from the Connecticut Chapter of the American Society of Landscape Architects. She holds a certificate of Merit from the School of the Chicago Botanic Garden in Healthcare Garden design. With a strong commitment to the connection between nature, landscapes and public health, Ms. Vincenta designed the award winning; nature based SOL (Sequential Outdoor Learning) Environment as a way of addressing the needs of over one million children with autism and their families ([www.SOLenvironment.org](http://www.SOLenvironment.org)). She has given seminars and written articles on designing environments for persons with autism and special needs and has been invited to speak at the Chicago Botanic Gardens in July 2012 on this topic at a Healthcare and Therapeutic Landscapes seminar.***

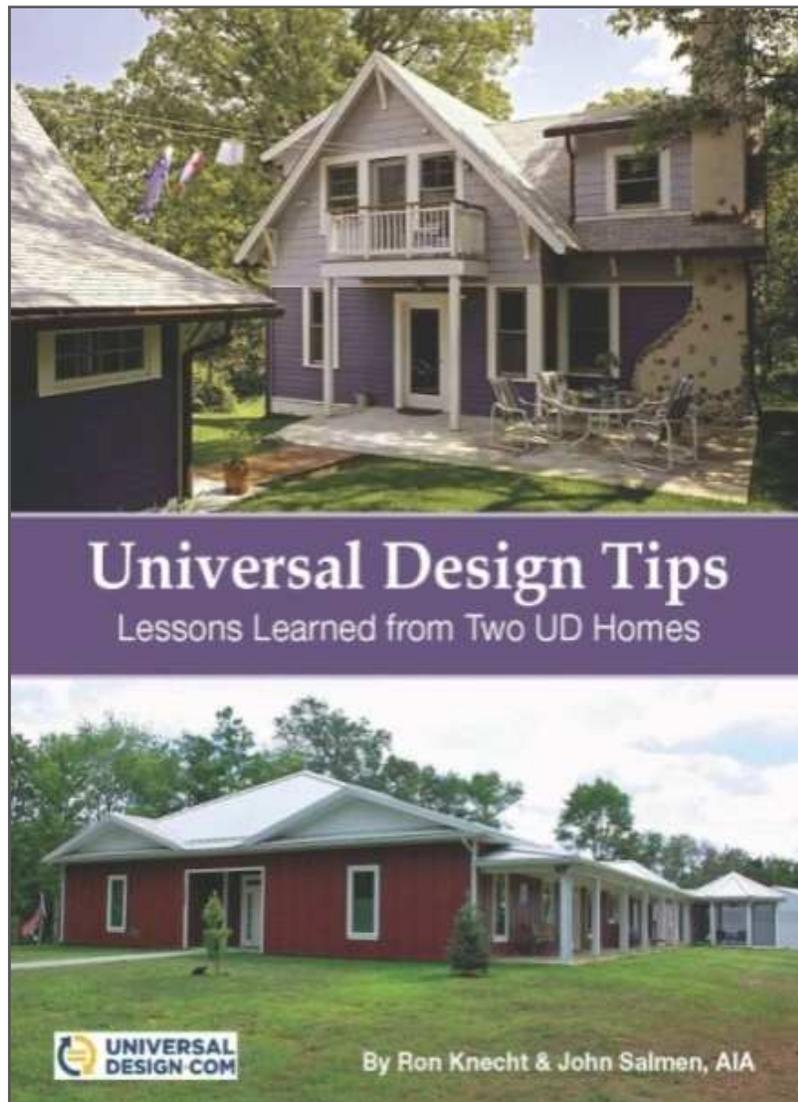
***Ms. Vincenta believes in giving back to her community and has generously provided her professional expertise on many projects and has served on the architectural advisory board in Brookfield, CT. She is a member of the US Green Building Council and is CLARB certified.***

***ARTEMIS      landscape      architects,      inc.      203.683.1808  
tara@artemisLA.com      www.artemisLA.com***



# New Books

## Universal Design Tips: Lessons Learned from Two UD Homes:



**This new electronic book from UniversalDesign.com is filled with tips and ideas that will help guide anyone through the process of designing and constructing their own Universally Designed home. The book was co-authored by John Salmen, AIA, the publisher of *Universal Design News* and founder of UniversalDesign.com, and Ron Knecht, whose durable, energy efficient Universally Designed house was featured in the [January 2012 issue](#) of *Universal Design News*.**

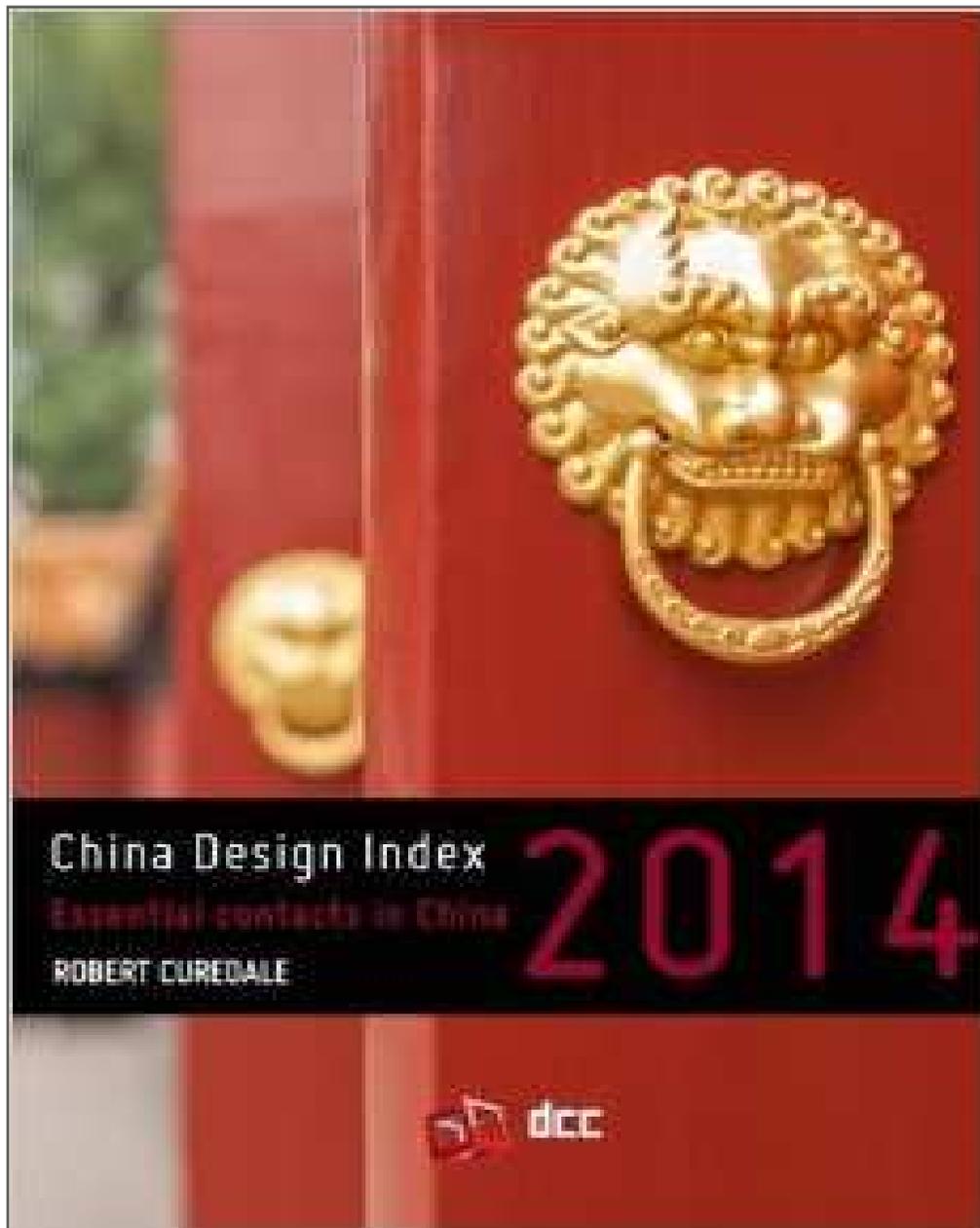
**The first section of the book deals with the planning process, providing insight on how to choose a location for the house, consider activities of daily living during planning, best use various types of design professionals, finalize a floor plan and develop a building schedule.**

**The rest of the book is organized according to different areas or elements of the home (i.e. exterior doors, bathing, and kitchen counters, just to name a few.) Whether designing a whole house or simply remodeling one area, *Universal Design Tips* makes it easy to quickly refer to the relevant section and find valuable tips that ensure success. Each of these sections includes design tips, photos and important lessons that the two authors learned through their personal projects.**

**John Salmen has been working in the field of accessible architecture and Universal Design for over 30 years, and he put this expertise to good use when remodeling a historic property to create the Universally Designed house he and his wife hope to live in for many years. Salmen's "Home for the Next 50 Years" has been featured in various media outlets: including *The Washington Post*, *Fine Homebuilding*, AARP's television show *Inside E Street* and the book *The Accessible Home: Designing for All Ages and Abilities*. Now, readers will be able to explore Salmen's home in even greater detail and apply his experience to their own Universally Designed home projects.**

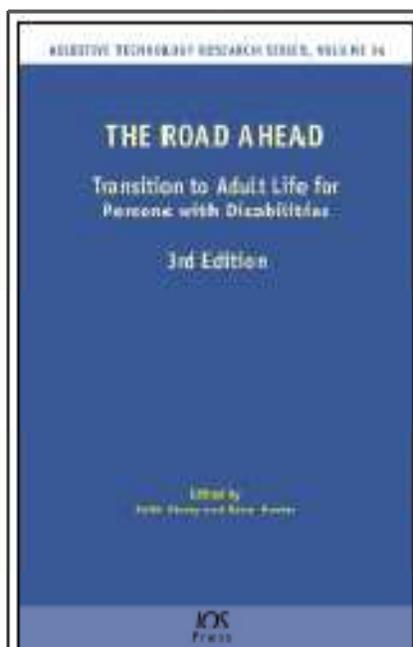
**Ron Knecht's experience with Universal Design started after his wife of 46 years became ill with cancer. As her health worsened, Knecht learned first-hand the importance of accessibility for maintaining independence, safety and one's quality of life. Before Knecht's wife passed away, she extracted a promise from him that he would move to a Universally Designed house located closer to their daughter. Knecht was underwhelmed by both the houses that he saw on the market and the UD house plans that he found online; he realized that he would have to plan and build a custom house in order to fulfill his promise.**

## China Design Index 2014:



**China Design Index 2014: The essential directory of contacts for designers Paperback – February 1, 2014 by Robert A. Curedale (Author)**

## The Road Ahead, Transition to Adult Life for Persons with Disabilities:



### **The Road Ahead**

Transition to Adult Life for Persons with Disabilities

Volume 34 Assistive Technology Research Series  
Editors: Storey, K., Hunter, D.

December 2013, 318 pp., hardcover (revised 3rd edition)

ISBN 978-1-61499-312-4 (print)

ISBN 978-1-61499-313-1 (online)

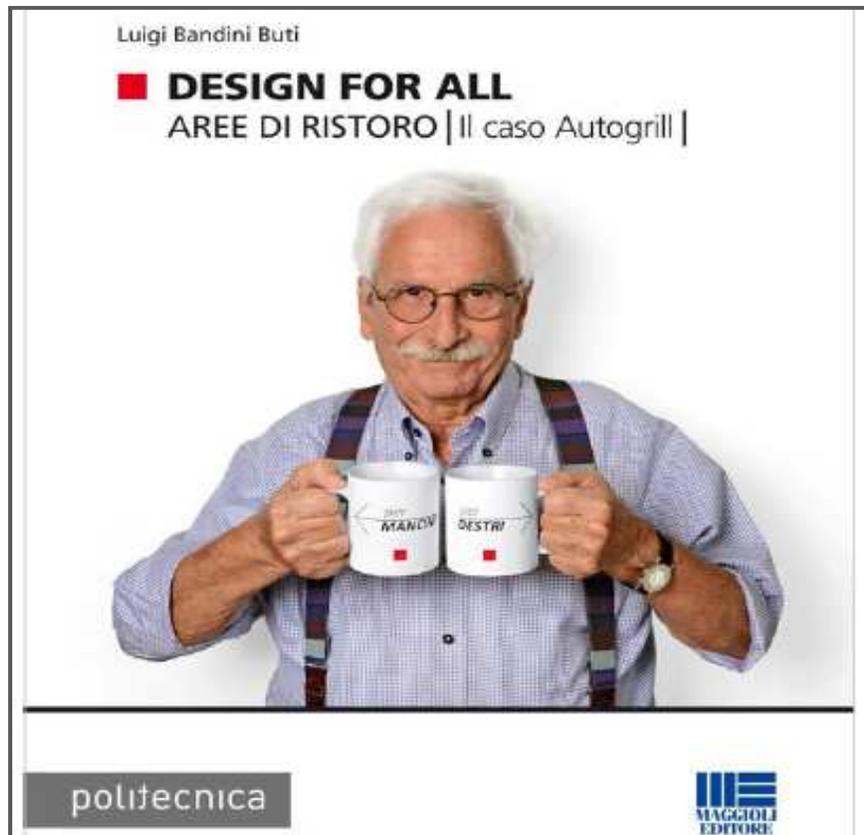
Price: €69 / US\$100 / £59

Successful transition from school to adult life has always been difficult for people with disabilities, especially in the area of employment. The vast majority of people with disabilities are either unemployed or underemployed with low wages and few benefits, and many governments are struggling to find a way of providing employment and benefits to people with disabilities without creating disincentives to work.

This book provides strategies and ideas for improving the lives of people with disabilities, exploring new ways of enabling a successful transition to an integrated adult working life by providing effective instruction and support. Following an introduction which outlines the importance of transition services and meaningful outcomes, topics covered in the remaining chapters include: person centered transition planning; enhancing competence and independence; employment assessment and career development; collaboration between agencies for a seamless transition; independent living and supported living; and community functioning skills.

The book will be of interest to all those who work with transition age students as well as those who work with adults with disabilities and want to enable them to have the best life possible. To paraphrase Helen Keller: "People with disabilities not only need to be given lives, they need to be given lives worth living."

## Design for All, Aree DiRistoro:



Luigi Bandini Buti

**DESIGN FOR ALL** | AREE DI RISTORO | il caso Autogrill |

Maggioli Editore, 2013

<http://shop.wiki.it/risultatoricerca.aspx?indizioricerca=luigi+bandini+buti>

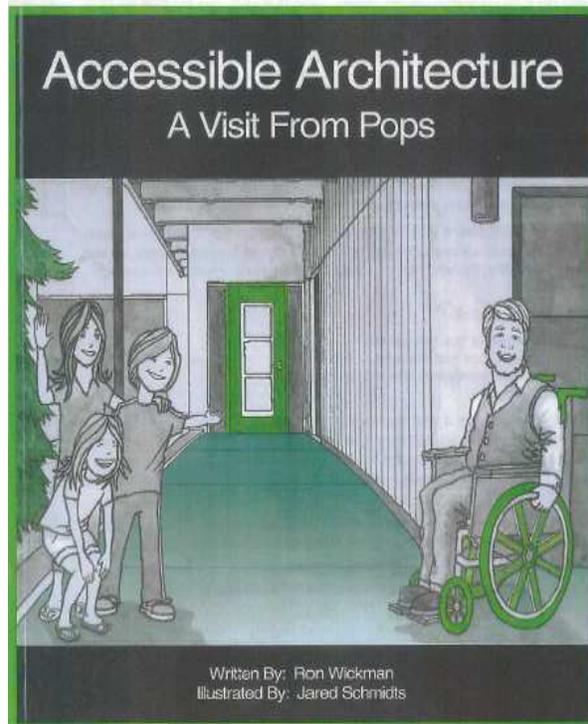
This book has been born following the collaboration with Autogrill that, for its new facilities "Villoresi Est", has developed an innovative, Design for All oriented project. We then realized that the cares foreseen for "all" would not be noted by "the majority".

If you are not on a wheel-chair, or blind, or you are not travelling with a large family or you don't have to look after your old grand-father, you will not be able to appreciate many of the attentions included into the project. It was therefore necessary to make more visible the virtuosity of the planning process and its results, which may not appear obvious to many people.

This publication is not meant to be a mere description, it is rather a critical analysis of the Villoresi Est rest area, included in a context that wants to examine in depth the methods and the means of Design for All.

Its main objective is therefore to use the "Autogrill case" to investigate the necessary steps to develop projects Design for all oriented, hopefully in an authoritative way.

## Accessible Architecture, A Visit from Pops:



### **Edmonton Architect publishes - Adult Children's Book—Accessible Architecture: A Visit From Pops.**

Edmonton Architect Ron Wickman launches his first book titled: **Accessible Architecture: A Visit From Pops** at the City Room in City Hall, Tuesday, March 18 at 6 p.m. Ron, son of the late Percy Wickman, MLA Edmonton-Rutherford 1989-2001, is a story written on the focus of Percy and his 3 grandchildren. Ron is best known for his accessible design. His most recent endeavor published by Gemma B. Publishing draws on this knowledge. Edmonton draughtsman Jared Schmidts illustrates with wit and precision the need for a house to be visitable by everyone.

As a child, Ron Wickman learned firsthand about the need for accessibility. His father became paraplegic after being injured by an industrial accident. Ron wheeled his father into many inaccessible places. A longtime Edmonton City Councilor Percy Wickman advocated for people with disabilities throughout his life.

Ron Wickman studied architecture in Edmonton and in Halifax, Nova Scotia, specializing in barrier-free design, designing houses and public spaces that were both beautiful and accessible.

**Accessible Architecture: A Visit From Pops**—is an adult children's book, which demonstrates the three principles for ensuring a house can be visited and enjoyed by everyone equally, including those with a disability. Following Wickman's design and renovation also enables homeowners to age in place.

Visitability principles include

- the front entrance must have no steps;
- all main floor doors must be at least 36" wide
- an accessible washroom must be on the entrance floor.

**Accessible Architecture: A Visit From Pops**, by Ron Wickman, illustrated by Jared Schmidts and edited by Sarah Yates, is published by Gemma B. Publishing, a Winnipeg-based publisher. Gemma B. Publishing creates heroes and heroines living with a disability, in both fiction and non-fiction. The book will be launched at Edmonton City Hall, March 18 at 6 p.m. and available later at Audrey's Books in Edmonton.

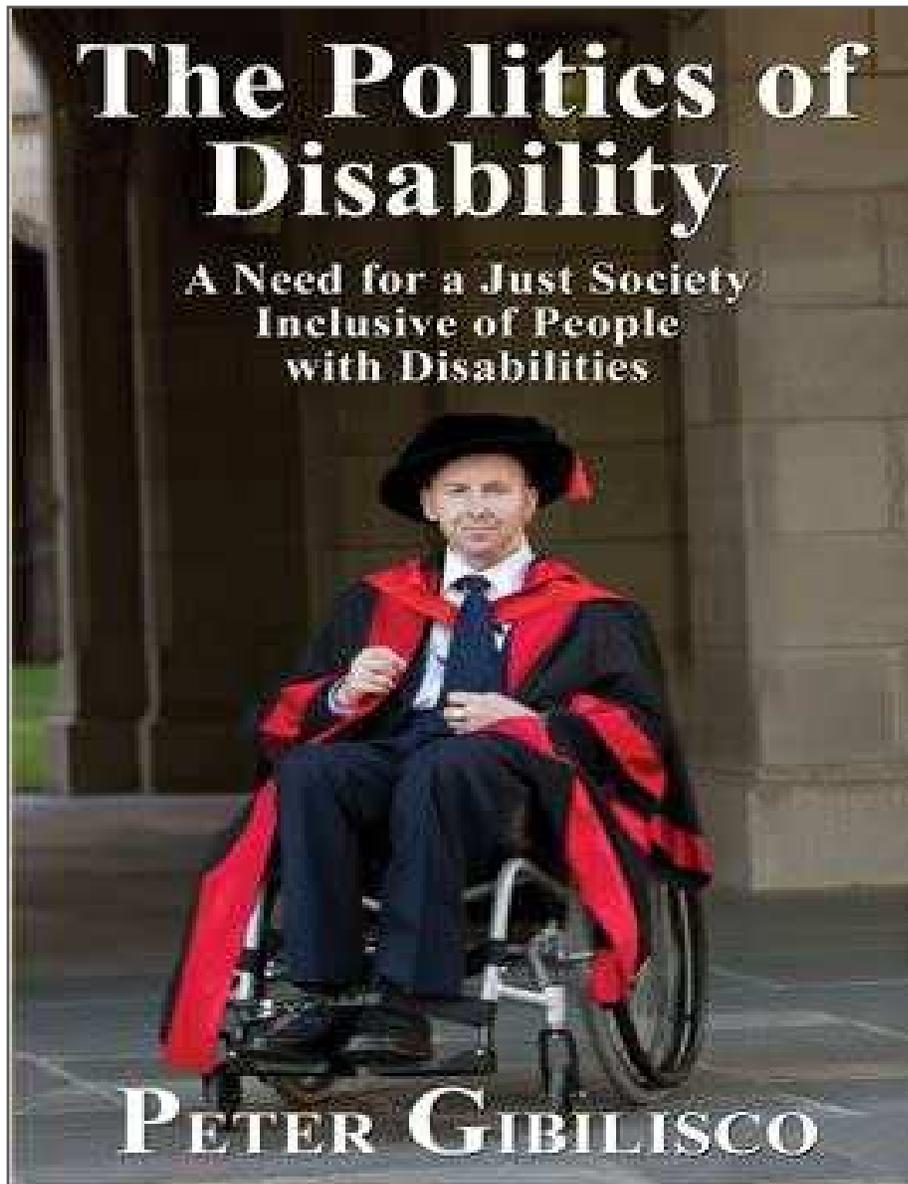
Ron Wickman will be available for interviews after the press conference at City Hall. His lecture at the Buildex Conference, Edmonton Expo Centre, Northlands will be held Wednesday, March 19 at 2:30 p.m.

**Accessible Architecture: A Visit From Pops ISBN978-0-991697-0-8** sells for \$20.

— 30 —

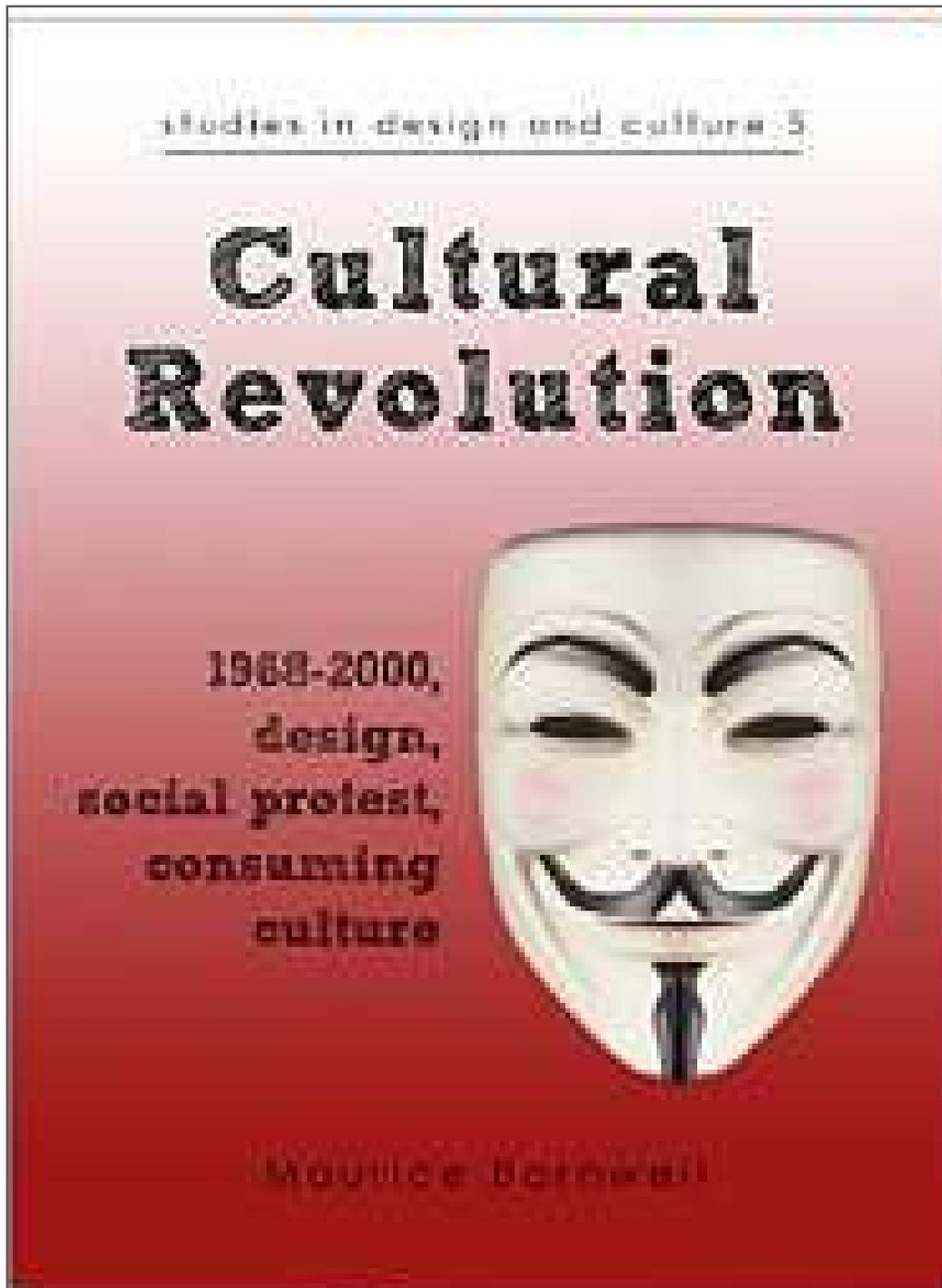
For additional information, contact:  
Ron Wickman  
Architect  
780-430-9935  
E-mail: [rwickman@shaw.ca](mailto:rwickman@shaw.ca)

## The Politics of Disability by Peter Gibilisco:



This book will retail for a recommended price of \$19.95 USD ISBN 978-1-77143-155-2, with an ebook version also available at a recommended price of \$7.95 USD ISBN 978-1-77143-156-9. You'll be able to buy it from all the usual places - Angus & Robertson, Bookworld, Fishpond, Amazon, Kobo, iBookStore, and Google's Play Store, amongst others.

**Cultural Revolution by Maurice Barnwell (Author):**



## Design For All – the project for everyone. Methods, tools, applications. Volume 1–2 (Steffan, 2012):

**Design for All – the project for everyone. Methods, tools, applications.**  
Volume 1- 2 (Steffan, 2012)

The publication highlights the multidisciplinary and cross-disciplinary of the Design for All approach, both in terms of issues addressed and of field of application. The accessibility of places and objects is nowadays a minimum requirement: it is only the starting point to allow their use by the widest range of people possible. Through professional experience and research, the paper tackles problems, methodologies and working tools, benchmarks.

The first volume covers the main areas of research and presents some examples at urban scale; the second volume illustrates examples of architectural design, products, services, university education.

The lack of compliance of the built environment and of the products, with needs that can be very different, causes a state of handicap. The lack of ability is a handicap only if the project has not taken it into account.

With these books we intend to stimulate debate, in-depth research, specialized studies, so that Design for All can be increasingly known and applied in more and more research and professional areas.



Published in Italian in December 2012 by Maggioli Editore (Santarcangelo di Romagna RN, Italy).

[http://ordini.maggioli.it/clienti/product\\_info.php?products\\_id=8832](http://ordini.maggioli.it/clienti/product_info.php?products_id=8832) Volume 1

[http://ordini.maggioli.it/clienti/product\\_info.php?products\\_id=8833](http://ordini.maggioli.it/clienti/product_info.php?products_id=8833) Volume 2

The on-line English version is also available since October 2014:

<http://www.maggiolieditore.it/ebook/tecnica/design-for-all-the-project-for-everyone-first-part.html>

<http://www.maggiolieditore.it/ebook/tecnica/design-for-all-the-project-for-everyone-second-part.html>

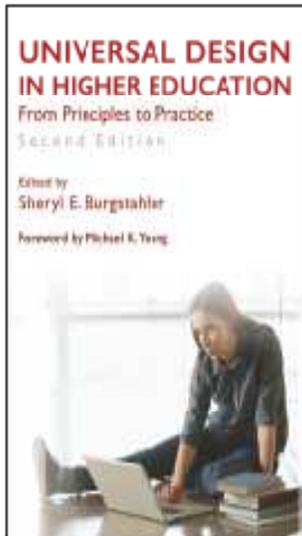
*"Ideas, even good ideas, flourish only when practitioners commit to sharing their experiences, perspectives and aspirations. By organizing this publication and convening a distinguished international group of contributors, Editor Isabella Tiziana Steffan helps to establish the current state-of-the-art and affirms the significant potential of Design-for-All. She also delivers fresh inspiration to an expanded audience critically important to engage if Design-for-All/Universal Design is to realize its promise in the coming years.(...)We salute Editor Steffan for her passion, focus and hard work to bring this valuable contribution to fruition." (Valerie Fletcher)*

# Universal Design in Higher Education:

**“Fresh, comprehensive, and engaging, *Universal Design in Higher Education* is expertly written, thoughtfully crafted, and a ‘must-add’ to your resource collection.”**

—STEPHAN J. SMITH, EXECUTIVE DIRECTOR, ASSOCIATION ON HIGHER EDUCATION AND DISABILITY

**Harvard  
Education  
Press**



384 PAGES  
978-0-674-30-00-0  
5 BY 8 IN H 2015  
\$34.00 PAPERBACK

**SAVE 20%** when you  
mention sales code **UDHETS**

(OFFER EXPIRES 1/8/2016)

## UNIVERSAL DESIGN IN HIGHER EDUCATION

From Principles to Practice, Second Edition

EDITED BY SHERYL E. BURGSTAHLER • FOREWORD BY MICHAEL K. YOUNG

This second edition of the classic *Universal Design in Higher Education* is a comprehensive, up-to-the-minute guide for creating fully accessible college and university programs. The second edition has been thoroughly revised and expanded, and it addresses major recent changes in universities and colleges, the law, and technology.

As larger numbers of people with disabilities attend postsecondary educational institutions there have been increased efforts to make the full array of classes, services, and programs accessible to all students. This revised edition provides both a full survey of those measures and practical guidance for schools as they work to turn the goal of universal accessibility into a reality. As such, it makes an indispensable contribution to the growing body of literature on special education and universal design. This book will be of particular value to university and college administrators, and to special education researchers, teachers, and activists.

**SHERYL E. BURGSTAHLER** is an affiliate professor in the College of Education at the University of Washington in Seattle, and founder and director of the university's Disabilities, Opportunities, Internetworking, and Technology (DO-IT) and Access Technology Centers.

**“Sheryl Burgstahler has assembled a great set of chapters and authors on universal design in higher education. It’s a must-have book for all universities, as it covers universal design of instruction, physical spaces, student services, technology, and provides examples of best practices.”**

—JONATHAN LAZAR, PROFESSOR OF COMPUTER AND INFORMATION SCIENCES, TOWSON UNIVERSITY, AND CO-AUTHOR OF *ENHANCING DIGITAL ACCESSIBILITY THROUGH POLICY AND PRACTICE*

### ORDER HERE

#### YOUR INFORMATION

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
STATE ZIP \_\_\_\_\_

#### BILLING

CARD # \_\_\_\_\_  
EXP. DATE \_\_\_\_\_  
SERIAL/REV \_\_\_\_\_ SVC CODE \_\_\_\_\_  
TELEPHONE \_\_\_\_\_ EMAIL \_\_\_\_\_

#### PLACE YOUR ORDER

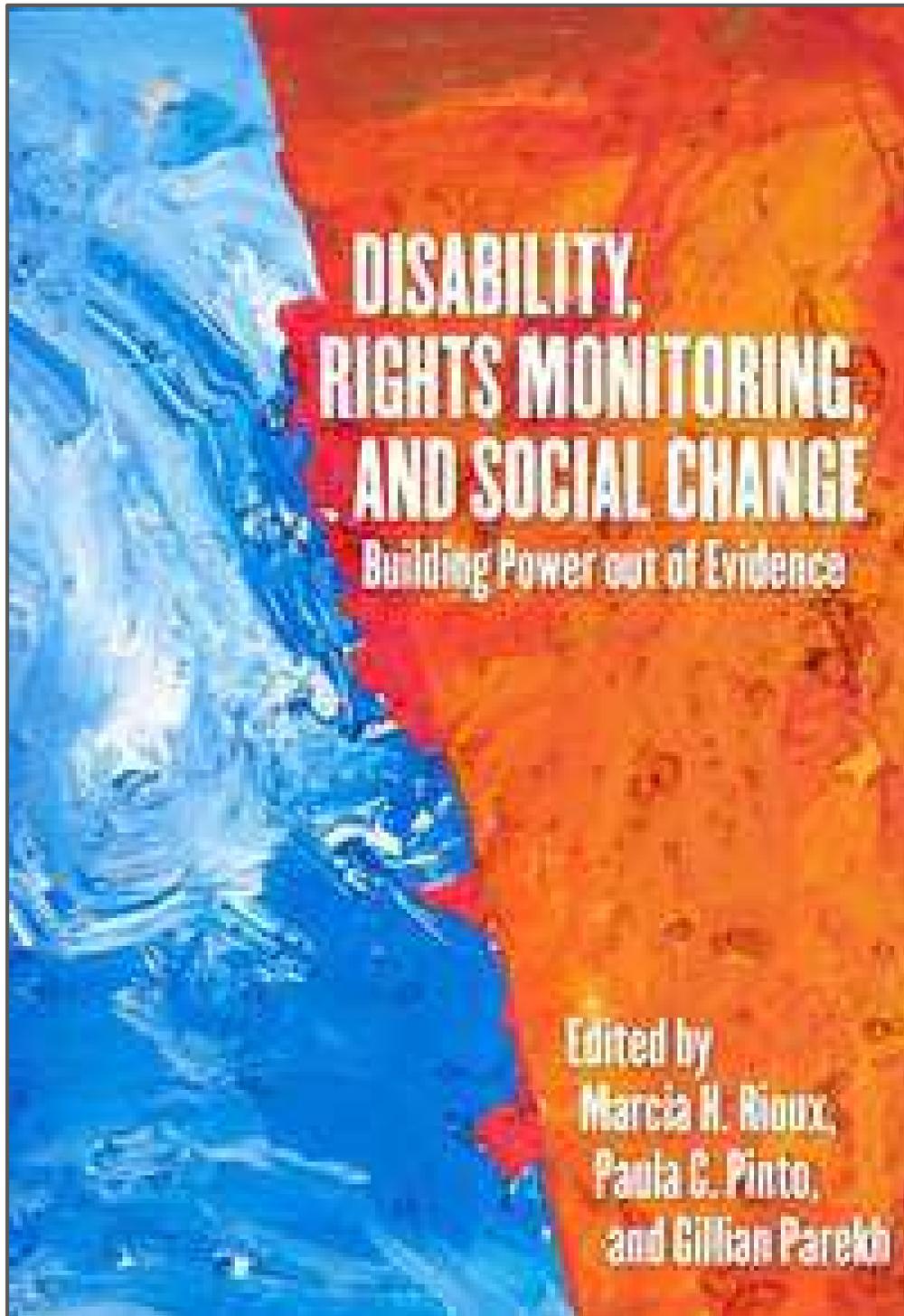
**YES**  
HARVARD EDUCATION PRESS ORD  
**PHONE**  
(888) 457-1457  
(978) 621-2512 (OUTSIDE US)  
**FAX**  
(978) 648-1231  
**E-MAIL**  
#orders@hup.harvard.edu  
**HARVARD EDUCATION PRESS**  
c/o HUPC  
16 DEVELOPMENT ROAD  
ITTOBURN, MA 01420

#### ORDER DETAILS

QTY	UNIT PRICE	PRICE
	<del>\$24.00</del> \$27.20	
<b>SHIPPING</b>	(INC COPY EACH ADD'L)	SUBTOTAL
US	\$6.45 \$2.50	
CANADA	\$7.95 \$4.50	SHIPPING
OTHER	\$7.50 \$4.50	<b>TOTAL</b>

MASTERCARD  VISA  AMERICAN EXPRESS  
 BILL NUMBER \_\_\_\_\_  
 CHECK ENCLOSED, PAYABLE TO HARVARD EDUCATION PUBLISHING GROUP

## Disability, Rights Monitoring and Social Change:





# Appeals



## Announcing the ALSAC/St. Jude Children's Research Hospital Business and Design Ethnography Fellowship

We are pleased to announce a **new fellowship program** for prospective MA students in **applied anthropology** at the **University of Memphis** seeking to work in **customer experience and business anthropology**. The **ALSAC/St. Jude Business and Design Ethnography Fellow** will receive **core training in ethnographic methods** and apply their skills in a business environment 20 hours a week throughout the Academic Year in a research support role within the ALSAC/St. Jude's Donor Experience Management department.

In return for their work at ALSAC/St. Jude, fellows receive **full tuition reimbursement (up to \$10,000)** as well as a **\$10,000 stipend**.

### Now taking applications for **Spring 2016!**

**To apply:** Submit your application for MA study to the Department of Anthropology **plus** (1) a separate letter of intent specifying why you are interested in gaining experience in a corporate environment like ALSAC, (2) a writing sample showcasing your research capabilities, and (3) a resume.

**Questions?** Contact Dr. Keri Brondo at [kbrondo@memphis.edu](mailto:kbrondo@memphis.edu) or visit [www.memphis.edu/anthropology](http://www.memphis.edu/anthropology)

**Department of Anthropology**  
Studying the cultures and behaviors of people throughout time  
College of Arts & Sciences

universal  
design

expert  
favorite 2016

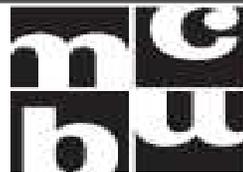


universal  
design

consumer  
favorite 2016



UNIVERSAL DESIGN



MUNICH CREATIVE  
BUSINESS WEEK

Program Partner

Press release

## “From universal design award to universal design favorite”

During the leading industry event, Munich Creative Business Week 2016, IF UNIVERSAL DESIGN will be presenting the favorites for 2016 to the UNIVERSAL DESIGN experts and a 100-strong user jury. The universal design expert favorite 2016 and universal design consumer favorite 2016 prizes will be awarded.

IF UNIVERSAL DESIGN, a member of the IF Industrie Forum Design e.V. family since 2013, will be honoring the international UNIVERSAL DESIGN favorite for the fifth time as a partner of the organizer, bayern design GmbH. Subsidization from the Bavarian Ministry of Economic Affairs and Media, Energy and Technology underlines the economic importance of the awards.

The competition is open to all designers, companies, universities, students and start-ups, which would like to present themselves and their concepts, scenarios and products online in the areas of Design, Architecture, Technology and Service Design on IF UNIVERSAL DESIGN's digital media. In addition, the entries will also be unveiled to a specialist audience and visitors to the Munich Creative Business Week alike in a jury exhibition as part of the Oskar von Miller Forum.

The eight-day jury exhibition is accompanied by a comprehensive “UNIVERSAL DESIGN program,” which opens up further opportunities for UNIVERSAL DESIGN favorite 2016 participants to touch base and network. Alongside the option to conduct a live presentation of the products for the UNIVERSAL DESIGN favorite Session 2016 committees, areas of UNIVERSAL DESIGN will also be presented and discussed in workshops, presentations and speed information events.

Active international cooperation will also play an important role in 2016 (designaustria, International Association of Universal Design, Japan; School of Architecture Aarhus, Denmark; Joanneum Graz (Austria), Coburg University of Applied Sciences and Arts, Macromedia University of Applied Sciences, Munich, Department of Industrial Design at the Technische Universität München).

UNIVERSAL DESIGN sees itself increasingly as a fundamental vector and strategy to design products, architectures and services which, in terms of their form, operation, and design, appeal to the needs of as many consumers and users as possible, reduce complexity to a minimum and also enable secure, fault-tolerant and sustainable innovations.

For IF UNIVERSAL DESIGN, positioning UNIVERSAL DESIGN as a pioneering social design platform and reinforcing its position as an economic factor for industry and design is both an incentive and a challenge.

Entries are open until December 31, 2015 at [www.if-universaldesign.eu](http://www.if-universaldesign.eu).

Press contact:  
Thomas Bade (General Manager)  
Phone: +49 (0) 511.54224 209  
[tb@if-universaldesign.eu](mailto:tb@if-universaldesign.eu)



# News

1.

## It's an Accessible Life: My 24-Hour Journey



**Snippet Park: Remember those words. Thinking differently sure makes the world a more friendly and accessible place. And the experience I felt straight through my core was undeniable while listening to a presentation by a senior inventor to the industrial design students at North Carolina State University with regard to his brilliant, yet simply designed OXO product that highlighted its intuitive attributes of flipping and folding an omelet as easily as if one had no impacts to**



**movement by virtue of any sort of disability or physical limitation - no matter one's age. Sexy stuff, this talk about all the possibilities and gains made on behalf of our aging population with its [all too often reported issues] of failing eyesight and unfortunate tendency towards memory loss.**

**The younger-than-springtime-at-heart professionals who were on board with me would certainly have none of those negative preconceptions. This group was raring to make some noise, relax into one's own body, dream bigger, breath, breath, breath, rest when ultimately necessary and resume again, intent to smell**

even the smallest molecule. In this case, the seniors were going to give the young students a run for their money...and their imagination all in the healthy and spirited pursuit of good humor and play. After all, is anyone (especially, an architect) ever too old (or averse) to play?



In architecture, design collaborations of this specific nature are called charrettes. And so it was in the utterly enchanted spirit of the Symposium that Snippet Park emerged. Snippet Park. Even the name evokes a woodland unimagined until now. A world unto its own and yet no farther than one's own backyard or neighborhood - or, a place one contemplates in a concrete jungle. Snippet Park: an oasis for young or old where all senses are summoned to life. Imagine which road to take when one is entranced by not just an earthen trail, but by a water trail and a plant trail as well. Each one uniting as a theme unto itself.



When was the last time you recall collaborating with a group of [relative] strangers in a creative exchange that you felt just might change the world? For me, the experience that fits the bill completely occurred during the 2015 Universal Design Symposium held at North Carolina State University, Raleigh in March.



Truth be told, North Carolina State University is the copyright holder of the seven guiding principles of Universal Design, whose goal

is to "extend ideals of accessible design to everybody and recognize that improved participation enhances the value of the built environment". The Standards were developed in part with the Global Universal Design Commission, Inc. (GUDC) and the National Institute on Disability and Rehabilitation Research (NIDRR), through the Rehabilitation Engineering Research Center on Universal Design and the Built Environment (RERCUD). I myself am a member of the GUDC Definitions and Ratings Committees.



Important stuff for certain, but I digress. Each and every participant left me spellbound and breathless with excitement for the range of possibilities that surfaced to explore in my chosen field. And, I am still in contact with those who befriended me - whose creativity moved me profoundly - over the two intensive and illuminating days (and nights) of the Symposium.

Make new friends...perhaps this was on Alice's mind the dreamy afternoon she tumbled down the rabbit hole? Yes, it's a familiar refrain, but in the particular instance in which it came to my mind, I immediately began thinking a zillion light-years beyond the proverbial box.

The plant trail for instance, employs the tactile through Lamb's Ears, smell via herbs and flowers, while hearing is spurred by whispering pines and aspens and taste encouraged by veggies and herbs, the haptic informed by bamboo or weaving stems, and the visual portrayed by a Venus fly-trap. Ah, the stuff of daydreams and nursery rhymes and definitely by the minds, perceptions and manipulations of these professionals tasked with their heady inventions.

While the water trail inspires its own sense of community, as each "sense" has a theme: water as a tactile substance; smell as mist coming off the water; hearing the movement of water - always a soothing presence; taste - while salty is taken for granted, what other options might occur if water appeared as a mist, there for the taking, a tasting experience par none.



And, just where does air make its mark in this Radial City of one's creation: does air become tactile when spun by the wind of a "stepping bellows"? Does the scent derive from bubbles intentionally imbuing the air? Do chimes signify the passage of time through the air? And, as for the visual a whirly-gig seems to fly unimpeded as if it had a mind of its own.



**And so as the early spring night wore on and the immersion in this sensory and accessible world we had created grew more outsize, our thoughts became as wild and animated as the characters that came to light during Alice's journey. What a tapestry of delights came to life (at least somewhat short lived). Like the flurry of friends she made that day. And so, like Alice, did I.**



**Becoming airborne, heading home, my mind, miles away in Snippet Park, is suddenly cued to appreciate each observation as if never seen before. Cumulus clouds taking on a different dimension and a sense of wonder seizes me.**

**Or, maybe, like Alice, seeing the world differently becomes as natural as breathing. Every improbable and ageless vista an opportunity to travel through the looking glass. And, make new friends.**

**(Source: The Huffington Post)**

2.

## Milan is the winner of the 2016 Access City Award

Beatrice Credi



Milan (Italy) is the winner of the 2016 Access City Award. Wiesbaden (Germany), Toulouse (France), Vaasa (Finland) and Kapsóvár (Hungary) were also awarded for their efforts to improve accessibility for people with disabilities and the elderly. In addition to its excellent and consistent accessibility efforts – the [European Commission](#) said – Milan has also committed to projects to promote the employment of people with disabilities and to support independent living. Its building standards not only support accessibility and usability, but they also promote Universal Design standards, which aim to design products and spaces in a way that they can be used by the widest range of people possible. Wiesbaden receives the second place in recognition of its efforts to create a city accessible to all its citizens for example by setting ambitious objectives to ensure the accessibility to the city centre and its open spaces, parks and playgrounds. Toulouse wins third prize for its commitment to improving the life of its disabled citizens, be it in the field of transport where the metro, trams and buses are 100% accessible or in the cultural sector where operas are performed with audio-description and programmes are available in large print or braille.

(Source: West- Welfare society territory)



## Programme and Events



# Welcome to CII Design Excellence Awards 2015

In an ongoing pursuit to establish design as a tool for national competitiveness, CII initiated the 'CII Design Excellence Awards' in 2011. In its fifth year, we are pleased to announce that applications are now open for the CII Design Excellence Awards 2015.

Endorsed by The India Design Council, CII Design Excellence Award is a celebration of Indian Design which will present the emerging face of design in India and its newer manifestations. The award seeks to demonstrate the value of design to the Indian Industry and will be a true acknowledgement of the prowess of Indian design, innovation and originality.

This Design Award is a perfect opportunity for your company to hog the limelight and gain increased appreciation for being a design-led organization.

32 AWARDS

4 CATEGORY WINNERS

28 SUB CATEGORY WINNERS

## Eligibility

### Design

- ▶ The entry submitted for the CII Design Excellence Award has to be designed for / designed in India and manufactured and or marketed in India
- ▶ Submitted by a company registered in India

### Period

- ▶ Design must be fully commissioned and in market or usage at the time of entry
- ▶ The design must have been realized in the calendar year of 2014 or 2015
- ▶ Prototypes cannot apply
- ▶ The entries must comply with the mandatory applicable standards for the given entry

# **TypographyDay2016**

## **Focus on 'Typography and Education'**

25 - 27 February 2016 at [Srishti Institute of Art, Design and Technology](#), Bangalore

Call for Logo (deadline 31 July 2015)

Call for Papers (deadline 30 September 2015)

Call for Poster Design (deadline 31 October 2015)

<http://www.typoday.in>

## **Transportation connects us all.**

Whether it's simply getting from home to work or using products shipped over distances near and far, in every region of the world transportation impacts our daily lives.

At first glance, transportation may simply appear to be about the movement of people and goods. But looking deeper, it's also closely linked to equality, access to healthy food and good schools, and wildlife impacts, for example.

As the mobility demands of people and freight have grown, so too has the need for products, systems, and services that will make the transportation sector more life-friendly, for both people and the planet.

Registration is now open

Learn biomimicry and how to apply it while competing for cash [prizes](#) with students from around the world.

[Register](#) your team for immediate access to the [biomimicry design resources](#) and start developing your design solution today!

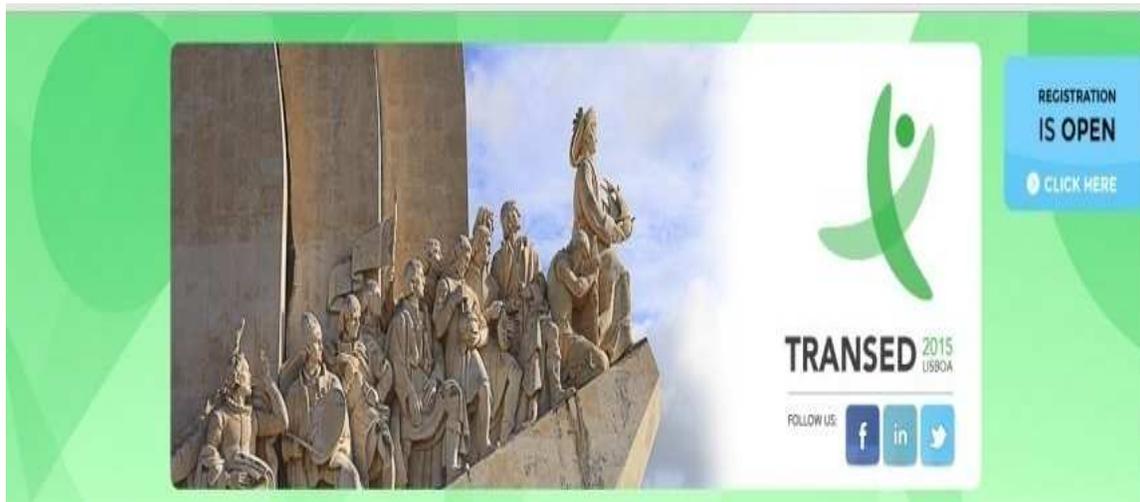
+33 680 48 62 67

INFO@MONEYDESIGN.ORG

---

Take a chance to travel for educational or professional purpose and tourism to the beautiful region of Provence. Improve your poster design practice and exhibit it with a selection of internationally renowned graphic designers in a European Capital of Culture.

# Transcend 2015



The voice of blind and  
partially sighted people in Europe

## Interaction Awards 2015

### EBU, The Vision for Equality Award

#### The Vision for Equality Award

**The EBU Vision for Equality Award** is given to European organisations, institutions, policy makers, enterprises or individuals in recognition of their commitment to protect and promote the rights of blind and partially sighted people and to improve their living conditions. The Award, which consists of a certificate and a piece of art by a visually impaired artist, is presented every four years on the occasion of EBU general assemblies.

Nominations may be put forward by EBU national members and are processed by the EBU Awards Working Group.

CALL FOR NOMINATIONS FOR THE 2015 EBU "VISION FOR EQUALITY" AWARD



# FINISTERRA

## IV ARRÁBIDA

film art & tourism festival



### CONVITE

6 de Maio – quarta – 10 horas  
Fundação Portuguesa das Comunicações em Lisboa

Carlos Sargeadas, diretor do Finisterra Arrábida Film Art & Tourism Festival, a Fundação Portuguesa das Comunicações, a Câmara Municipal de Sesimbra e Arrábida Film Commission tem o prazer de o convidar para estar presente na Sessão inaugural da 4ª edição do Festival

organização



# 14th Participatory Design Conference

15 - 19 August, 2016

Aarhus, Denmark



## AIAP WOMEN in DESIGN AWARD



AIAP  
WOMEN  
in DESIGN  
AWARD

PREMIO BIENNALE DESIGN  
DELLA COMUNICAZIONE



# SPARK



CALL FOR ENTRY

출품작 공모

INSCHRIJVING GEOPEND!

徵件中!

火热征集

AUSSCHREIBUNG ZUM WETTBEWERB

応募者募集中

DEMANDEZ VOTRE ENTRÉE!





**Real People,  
Real Lives,  
Real Progress**



# DISABILITY INCLUSIVE PHOTO CONTEST

Sponsored by *New Mobility Magazine*  
and *PhotoAbility.net* Stock Images

*We are looking to break the mold and discover the best inclusive photos that will change the way the public, advertisers, magazine editors and business owners see disability. Your images can help eliminate social, structural and professional barriers!*

**Images should depict real people with disabilities of all ages in the following categories:**

1. Lifestyle activities (dinner with friends, gardening, working, parenting, or enjoying a hobby)
2. Travel
3. Creative (unusual places, stylized, creative use of wheelchair parts, reflections, shadows, etc.)
4. Sports
5. Business/education
6. Portraits

The contest will run for 4 months, from September 1 to December 31, 2015. We'll announce monthly winners online and award the Grand Prize in the February 2016 issue of *New Mobility*.

- Monthly winners will each receive a \$100 cash prize
- Finalists and winners will be published on *PhotoAbility.net* (you'll receive royalties for images sold)
- Finalists and winners will be featured in a special gallery on *PhotoAbility.net*
- Winning images will be published in *New Mobility*
- Grand Prize winner will receive a \$500 cash prize and a write-up in *New Mobility* that includes the Grand Prize image

Photos must be taken with a camera that is at least 8 megapixels and may include iPhones and other mobile. All people featured in the images must be willing participants in the competition and sign a model release. You may enter as many photos as you wish. See all terms and conditions and register for contest and upload images at [photoability.net/disability-inclusive-photo-contest.html](http://photoability.net/disability-inclusive-photo-contest.html)





WE WANT TO HEAR FROM YOU

**1 8 4 5** people have participated from  
**1 5 7** countries

The World Humanitarian Summit is seeking ways to better meet the needs of people affected by conflicts and disasters. Show your support for the actions needed to make humanitarian action fit for future crises.



## XRCI Open 2016

Bangalore, India – January 21-22, 2016

<http://xrci.xerox.com/xrci-open-2016>



# DESIGN EXPERIENCE

**DESIGN EXPERIENCE** is an initiative conceived by designers, made possible through designers and directed to designers.

We organize a **one-week intense seminar in Barcelona** where we explore the main concepts of Office Management, Project Management, Teamwork, Customer and Space Psychology, Creative Process, Sustainable and Ethic Design.

Important Barcelona designers will open the doors of their offices for us, will show us their construction sites and will tell us about the way they work.

We organize visits and round trips in the most important factories, showrooms, retails, places and sites in the area of Barcelona.

We discuss in a design environment about the most advanced topic about the design process



## Pacific Rim International Conference on Disability and Diversity

The Pacific Rim International Conference, considered one of the most 'diverse gatherings' in the world, encourages and respects voices from "diverse" perspective across numerous areas, including: voices from persons representing all disability areas; experiences of family members and supporters across all disability and diversity areas; responsiveness to diverse cultural and language differences; evidence of researchers and academics studying diversity and disability; stories of persons providing powerful lessons; examples of program providers, and; action plans to meet human and social needs in a globalized world.

**April 25 26, 2016 Honolulu, HI: Hawai'i Convention Center**



### Joseph Binder Award 2016

#### Organisation und Information

designaustria  
designforum Wien / MuseumsQuartier  
Museumsplatz 1, Hof 7  
1070 Wien  
Österreich  
www.designaustria.at  
Tel.: (+43-1) 524 49 49-25  
E-mail: heidi.resch@designaustria.at

up

2015 endorsement by

**ico-D** International Council of Design  
leading creativity

**BEDA** The Bureau of European Design Associations

In Kooperation mit:

**aiap** associazione italiana design della comunicazione visiva

**alliance française des designers**

**ILLUSTRATOREN ORGANISATION E.V.**

**BDG** Attitude Knowledge Network

**CZECH UNION OF GRAPHIC DESIGN**

AARP, AARP FOUNDATION,  
HOME MATTERS AND WELLS FARGO, PRESENT

RE-DEFINING HOME:

# HOME TODAY, HOME TOMORROW

A DESIGN CHALLENGE

Stay Informed

Submissions open January 20, 2016

AARP  
Real Possibilities

AARP  
FOUNDATION

Home  
Matters

WELLS  
FARGO

[WWW.IFA-COPENHAGEN-SUMMIT.COM](http://WWW.IFA-COPENHAGEN-SUMMIT.COM)

IFA  
COPENHAGEN  
SUMMIT

Reablement

It's simply the right thing to do

SAVE THE DATE : 17-19 APRIL 2016



# Job Openings

## 1. Job Opening

Looking to fill positions in UX, folks who have good photoshop skills in addition to strong UX background.

You may use this for reference - <https://www.zynga.com/careers/positions/senior-ui-designer>

Feel free to mail me at this email id for any details.

Vyas Mohan Thottathil<[vyas.thottathil@gmail.com](mailto:vyas.thottathil@gmail.com)>

## 2. Job Opening

F1Studioz is looking for compulsive problem-solvers with excellent visualisation, collaboration, and communication skills.

Interaction Designers at F1Studioz will have a versatile

**Responsibilities:**

Plan, prioritise, coordinate, and conduct user requirements analysis, task analysis, conceptual-model, information architecture, interaction design, and UI review.

- Design and specify user interfaces and information architecture using participatory and iterative design techniques, including observational studies, customer interviews, usability testing, and other forms of requirements discovery.
- Produce user requirements specifications, personas, storyboards, scenarios, flowcharts, design prototypes, and design specifications.
- Effectively communicate research findings, conceptual ideas, detailed design, and design rationale both verbally and visually.
- Manage the design process, drive decisions, track issues, and assist in estimating resource needs and schedules.

- Work closely with development teams to ensure that design specifications are implemented.
- Participate as a contributor to an interdisciplinary team that includes other designers, project management, business and software developers.

#### Qualifications

- 2+ years of experience in product design/industrial design/interaction design
  - Strong knowledge of user interface design processes and methodology, particularly as applied to Web-based applications and consumer electronics.
  - Strong project and people management skills. Must be able to function as a project leader as well as an individual contributor.
  - Proficiency with design and prototyping tools such as Adobe Fireworks, Photoshop and Illustrator.
  - Knowledge of capabilities and limitations of Web technologies such as HTML, JavaScript, Flash, and CSS.
  - Excellent communication and organisation skills.
  - Bachelors or Mastersdegree in Human-Computer Interaction, Industrial Design, BFA or any design program.
  - A passion for creating products that resonate emotionally with people.

Interested candidates can respond with their portfolio to [dhayan@f1studioz.com](mailto:dhayan@f1studioz.com).

### 3.Job Opening

We are looking for a full time Graphic Designer at [Drishyam Films](#), Mumbai. We are a leading film production studio, creating content driven cinema like AnkhonDekhi and Masaan.

The workspace is young, vibrant and full of fresh ideas.

The graphic designer is expected to:

- Design media communication like press kits, brochures and emailers.
- Design some promotional material for films like posters, flyers, etc
- Execute the design requirements of entire social media campaigns.
- Be proficient in Publication design, Promotional design and Branding.
- Be proficient in Photoshop, Illustrator and InDesign.

We're looking for someone who can take initiative and can bring something new to the table.

Please send applications to [reishabh@drishyamfilms.com](mailto:reishabh@drishyamfilms.com) or [shraddha@drishyamfilms.com](mailto:shraddha@drishyamfilms.com)

## **4. Job Opening**

Mubble was founded in 2013 by three friends, with strong interdisciplinary backgrounds in marketing, analytics and mobile technology platforms. We are based in Koramangala in Bangalore, and are always looking for the right mix of passion & aptitude who can join us.

Modern multi-core smartphones put huge amounts of processing power in our pockets. Our patent-pending on-device analytics technologies enable powerful data crunching on the phone and reducing the need to send data out of smartphones to central servers. This not only make our Apps smarter, but extremely privacy friendly as well.

Our first App, called Mubble is a simple service that presents a live bill of usage to prepaid subscribers. Mubble helps subscribers track their mobile balance, deductions and mobile data usage, all in one easy place. It is the first and only fully dual-SIM aware App based service of its kind. Mubble uses multiple on-device analytics technologies like telecom text analytics to enable simple and intelligent utilities for users.

**Job: User Interface designer**

**Responsibilities**

- Own user experience as well as look and feel of our consumer Apps
- Design user interactions, evolve wireframes, prototypes and navigation flows
- Own and be responsible for all Visual designs
- Develop complete UI mockups for product releases
- Work with engineers to help implement your UI designs
- Develop UX and UI standards for Mubble's Apps

**Required Experience**

- 3-5 years of work experience as UX / UI designer
- Direct experience in designing UX and UI of Smartphone Apps, Android preferred
- Well versed with wireframing and prototyping tools
- Experience creating creative concepts, detailed mockups, and graphical assets for Smartphone Apps
- Experience managing heuristic evaluations, A/B testing, surveys, or conducting focus groups
- Experience in maintaining documentation such as user personas, detailed navigation flows and wireframes

**Send your interest to [raghavv@gmail.com](mailto:raghavv@gmail.com)**

## 5. Job Opening

Idiom Design & Consulting Ltd. Bangalore, is looking for a senior Graphic Designer (10 plus years of experience) to lead a team of designers and work on challenging projects in branding and other areas of communication design. A challenging opportunity with immense potential for professional growth. Remuneration package will be comparable to the best in the industry. Kindly pass a word around. Those interested may be asked to send in their CV to: [mgd.nair@idiom.co.in](mailto:mgd.nair@idiom.co.in).

## 6. Job Opening

**Location:** Vienna - Austria

**Contract duration :** Minimum 2 Years

**The consultants shall have the following experience:**

**Experience and Skills**

**The consultants shall have the following experience:**

- \* A minimum of 4 years of experience as Interaction Designer
- \* A minimum of 4 years of experience of standard design software tools such as Photoshop, Illustrator, etc.
- \* A minimum of 4 years of experience using HTML, CSS and JS web standards
- \* Graphics design experience for creating Icons/Buttons/Graphics
- \* Expert knowledge in Bootstrap framework, HTML5, CSS3, LESS (+Angular JS)
- \* Should have work portfolio (to be shared with the team for reviewing and assessing his suitability)
- \* Strong understanding of the latest web technologies and their capabilities, including Responsive Web Design
- \* Proficient with multiple ways to communicate ideas and concepts (e.g. storyboards, wireframes, prototypes, etc.)

**Work Specification:**

**The consultants will be assigned the following core tasks:**

- \* Identify user requirements by researching and analyzing user needs, preferences, objectives, and working methods.
- \* Study how users consume content, including data categorization and labeling; meeting with focus groups.
- \* Plan information architecture by studying the site concept, strategy, and target audience; envisioning architectural scheme, information structure and features, functionality, and user-interface design.
- \* Team up with Back end developers to ensure the design gets translated well – as a final solution.

**Education:**

**The consultants shall have a university degree in Human-Computer Interaction, Cognitive Science, Design, a related subject.**

**Interested, please share portfolio/resume to [qalqi@qalqi.com](mailto:qalqi@qalqi.com)**

## 7. Job Opening

SAP Labs Bangalore is looking for a talented visual designer to join one of the design teams. Mentioned below is the job description and requirements.

### Visual Design

1. Ability to conceptualize and deliver appealing and creative visual design solutions and assets across various formats and levels (low fidelity to high fidelity, controls to layouts to patterns & templates)
2. Proven theoretical & practical knowledge of graphic & visual design theory, methodologies and concepts, including knowledge of contemporary trends in visual design and responsive design (across multiple form factors and resolutions)
3. Ability to deliver visual design specifications to the development team
4. Creation of icons and icon fonts
5. Ability to apply theming and deliver reusable visual design patterns
6. Ability to think, visualize and deliver visual designs from an end user and interaction design perspective
7. Ability to understand business requirements, interaction design, technical possibilities & limitations of controls and how visual design is crucial to the end user experience

**Technical** – Good understating of CSS (mandatory) & HTML5 (desired, may influence the final decision)

**Team work** – Experience in working with a multifunctional team of UX Designers, Solution Management/Subject Matter Experts and Developers. Experience in working with cross-located teams is desired but not mandatory.

**Communication** - Excellent English communication skills (writing & speaking) is mandatory

**Soft Skills** – self-motivated, creative & innovative, pragmatic, demonstrates maturity & emotional intelligence, especially since the role requires extensive collaboration between multiple stakeholders working in a global setup

**Work Experience** – 2 - 4 years of experience; including some Implementation experience in building working prototypes in HTML5 + CSS (is a desired but not mandatory)

**Educational Background & Other Requirements:**

1. Masters or Bachelors degree in graphic design from a well-recognized institution
2. Portfolio is mandatory.
3. Proficiency in Adobe Creative Suite and other graphic design tools including tools for creation of Icon Fonts (example: FontLab)
4. Ability to think creatively and execute & deliver at a practical level (based on the ground realities)
5. Passionate about visual design

Interested people can email me at [sugunadew@gmail.com](mailto:sugunadew@gmail.com) with their resume and portfolios.

## 8. Job Opening

Housejoy is a fast growing startup based out of Bangalore.

Candidates interested can directly get in touch with the CEO at:  
[saran@housejoy.in](mailto:saran@housejoy.in)

Housejoy provides high-quality, on-demand residential services in Bangalore, Mumbai, Hyderabad, Chennai, Pune and other major cities. We are a dynamic team, having capable and trusted professionals who perform a wide variety of common home repairs and maintenance services. You can lookup for more information at [housejoy.in](http://housejoy.in)

What are we looking for?

We are looking for passionate & experienced design leader to join our team.

Role: Head of UX Design

- You will be building and leading a high performance UX team.
- You will be defining the delightful experiences across touch points and across platforms.
- You will be in-charge of the product design decisions, interaction and visual designs.
- You will mentor other junior designers in the team.
- You will be the go to person for all things Design.

Candidates interested, please get in touch with [saran@housejoy.in](mailto:saran@housejoy.in)

## 9. Job Opening

Hiring for UX intern for Salesforce.com, Hyderabad.

We are looking at hiring students / undergrads who are permitted by their college to do internship with Corporates.

Skills required :- HTML, CSS, Java Script and Photoshop

Work location :- Salesforce.com , HYDERABAD

Pay :- 25000/- per month

Internship tenure - 3 months

Senior Recruiter | [salesforce.com](http://salesforce.com) | Hyderabad

P: 040-67307445 | Email: [Asheesh.sharma@salesforce.com](mailto:Asheesh.sharma@salesforce.com)

Web: [www.Salesforce.com](http://www.Salesforce.com) | <http://in.linkedin.com/in/asheeshhr/>



## Contact *Design for All Institute of India*

### Advertising:

To advertise in digital Newsletter

[advertisement@designforall.in](mailto:advertisement@designforall.in)

Acceptance of advertisement does not mean our endorsement of the products or services by the Design for All Institute of India

News and Views:

Regarding new products or events or seminars/conferences/workshops.

[News@designforall.in](mailto:News@designforall.in)

### Feedback:

Readers are requested to express their views about our newsletter to the Editor

[Feedback@designforall.in](mailto:Feedback@designforall.in)



## **Forthcoming Events and Programs:**

[Editor@designforall.in](mailto:Editor@designforall.in)

**The views expressed in the signed articles do not necessarily reflect the official views of the Design for All Institute of India.**

## **Chief-Editor:**



**Dr.Sunil Kumar Bhatia Faculty Member,  
13, Lodhi Institutional Area, Lodhi Road, New Delhi-  
110003(INDIA)**

## **Editor:**



**Shri L.K. Das  
Former Head Industrial Design Center, Indian Institute of  
Technology (Delhi), India**

## **Associate Editor:**

**Shri.AmitavBhowmick Industrial Designer Small Industries  
Service Institute. Ministry of Small scale, Government of  
India, Delhi**

## **Editorial Board:**

**Mr. M.L.Dhawan**

**Mr. Pankaj Sharma**

**Mr. Pramod Chauhan**

## **Special Correspondent:**

**Ms.Nemisha Sharma,**

**Mumbai, India**

**[Nemisha98@gmail.com](mailto:Nemisha98@gmail.com)**

## **Address for Correspondence:**

**13, Lodhi Institutional Area,**

**Lodhi Road, New Delhi-110 003India.**

**Material appearing in this Newsletter may be freely reproduced. A copy of the same and acknowledgement would be appreciated.**

**This Newsletter is published monthly, by Design for All Institute of India,**

**3 Lodhi Institutional Area,**

**Lodhi Road, New Delhi-110 003 (INDIA)**

**Tel: +91-11-27853470**

**E-Mail: [newsletter@designforall.in](mailto:newsletter@designforall.in)**

**Website: [www.designforall.in](http://www.designforall.in)**