

Guest Editor : David Berman

Content of October 2016 Vol-11 No-10

1.	Chairman's Desk : Role of Rotational motion to linear and vice
	versa in design3
2.	Forthcoming issues:10
3.	Guest Editorial: "What do Turkey, Singapore, and Romania have in
	common with Massachusetts?"15
4.	Inclusive Design: Plan B:21
5.	The Inclusive Service Design Triad: Humanization, Integration,
	and Flexibility:27
0	ther Regular features



Letter from the Chairman's Desk By Sunil Bhatia PhD

My carpenter was repairing the broken chair by tightening the screw by screw driver and I noticed his action was to rotate the screw and it was slipping inside linearly into wood. I was struck by such a beautiful simple design of screw where rotational motion was converted to linear. Immediately design of nuts struck to my mind where threads are inside and it rotates and slips into the bolt linearly. When I looked at my ball pen with I am writing this write up strike amazed and I thanked Ladislao José Biro for giving us such a nice gift to mankind where century old technique of writing was made comfortable where spillage of ink was eliminated and produced a smooth linear writing on paper by introducing rolling ball pen. The nib in a ballpoint pen is normally made of a metal such as brass, steel or tungsten carbide and when it comes into contact with a piece of paper, or other writing material, the ball rotates and picks up a thin film of ink from the cartridge, which is a pressurized tube and leave mark on writing material. The basic principle was rotational motion were applied for achieving continuous linear motion for writing. Is it modern concept and I believe it was extensively used for establishing modern industrial revolution? I will say with affirmation because by designing the dam for generation of hydro power for electricity by allowing the water linearly fall with

force on wings of turbine for rotation has revolutionized the humans' progress.

I believe the real foundation of modern industrial revolution and success was on converting rotational motion into linear or vice versa. Concept of conveyer belt or use of pulleys or cams or scotch and yoke or rack and pinion and many more that helped in progress of industrialization. Cam is the device that changes rotary motion to linear and best use is in automobiles of camshaft. James watt designed the concept of D valve that converted linear motion into circular and it was the biggest step for future of establishing various type of automobiles but basic principle remain intact in all automobiles. Role of rotation conversion to linear motion as well as linear to rotational motion played significant role in progress of humans and it was witnessed since cosmos was created. It is inbuilt character of nature.

The more I brood I realize it is not modern phenomena. In nature conversion of rotational to linear exist and I looked at whirlpool or tornado that surfaces when water or storm rotate and is drowned or throw upward the items linearly surprised me. It is mobile, destructive vortex of violently rotating winds having the appearance of a funnel-shaped cloud and advancing beneath a large storm system. It means nature has inbuilt mechanisms and I witnessed when I looked at the stem that has concentric circles helps in attaining vertical height for plants. A bird flies by flapping its wings that moves rotational and flies forward linearly. A swimmer strokes his/her arms in such a fashion it moves in rotation for moving forward/ backward linearly . When we exercise in gym by fixing the elbow for lifting the weight in fact is rotational is converted to linear. Similarly running is conversion of partial rotational to linear motion. A cricket bowler throws the ball linearly by rotating his arm for batsman standing at other end of the wicket for hitting the wicket or allows him to hit for catch out.

It is not confined to nature rather our ancestors used this concept extensively for their progress and to make their tasks executed with no hard work. My past memory flashed and the design of water wheel for lifting water for irrigation allows to flow into linear drain surfaced. Another example of peddle water boat where we rotate the wheel for forward as well as backward linear motion. Rotational spindle was designed for turning cotton fiber into threads by twisting manually. By rotating spinning wheel with the help of special design of needle provides a twist to cotton fiber for converting into thread linearly. I admire the design of sewing machine where rotational motion is easy to operate by user and that helps in stitching by needle moving upward and downward linearly. Wood spool reel releases the thread by rotating and kite moves linearly upward or downward in the sky. Hand held fan was designed on rotation by using linear power by wrist. Design of churner for extracting the butter is based on conversion of linear to rotational where we move the bar by pressing by both palms for rotation to and fro linearly. Later on the role of palm was replaced because it was useful for extracting small quantity of butter to large quantity for churn out with the help of rope placed around the bar of churner .Our ancestors realized that certain edible items were better after crushing and they devised the design with stone mortar and pestle where stone was cut in shape of cup and another stone in shape of bar for holding and hitting with force by moving upward and downward for crushed by its pressure. Fine paste was possible when they use bar to rotate by holding in such a way the crushed items came in contact with maximum surface area for frictional force. Later on traditional carpenter has tool for drilling that has a bow like another tool where rope of it is around the drill tool for linear but it rotates for drill. That was earliest design of conversion of linear to rotational. Before use of animal they designed manual cart for transportation by using push/pull linear force for rotational movement of wheel and as they learned the art of using animal power for their own benefits they designed bullock / horse cart. In bullock/ horse/ dogs cart where animal pulls linearly and wheel moves forward by rotation. Even to separate the grains from the paddy they allowed the ox to rotate over it and linear pressure of weight passes through leg crushes the cover that helps in separate the grains without damage by slightest wind pressure. The best use of animals were put for extracting oils by allowing animals to rotate for grinding and crushing. Modern fishing rod has rotating spool that converts into linear when fish are trapped and allowed for making tired for easily taking out of water. Later they designed winch for attaining good result.

Primitive people realized to kill the animals or used to keep it away for its attack they were rotating by holding any body part that could easily held and released at that point where it went far distance. They were unaware about tensile motion that is linear in nature when we rotate the item circular ad suddenly left. They designed the arrow and bow for killing the animals for food where bow turns to circle that helps in linear motion of arrow. They designed wooden damru or monkey drum for producing sound by holding in hand by rotating to and fro by using wrist linear power that allow bead attach with cord to strike the leather surface of damru. Hand held two-headed drum on a stick; two corded bead beaters strike the heads.

A concept of toys was designed for entertainment and some time it was for educating the art. There were various type of toys but I am focusing on where concept of rational to linear was applied .There was toy assembly includes a hub where two holes are disposed in the hub through which a loop of string is passed. By winding the string and then pulling the string taut, the string can be caused to rapidly unwind, thus rotating the hub. That pulling and squeezing of string was responsible of rotation of hub .They designed lid cart as toy for children where linear force was applied by child on attached wooden bar and that was responsible of rotation of wheel attached at the end of bar rolling on ground. Another was marble ball threw by placing at the edge of index finger and pressed by other hand finger for hitting the number of marble ball placed on ground was using the concept of rotational finger to provide linear motion to marble ball . When I was child and there was not much facility I used to hit the old discarded bicycle tyre by small dry log for rotating it and I do not know why I used to enjoy for keeping the tyre rolling. This hitting dry log creates linear force that makes the tyre rotational. Another toy was "Dugdugi" (Drum Rattle) . I was surprised when I see a child even as a child I did the same by pulling the sting that allows to pull the cart that carries the clay drum and bamboo stick strikes rhythmically and I called it the first known mechanical robot where continuous power was supplied by child by pulling the attach card for motion of cart.

Degrees moves how far angle we rotate our head to see the item but radian is linear distance we travelled. .Torque and rotation has very strong bonding. Torque is linear bearble motion for specific rotation.

7 October 2016 Vol-11 No-10 Design For All Institute of India

Measurements of time by watches are designed on this concept where arms indicating hour, minute and second are rotating by releasing the twisted spring linearly.

In modern time supply of potable water for household is available through pipe lines and it is readily supplied as and when we open the water taps by rotating and that linearly lift the valve of opening and as we twist it closes and stop the supply. Designer have designed storage tank with floating valve that moves making arch as level of water raises by filling and that moves the attach stop valve by moving linearly forward and backward for stopping water inlet. All the water taps, stop cocks and flush knobs has rotating knobs that lift the valve vertically linearly. Even mains water supply line uses various type of valve for functioning linearly for closing and opening of pipe lines by rotating. Even doors lock has knob for rotation for opening and closing that moves the latch to move sideways for clearing hurdles. Modern bulbs or tube-lights are fixed by rotating for placing holder pins into socket's slot for electrical contacts. Electric fans supply the current linearly and by using brush or brushless for rotation of shaft. Bottle caps are closed/opened by rotating and that helps in moving linearly upward or downward. Laptop flap is generally close by pressing that allow the lock latches by sliding lock lever. While opening we unlock by sliding linearly the latch that helps to open flap angularly. Closing of doors or windows is possible by using external force applied linearly and panes can move angularly movement with the help of hinges. A electric floor cleaner has rotational brush that has linear shaft.

A reel of thread when unwind by user moves in rotation by holding and pulling one lose end of thread linearly. Similarly spool of motion picture unwind by rotation but films frames open linearly. This concept was use by circus people for sending message to the masses nearby area in night by using arc light that travels linearly by rotating that was the message that circus has arrived and shows are on.

Our publication is cyclic in nature and we experience rotation of excitement for new edition and it is divine power that silently support for selfless service and we are blessed and succeed in bring out monthly issue without fail and march linearly in forward in time . We are thankful to David Berman who has accepted our invitation for guest Editor.

With regards

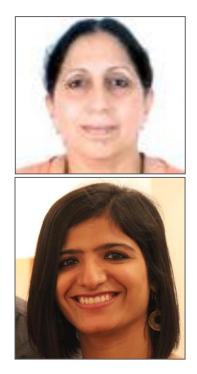
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Forthcoming Issues

November 2016 Vol-11 No-11

Prof NirajaTikku and Associate Prof Krity Geara of Industrial Design of School of Planning and Architecture Delhi will be the Guest Editor



December 2016 Vol-11 No12

Mainak Ghosh Assistant Professor of Architecture & Department Regional Planning, Indian Institute of Technology Kharagpur, India will be the Guest Editor. his research interest revolves around perception studies, cognition and learning, and urban design. Presently he is working on various facets of visual perception factors cutting across various media in an urban domain.



Precisely this delves in understanding concepts between spatial design, Human Computer Interface, Robotics, Information and instructional design, interaction design etc. which could be proliferated at an urban design and urban scape level. Completing his Bachelor in Architecture, he deep-dived into specialization of visual communication design in IIT Kanpur, Masters in Design. There after industrial experience as design consultant in one of the largest corporations in India. He has worked for various international and national clients working on the fronts of innovation, research & development and design interventions. He is well travelled with collaborations and connections in USA, Canada, UK, China and UAE. He is the founder of Undream Design, a holistic design hub. He has always been keen on academic pursuits, with publications of books, various journal papers and with attending conferences, mainly focusing on bridging the gap between communication design and space, architecture & urban forms. He has been invited speaker to Smart Cities and Countries Congress held in Paris last year. He has been visiting faculty in various institutions such as, Jadavpur

University, School of Illumination Science, Engineering and Design, Kanpur University, Loreto College. Apart from his academic and professional expertise, as a hobby he is inclined towards artistic spurts. His art works has been exhibited in Berlin, Germany in 2012.

January 2017 Vol-12 No-1

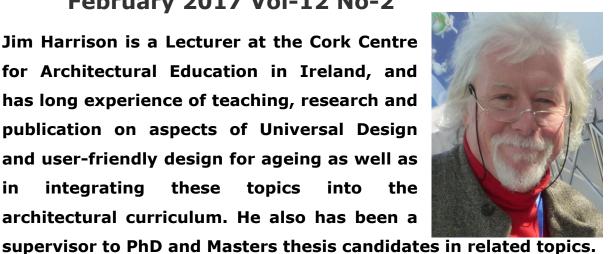
Gerhard M. Buurman is the founder of a couple of programmes, initiatives and institutes at the Zurich University of the Arts (ZHdK). Hochparterre called him a steady initiator and Bernhard Bürdek commended his distinguished ideas on the university level. As theorist and vibrant researcher he worked in international groups at the ETH



Zürich and Harvard Law School as a practitioner. He will be the **Guest Editor.**

February 2017 Vol-12 No-2

Jim Harrison is a Lecturer at the Cork Centre for Architectural Education in Ireland, and has long experience of teaching, research and publication on aspects of Universal Design and user-friendly design for ageing as well as in integrating these topics into the architectural curriculum. He also has been a



He has produced numerous publications on inclusive design related topics with over 50 papers and journal articles, a collection of which were successfully presented for his Higher Doctorate (LittD) at the University of Sheffield. Whilst teaching in Singapore (1984 – 2002) he became involved in UN ESCAP 'Training the trainers' accessibility workshops in the Asian Pacific Region, in which he is still active. Amongst many other achievements he contributed a section for the Singapore Access Code on the needs of older people and, as a UN Expert Resource Person, continues to participate in projects on Universal Design promotion. He will be the Guest Editor.

March 2017 Vol-12 No-3

Bonollo, Emeritus Prof. Elivio Emeritus Professor, Industrial Design Faculty of Arts & Design ,is one of Australia's leading industrial design educators and researchers. In 2008 he was conferred with the Honour of Cavaliere by the President of the Republic of

Italy in recognition of his collaborative work in design and education. He is emeritus professor of industrial design at the University of Canberra (UC), and recently visiting professor in the School of Design and Environment (2004 -2007), and the Department of Mechanical Engineering (2007) at the National University of Singapore (NUS) will be the Guest Editor

April 2017 Vol-12 No-4

Dr. Sandeep Sankat Associate Professor, Department of Architecture , School of Planning & Architecture, Bhopal India will be the Guest Editor .





June 2017 Vol-12 No-6

Dr. Gaurav Raheja Associate Professor, Department of Architecture & Planning Joint Faculty, Centre for Excellence in Transportation Systems Indian Institute Of Technology (IIT) Roorkee, Uttarakhand State, India will be the Guest Editor



July 2017 Vol-12 No-7

Mark Watson was chosen from an international field of Designers to participate in the International Society of Councils of Industrial Design Interdesign Workshop, a two week workshop looking



at Smart City solutions to social, environmental and economic problems in Mumbai .

Mark has a 15 year long engagement with Design in India presenting at leading Design Conferences on Design Thinking and Experience Design and is currently adviser to the Indian Design Festival.

Mark Watson MDIA Managing Director Design Providence http://www.designprovidence.com.au Lead Partner Design Thinkers Group Australia http://www.designthinkersgroup.com/

Co-Founder Indo Australian Design Research Alliance https://www.

Guest Editor:



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

"What do Turkey, Singapore, and Romania have in common with Massachusetts?"

David Berman, RGD, FGDC



Caption: Colour blind-killer traffic signals on Mass Ave. in Cambridge, Mass. Photo: Leslie Shelman

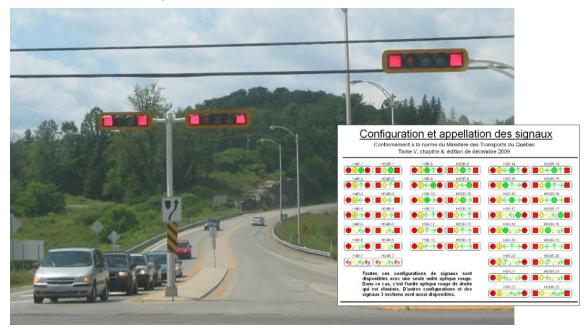
I was driving through downtown Cambridge, Massachusetts three years ago when I saw it; the traffic signal pictured above intends to tell people that it's not safe to turn left. However, for folks like me who live with a color deficit, it encourages me to turn left into oncoming traffic. If you can't see the red colour in the arrow, which suggests a prohibition, it shouts "Turn left now," especially if impatient cars are on your tail or you are rushing to your nibling's* bart mitzvah**. Even in people without this deficit, the part of our brain that interprets the encouraging shape of the arrow triggers a hundred milliseconds before the part that associates red with danger.

I qualified for my Ontario Driver's License as a teenager growing up in Ontario, Canada, and so I am allowed to drive in Massachusetts when I visit at my own peril. But my nibling* who lives there, and who lives in an almost completely colourblind world, cannot legally get a Driver's License from his state's Department of Motor Vehicles (DMV). The Massachusetts DMV states that anyone applying for a license "must be able to distinguish the colors red, green and amber." Massachusetts is the only state in the USA with such a law, infamously grouping themselves with Turkey, Singapore and Romania. These regions feel it's dangerous to have people living with colour deficits loose on their roads, so they have laws that prohibit their full participation in society rather than having laws that mandate better design of traffic signals.

More typically, traffic signals everywhere would benefit from not relying on colour. In the Canadian province of Quebec, we have a solution for that: traffic signals that don't rely on colour. Going beyond rejecting a red arrow as a way to say "Don't turn now", even the basic stop-go lamps use the number of lamps (two for stop, one for go), the shape of the lamp, as well as the colour of the lamp (for backwards compatibility) to indicate when it is safe to proceed. The entire world should replace their dangerous traffic signals with these.



Caption: Stop and go traffic signals at an intersection in Seoul, Korea as seen by someone with a complete colour deficit. Photos: David Berman



Caption: Traffic signal in Quebec, Canada safer for those living with colour deficits... and everyone else too!

Meanwhile, back in Massachusetts, my nibling, who happens to have a profound colour deficit, has now reached the age where he wants to get his driver's license. In the male population worldwide, 10% have some level of colour deficit. He may indeed choose to do what 10% of men seeking their driver's license do in Massachusetts? Apparently, they lie on the written test.

Laws like those in Massachusetts aren't only inconvenient; they constitute a violation of human rights, which in the USA has been enshrined in the Americans With Disabilities Act (ADA). The ADA, one of the greatest pieces of human rights legislation in the history of civilization, legally mandates equal opportunity for persons with disabilities in fields like employment, government services, public accommodations, and transportation.

We live in a time where country after country is passing laws that are proudly leading us to a civilization which increasingly recognizes and enshrines the benefits of inclusive design for all. When we think of disabilities, most of tend to think about the extremes: someone blind since birth... a quadraplegic... being completely deaf. Yet most disabilities are more subtle, more temporary, and most of us have them. When you're on the treadmill at the gym where five TVs are showing five stations: the sound is turned off and the captions are on, and so everyone is temporarily deaf. Or when we use a black and white laser printer to print a Web page: almost all suffer from that flavour of temporary colourblindness.

And so in the same way that Massachusetts alienates its colourblind drivers, we risk losing a substantial portion of the audience we deserve when we don't follow the inclusive design principles that are sure to leave no one behind...

... in this issue, we explore how to get that done.



Dr David Berman



Dan Formosa Ph.D.

From the start of his career Dan Formosa has been helping change the way we think about design. With a background in design and ergonomics, he understands not simply how a product should work, but also how people work – because design is about people, not things.

From 1981 to 1990 he helped create Smart Design, with the idea that design should be about people not things. His original work on OXO Good Grips kitchen tools helped them become a symbol of inclusive design – design that works for everyone. Dan conceived SmartGauge, an instrument cluster for Ford Motor Company designed to influence driving behavior to save fuel – an innovation for the industry. In healthcare he has rethought products from consumer items to surgical equipment, automobiles to food.

Awards include the Smithsonian's Cooper-Hewitt National Design Award, accepted on behalf of Smart Design, and IxDA's first annual Interaction Design Award, in the "Disruptive" category. His work is included in the permanent collection of the Museum of Modern Art. Dan continues to develop ways to better understand design and its potential, employing both quantitative and qualitative methods in design research, and drawing on knowledge from a wide array of disciplines. The results continue to have positive impact on people's lives.

In addition to his personal consulting work he recently co-founded two collectives, 4B Collective (focusing on design and gender) and Brainpool (focusing on design and emotion). Dan also helped create the Masters in Branding program at the School of Visual Arts in New York City, the first of its kind, exploring the future of brands. He lectures and writes frequently about the physical and emotional aspects of design. Dan appears in the documentary films Objectified and Design & Thinking. He also co-authored the bestselling book Baseball Field Guide.

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Inclusive Design: Plan B

(and thoughts on why the field of design isn't getting very far.)

Dan Formosa, Ph.D.

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The idea of design-for-all has been with us for 40 years - maybe longer. You would think we'd be further ahead by now. It's still a foreign concept to many companies and organizations in the world witnessed by the not-very-well-designed products and services that surround us. There are, of course, great examples of inclusive design to be found over the last four decades, and attention to the topic has flourished. Lots of people out there doing really nice work. But I would have thought that by now, 40+ years on, we would have been much further ahead. (Rama Gheerawo of RCA' Helen Hamlyn Centre told me last week that we'll know we achieved our goal when the term *Inclusive Design* becomes obsolete – it will all be inclusive.) Hope I'm not insulting anyone here, because this is the Design For All community, and by writing this article I realize I am preaching to the choir. But I'm wondering if many of us, like the rest of the design profession, are operating within a system that isn't quite getting us to where we want to be – at least not quickly. It may be time for some soul searching, and ideas for *Plan B*.

A quick history of design, from my US point of view: Since the mid-1950s the field of design has been sponsored (a.k.a. financially supported) by marketing budgets. In the 1950s television was becoming extremely popular. For the first time companies were able to show their products, at the same instant, to consumers across the country. A heyday for the field of marketing emerged. Budgets became excessive, marketers wielded power, the Madison Avenue advertising culture was soon to be in full swing. It quickly turned into competition among companies – fierce, and ruthless at times. In this environment promises were made far beyond what companies or their products could deliver. "New and improved" items were being offered at a pace faster than they could actually be developed. How to accomplish this? Hire some talented designers to make the products look new and improved - whether they actually were or not. Designers' focus, and value, came to be based on aesthetics. Research in design, attention to things like usability, were not in the picture at all. Designers became renderers and model makers, typically called in after the product had already been conceived and engineered. Designers added an aesthetic covering to finalize the product. That role lasted through the 1970s and well into the 1980s, as can be seen by the false chrome and wood grain finishes on toasters, televisions, and any number of other products people were buying at the time.

By the 1980s a new wave of designers were re-thinking that role. Maybe designers should seek a higher purpose, become more relevant, cater to the real needs of people as opposed to the needs of marketing executives. The concept of *user centered design* began to emerge. Designers opted to perform their own research, not simply rely on marketing research to dictate their profession. The way to approach user-centered design was based on a plan, a process that design teams could follow to get to the actual needs of their consumers. That process, unique to manufacturers in the 1980s, consisted of a series of steps. Titles of the steps vary, but basically follow a format that has since become standard practice: Step 1, Discovery; Step 2, Concept Generation; Step 3, Design Development; Step 4, Refinement; Step 5, Finalization. These steps represented a significant departure from the way companies previously approached, and thought about, the role of designers.

The approach was radical at the time – but that was the 1980s. Back then, most design programs addressed incremental changes in products - a company needed next year's version of a camera, printer, microwave oven, or whatever. *Innovation* wasn't nearly as popular as it is today. The process developed to design products was created to be efficient, getting the team from start to finish as quickly and efficiently as possible. While the desire to conduct research in design existed, designers weren't well trained in research (why would they be, since little to none had previously been practiced in the profession.) Experts in fields like applied psychology and ergonomics were called in. As the new process in design started to find its place, competition within the field of design also became a factor. Designers were following a more-or-less similar process. To increase efficiency, that process was often staffed by people who were not necessarily the most qualified in a topic, but were the most available. Staffing and managing a design team is easier when the process is so formulated that anyone in the design office could fill the slot. The process became routine. Projects were no longer planned on blackboards or whiteboards, but on spreadsheets, usually replicated from one project to the next.Design evolved to become a profession based on process as opposed to knowledge.

Forty years later, I can say from personal experience that few designers have a working knowledge of even the most basic principles in biomechanics – how the body works – or psychology – how the brain works. Yet many designers and design schools profess

25 October 2016 Vol-11 No-10 Design For All Institute of India

to be *all about the person.* Again, I'm assuming that the *Design For All* crowd reading this article consists of the already converted. But I'm wondering if the entire field of design has some fundamental structural flaws that's keeping design from advancing. After 40 years, what does the profession know about topics like *design and behavior, design and gender, design and stress*? If we did, we would all be in possession of far more power, and budgets, than we seem to be now. And we'd see far better design in the world.

If the field is moving slowly, as I believe, maybe we should do some soul-searching to get to the cause. Does the practice of design need to be re-designed? Is the system for design that we developed in the 1980s now holding us back? Is it time for Plan B?

That process by which we designed products was, back then, unique and valuable. But now, 2016, while that system is still important, it's become a commodity. I can travel around the world and find designers well versed in the process. What's next?

Lately I (and others around the world) have been experimenting with a somewhat different model for design. Instead of a fixed group of designers, where the ideal is a system that will keep everyone continuously busy regardless of their level of expertise, can a network of designers become more efficient, flexible, and have significantly more impact? And in doing so, advance the profession at a rate far beyond its current pace? This can have dramatic effect on seeing more universal achievements in design for all.

We're working in a collective model. That means we've formed networks of designers, engineers and other design-related professionals to gather together to work as a team when an opportunity arises. Collectives are based around topics that represent a need, and are enthusiastically regarded by members of the network. They emphasize knowledge over process, and places value more on what we know rather than what we do. When an opportunity presents itself, a team is formed based on the most appropriate, knowledgeable and passionate people within the network.

In my case I helped form two collectives: 4B, based on design and gender (4B standing for the soon-to-be 4 billion females in the world), and Brainpool, adding quantitative methods to our design research in effort to truly learn more about design. In both collectives we're helping companies, organizations and countries explore the impact design can have to further their goals. (A third collective, newly-formed Advocit, is helping designers, companies and organizations understand the needs of people with arthritis and other challenges – but we're just getting started on that one.)

Collectives may not be the only way to advance our goals in design, although they certainly seem to be an attractive alternative. In our pursuit of advancing design for all, placing knowledge over process and accumulating knowledge on a wide array of related topics, as well as drawing from a network of dedicated people with expertise in a wide array of related fields – the underlying premise of Plan B – has been showing great success.



Dan Formosa Ph.D.27October 2016 Vol-11 No-10Design For All Institute of India



John D. Willis, MDes Toronto | Canada

The author: John D. Willis is a Canadian designer, strategist, and policy entrepreneur working to improve inclusion, innovation and learning in conditions of diversity. In addition design strategy, John also provides market research and program evaluation services for clients in the not-for-profit, public and private sectors. For companion articles detailing the use of design narratives and mapping tools to implement inclusive service design, see www.jdwillis.ca.

The Inclusive Service Design Triad: Humanization, Integration, and Flexibility

"It may be the Devil, or it may be the Lord, But you know, you're gonna have to serve somebody." --- `Gotta Serve Somebody', (1979, Bob Dylan)

I'm fascinated by the challenge of designing better services. As a parent, a consumer, and a citizen with low-vision, I discover opportunities every day to make more effective and delightful experiences - on public transport, in retail shops, and when I want to work or entertain myself through my digital devices.

'Services' can mean anything from a simple taxi ride to a settlement strategy for a refugee family arriving in a new country, or an online Master's degree programme, Designing great services is about more than making a few adjustments to systems that we already have. It calls on all of the design sub disciplines - interaction, graphics, environmental and industrial design especially -- as well as other competencies such as culture change, software architecture, policy development, and business process management. We need to work spectrum the broad of technology, information, across organizational structures and the ever-present 'human factors' of emotions, idiosyncratic preferences, and cultural values.

And yet, too much of what we call 'accessibility' ignores this rich and insightful service design practice, opting instead for checklists of testable 'one-size-fits-all' standards that too often don't succeed in making the world more inclusive. Access barriers are, mostly, issues of poor design in the service systems we engage with - they are not a part of the individual, but rather of the interactions an individual has with the designed world around them.

In this short article, I investigate three aspects of service design -humanization, integration, and the primacy of information architecture -- which should inform 'design for all'. Along the way I will make the case that inclusive service design is an organic catalyst for equity and prosperity in our increasingly diverse societies.

Tuning In to Diversity of Abilities

People with disabilities are the most diverse group on earth. What we have in common is that we have fewer degrees of freedom to adapt to systems, products and situations, but the specific modality of our adaptations come in sets of needs and preferences that are unique to each of us..

In other words, there is no such group as 'blind people' -- rather there are various needs and preferences for lighting, font size, contrast, audio descriptions, colour palettes, animations, and tactile communication that exist *across the whole population*, regardless of vision loss. (Treviranus, 2014a/b; Vanderheiden, 2006) So ironically, design for all must be concerned with design for each person, not an 'average' or 'typical' user.

This is a critical insight for a 'design for all' approach, since it highlights how accessibility is embedded into the larger world of user-centred design. When designers focus on an 'average' or 'typiucal' user's needs, they will often fail to satisfy many whose needs are less prevalent or occur in uncommon combinations.

But recognizing the diversity of human needs in this way also forces us to acknowledge that accessibility is not an *a priori* attribute of things, or the result of a 'universal' set of form factors ('making things accessible to all people' according to Wikipedia). Instead, we need to start thinking of accessibility as an outcome of design that aims to maximize access experiences for diverse users in various contexts. (IDRC, 2013)

Services: The Big Picture

Services have never been more important for our economies and for our experiences as citizens. They've taken over from traditional production of material goods as the key driver of the global economy. As designers, we are accustomed to focusing on the creation of 'things' (refrigerators, clothing, web pages, furniture, and so on) but it is the *immaterial* service sector that now provides a staggering two-thirds of value-added every year to the global economy.

There is a clear contrast between traditional products and services: "Services cannot be possessed; they can only be experienced, created or participated in," according to service design pioneer G. Lynn Shostack (1982). In an influential 2004 article, marketing experts Stephen Vargo and Robert Lusch advanced the idea that the 'mode of production' for services is *co-creation* between consumers and firms, at the intersection of 1) tangible resources (e.g. facilities, raw materials, labour time); 2) intangible resources (e.g. skills, know-how, and opportunity); and 3) customers' desires, needs, time, funds, possessions, venues. (Vargo & Lusch, 2004)

For users (consumers), interfaces and product features recede into the background, as they focus on their own intangible experiences. (Brown, 2005) But for designers, the implication is that we need to focus on the creation of platforms or architecture for users to 'enact' their own experiences. (Lehoux, 2013)

Take for example music and video streaming services, in which the customer creates their own account, sets up a payment channel, and manages their own retail experience on their own time, in their own space and context.

The logic of service co-creation is especially evident in human services such as healthcare, which is undergoing a revolution called 'patient-centred care' in much of the OECD) as well as the so-called 'hard' public services such as transportation. (Brudney & England, 1983) As digital technology disrupts, supports, and augment business processes of all kinds, there is a convergence of service design methods in a single, coherent domain of design practices.

This trend toward a fully-developed service design practice offer important insights for inclusive design. What does 'design for all' look like when we are designing experiences rather than things? How does service design intersect with service design, and what are the appropriate methods to take advantage of the overlap between them?

Inclusive Design in Services

Services 'happen', as opposed to being owned in the traditional sense, in real-time and between real people, but are enabled by platforms, data, structures, and processes that require 'staging'.

The logic of service co-creation is that all of the many factors that affect users in their daily life may come into play in the production process, and can influence the successful delivery of value in the service experience. Feelings, expectations, abilities, memories, beliefs, goals, prejudice, misinformation – all of these have to be taken at face value in a service exchange. A friend of mine, for example, uses a service dog because she has no eyesight; sometimes taxi drivers refuse to pick her up because they have religious beliefs about the presence of animals in their vehicles. This is a fact of a service encounter in which both the driver and the passenger bring everything - their disability and their religious dogma - into the co-creative process, notwithstanding that the law where she lives says this should not be happening.

Value, in our service-driven economy, is created (or not) between whole living people, not flattened personas or 'types'. Claudio Pinhanez evocatively notes that in service systems "the customer is on the conveyor belt," and defines the relationship as one in which the customer is necessary to the means of production and yet remains autonomous of it. The challenge of contemporary service systems design, he says, is to avoid dehumanization in technological architectures and processes. (Pinhanez, 2012, pg. 7). It can hardly be overstated how relevant this is for individuals with intellectual, sensory, or motor differences; divergent sexuality, cultural practices or languages; or who are racialized by a dominant society. Historically, these communities have suffered marginalization, abuse, and silencing not only by policies and institutions but also by designers that reinforce a false dichotomy between 'the mainstream', or average user, and these 'others'.

Using a service design approach, we can train ourselves to see the whole person (including their physical capabilities, emotional intentions and wishes) rather than limiting our discovery to those aspects we deem most desirable for our designs (such as the size of their bank account). We can train ourselves to see that everyone is, at some point, an 'edge case' whose experiences can reveal weaknesses in system design, and spur innovations that benefit a much larger community of consumers or citizens.

For example, a student at OCAD University in Toronto, Jacob Willow, created a participatory process for designing a new City-run shelter for transgendered homeless youth, a group that is typically at-risk of violence, substance abuse, and involvement with the criminal justice system. Shelters are often seen, even by designers, as thoroughly utilitarian spaces, resented for taking up tax dollars and space in 'good neighbourhoods'. Willow countered that tradition by working with young transgendered homeless Torontonians to propose a variety of architectural, graphic, decorative and artistic interventions to render the new shelter a space that emotionally-supportive from the point of view of potential future residents. Humanizing services for people living at the edge of our service economy is a central concern of inclusive design.

A second insight from service design that supports inclusive design is the primacy of system integration. Beyond guality and price (or 'price of entry'), platform integration is a key driver of customer experience, and is discovered through techniques such as customer journey maps and analysis of 'touchpoints' in a service journey. A simple example of how this factor affects satisfaction i public services comes from the public transit system in my home town, Toronto, which lets riders use the same fare tokens or tickets on all vehicles (bus, tram, subway) but they can only be purchased at subway (metro) stations. And although cash fares are allowed on surface vehicles, drivers do not provide change, Contrast Toronto's crazy fare patchwork to Hong Kong's Octopus card, which functions as a single farecard across all local transit modes as well as many shops and restaurants, and it can be recharged at stations, news agents or kiosks throughout the city. The perceived quality of service in Hong Kong (and London, with its Octopus relative, the Oyster card) is much higher than in Toronto because of the high level of platform integration.

More complex services, such as a package holiday or a course of cancer care, span multiple subsystems, and the users' experience of (dis-)integration is a reflection of business efficiency.

Why this matters is that service integration is also a key driver of accessibility. Poorly-integrated services create unnecessary cognitive, sensory, emotional, and mobility barriers. Individuals with disabilities have fewer degrees of freedom to manually achieve the integration they seek, for instance through matching incommensurate sets of instructions, navigating dissimilar web content, or navigating point-to-point to gather or give information that could be served online. In my own life, I am struck by how well my doctor and pharmacist communicate to me in-person but then let me flounder in a sea of incredibly small fonts on most of the packaging in my pharmacy.

What may be an irritant to a mainstream user could be a showstopping barrier for someone with cognitive decline, low vision, or mobility challenges.

This last point highlights a third factor in inclusive service design -"the core material in creating user experiences," says author Mike Kuniavsky. At the most abstract level, what is common to all service systems (self-serve, person-to-person, automated and their hybrids) is information exchange. (Morville, 2010; Glushko, 2010) Service design has to be concerned with data flow, sequencing and time lags (as in any systemic design challenge), but inclusive service design also has to contend with the need for flexible content formatting and alternative interfaces.

 Users with different needs and preferences for how they take in or provide information will benefit from having an intuitive means of reformatting the content to suit their needs. For example, Canadian tax authorities provide me with all correspondence in electronic format, so that I can use my computers' magnification to reformat the content and provide responses. Ideally this can be automated so that users choose and manipulate the reformatting process. If self-service reformatting is not an option, or not a sufficient solution for the user, an alternate interface may be required. The most obvious example of this is when a customer chooses to ask restaurant staff or a bank teller to explain some aspect of information flow to them - what is on the menu? What is my bank balance? - instead of using a self-service option (which may be inaccessible to them). Note that this interfaceswitching may imply a mode switch (from technology-enabled self-serve to technology-enabled person-to-person, for instance).

In this realm, the Web Content Accessibility Guidelines 2.0 are an important resource - despite the word 'web' in its name, these guidelines are good all-purpose design guidelines for all types of information exchange.

(One of the most famous new services in the world - Uber - is failing on this count: In Toronto at least, the content of the Uber app difficult to perceive without very good eyesight; it reformats very poorly on an iPhone; there is no audio equivalent to the visual prompts; and no alternate channel to request and manage my interaction with the service.)

Conclusion

Services are deeply human interactions, so much so that designers risk dehumanizing users through an over-reliance on technology. They can counter this risk by taking into account the voices and experiences of paying 'at the edge' of the service system; their insights can dramatically uncover flaws in the system and suggest corrective action, provided designers do not assume that 'one-sizefits-all'. Other key strategies to improve and humanize services is to monitor the many issues around the integration of services across channels and sub-systems, and by providing flexibility to let users reformat information and choose alternative interfaces according to their needs.

Service design is a discipline necessary to our current design challenges. Through the three key dimensions reviewed here -humanization, integration, and flexibility -- it provides powerful leverage to the 'design for all' philosophy.

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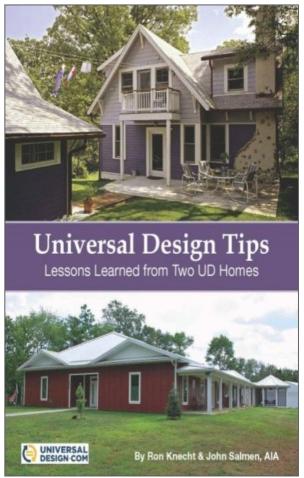


John D. Willis, MDes Toronto | Canada



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*.

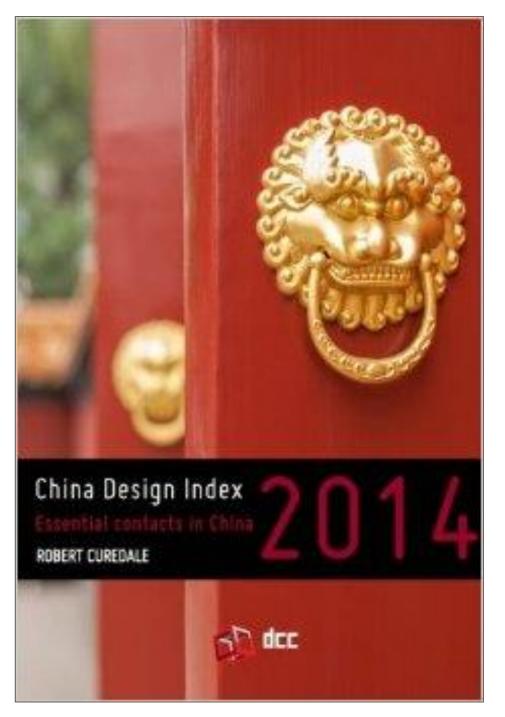
The first section of the book deals with the planning process, providing insight on how to choose a location for the house, consider activities of daily living during planning, best use various types of design professionals, finalize a floor plan and develop a building schedule.

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.

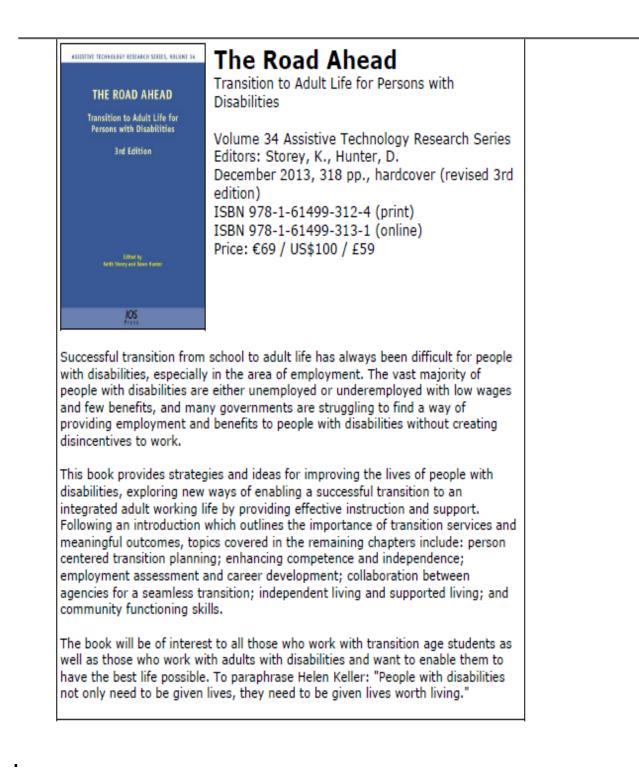
Ron Knecht's experience with Universal Design started after his wife of 46 years became ill with cancer. As her health worsened, Knecht learned first-hand the importance of accessibility for maintaining independence, safety and one's quality of life. Before Knecht's wife passed away, she extracted a 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:

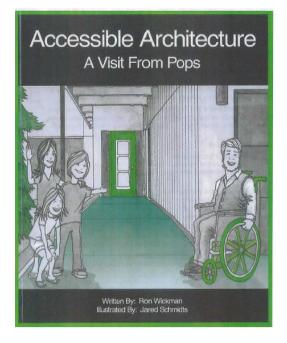


Design for All, Aree DiRistoro:



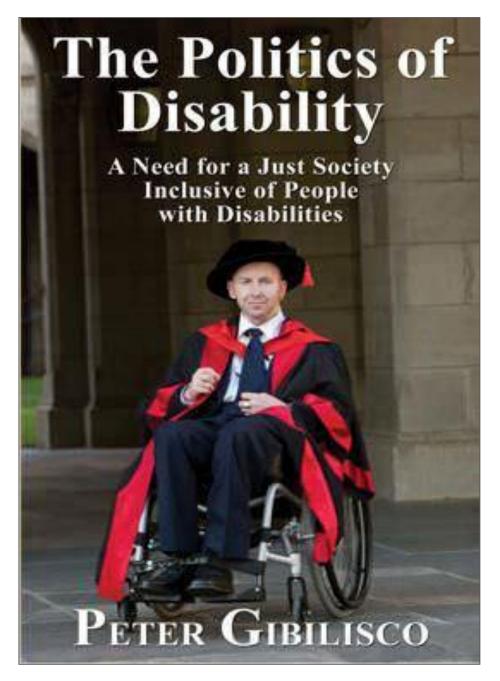
Luigi Bandini Buti DESIGN FOR ALL | AREE DI RISTORO | il caso Autogrill | Maggioli Editore, 2013 http://shop.wki.it/risultatoricerca.aspx?indizioricerca=luigi+bandini+buti This book has been born following the collaboration with Autogrill that, for its new facilities "Villoresi Est", has developed an 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:



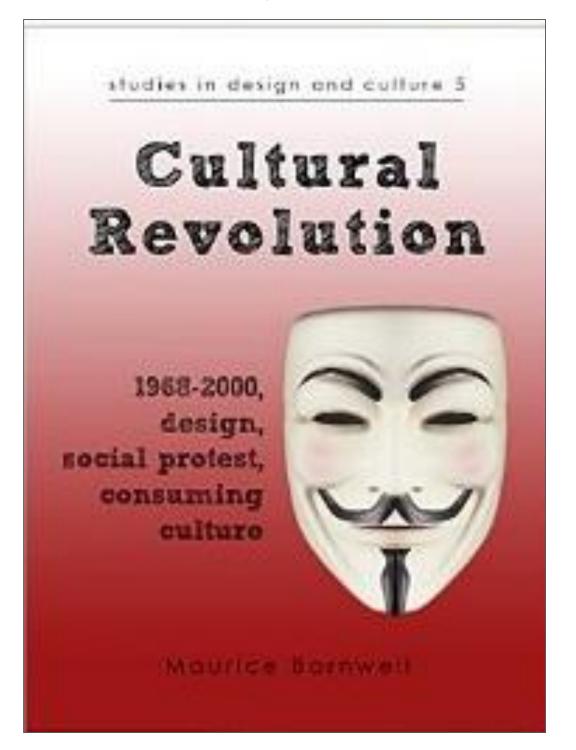
Edmonton Architect publishes - Adult Children's Book-Accessible Architecture: A Visit From Pops. Edmonton Architect Ron Wickman launches his first book titled: Accessible Architecture: A Visit From Pops at the City Room in City Hall, Tuesday, March 18 at 6 p.m. Ron, son of the late Percy Wickman, MLA 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 publis by Gemma B. Publishing draws on this knowledge. Edmonton draughtsman Jared Schmidts blished 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 nonfiction. 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: nwickman@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):



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 multidisciplinarity and cross-disciplinarity 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.

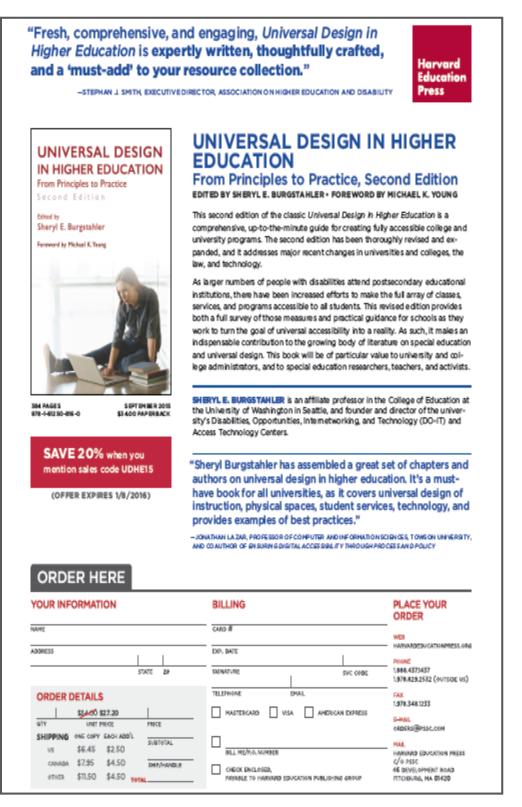
With these books we intend to stimulate debate, in-depth research, specialized studies, so that Design for All can be increasingly known and applied in more and more research and professional areas.



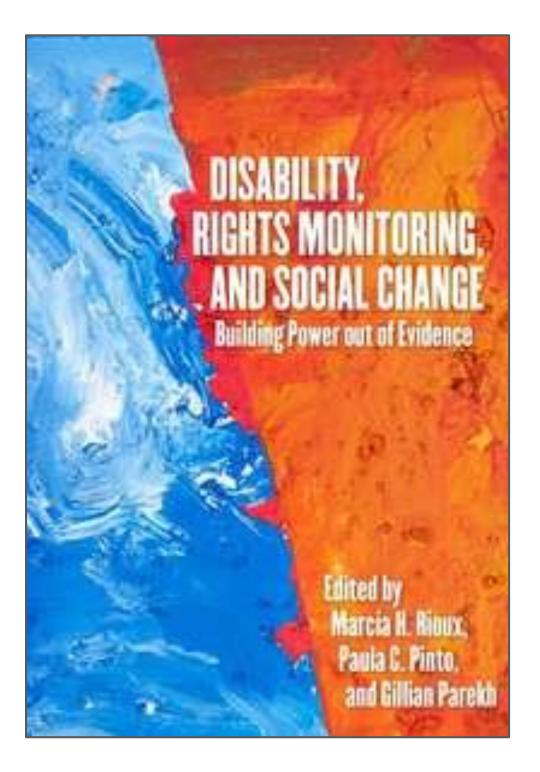
Published in Italian in December 2012 by Maggioli Editore (Santarcangelo di Romagna RN, Italy). http://ordini.maggioli.it/clienti/product_info.php?products_id=8832 Volume 1 http://ordini.maggioli.it/clienti/product_info.php?products_id=8831 Volume 2 The on-line English version is also available since 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

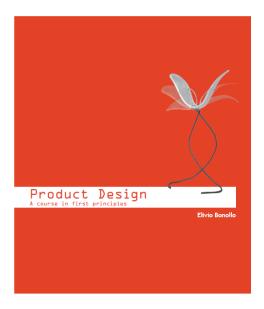
"Ideas, even good ideas, flourish only when practitioners commit to sharing their experiences, perspectives and aspirations. By organizing this publication and convening a distinguished international group of contributors, Editor Isabella Tiziana Steffan helps to establish the current state-of-the-art 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:



Disability, Rights Monitoring and Social Change:





Amazon.co.uk

http://www.amazon.co.uk/Product-Design-course-firstprinciples/dp/1784562939/ref=sr_1_fkmr0_1?m=A2U321JN96E0UZ&s=merchantitems&ie=UTF8&qid=1456434788&sr=1-1fkmr0&keywords=Bonollo+Prrroduct+Design%3A+A+course+in+first+principles

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Product Description

In this book, Elivio Bonollo takes us on a 'learning journey' about design including a scholarly explanation of the characteristics and power of the design process. It provides valuable insights into the attitudes, knowledge and skills that underpin the design discipline at an introductory level of expertise, and has been developed to meet the needs of aspiring designers in many areas including industrial design, and technology, art and design and architecture. Elivio uses an operational model of the design process - along with related educational strategies, learning outcomes and an ordered set of design briefs - to develop a systematic, problem-based method for learning design from a first principles viewpoint. The beauty of this approach is that it brings structured learning to aspiring designers whilst being mindful of diverse cultures and backgrounds. Each part of this book encourages self-expression, self-confidence and exploration: it is has been carefully designed to take the reader on a highly motivating journey of design thinking and creativity, supported by excellent sample solutions to design problems, lucid discussions and extensive references. These solutions, developed by design students, serve as novel examples of how to solve real problems through innovative design without restraining creative freedom and individual personality. The design learning method and strategies in this book will greatly assist design and technology teachers, students of design, aspiring designers and any individual with an interest in professional design practice.

I cannot recommend this book highly enough, it was a complete lifesaver throughout my undergraduate studies and honours degree and now continues to serve me well as I move into industry practice. The content is easy to understand and follow, providing a practical guide to understanding design principles and every aspect of the design process. It includes great project examples and reflects the wealth of knowledge and experience possessed by this accomplished educator. I have purchased multiple copies of this book for peers and would suggest any student who is studying a design discipline to pick up their own copy as this has quickly become the most useful book in my design collection.

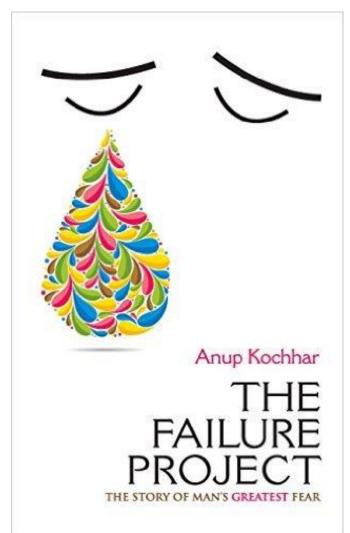
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★★★★★ A 'Must Have'.

By Amazon Customer on 7 April 2016

As a Design Education professional of many years standing, I endorse this book without reservation. It is comprehensive, lucid and above all, useful in a very accessible level at the coalface. Professor Bonolo has an enormous cache of experience as an engineer, designer and design educator and his experience is well demonstrated in this book. A 'must have' for anyone in the business of educating or being educated in the product design arena.

The Failure Project: The Story of Man's Greatest Fear



of failure is to know the enemy - inside and out.

This amazing, comprehensive and compassionate book helps us understand the anatomy, psychology and management of failure - the greatest, and often the most secret, fear of Man.

Failure destroys lives. It damages confidence and crushes the spirit. Throughout our lives we endeavour to manage our thoughts, actions and results so as not to be branded as failures. Despite our best intentions, life does have a way of throwing curve balls and surprising us. Things do not always go the way we planned or wished for. Failure happens. And it will continue to happen. For most people failure is akin to a dreaded disease that must be prevented at any cost.

Failure is like fire - it has the power to singe or destroy completely. Few of us remember that failure can also be harnessed creatively. All that it requires is a different perspective.

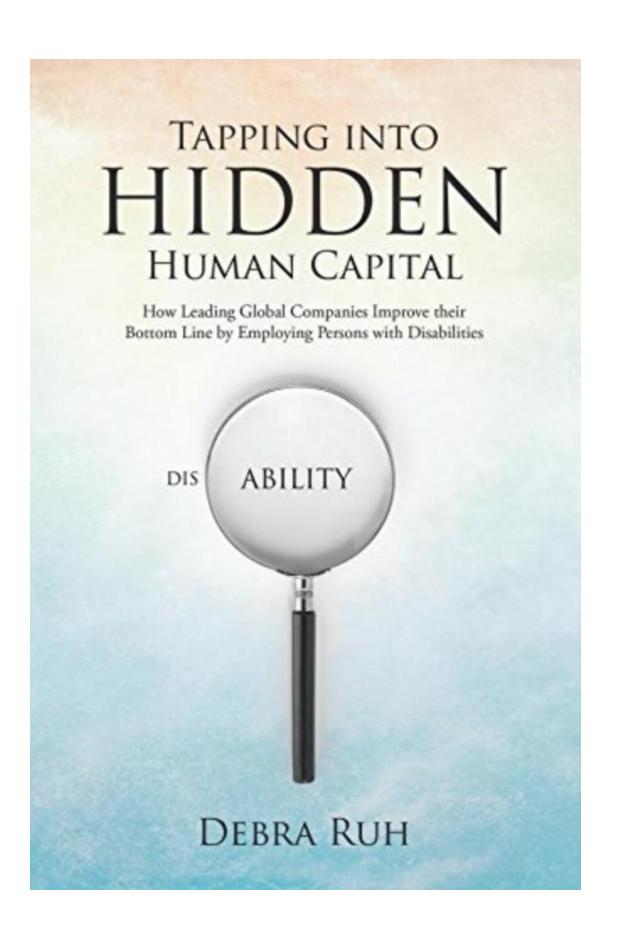
What do we know of failure? More importantly, how much do we know about it? The first step to overcoming our inherent fear

The book is now available in paper back and as an e-book from Amazon

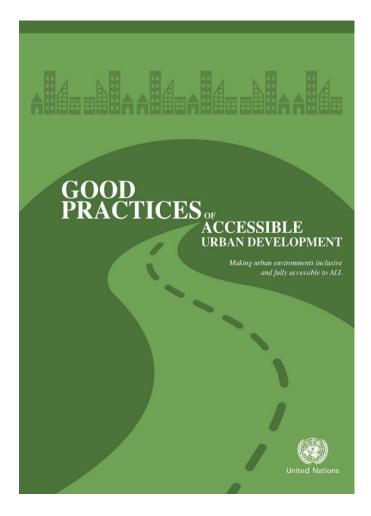
http://www.amazon.in/Failure-Project-Story-Mans-Greatest/dp/9352015789/ref=sr_1_1?ie=UTF8&qid=1461578229&sr=8-1&keywords=the+failure+project

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54 October 2016 Vol-11 No-10 Design For All Institute of India

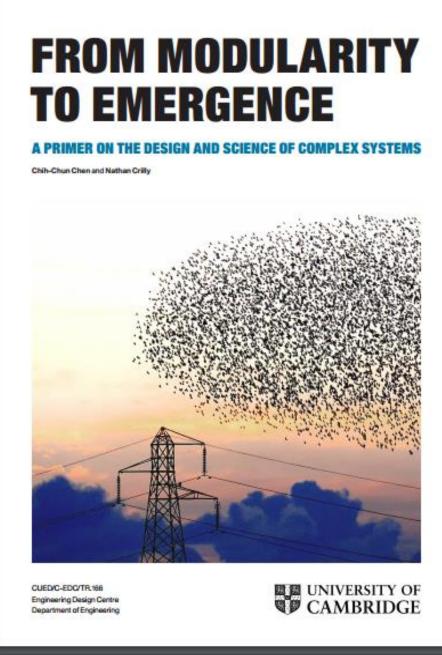


In light of the forthcoming United Nations Conference on Housing and Sustainable Urban Development (HABITAT III) and the imminent launch of the New Urban Agenda, DESA in collaboration with the Essl Foundation (Zero Project) and others have prepared a new publication entitled: "Good practices of accessible urban development".

The publication provides case studies of innovative practices and policies in housing and built environments, as well as transportation, public spaces and public services, including information and communication technology (ICT) based services.

The publication concludes with strategies and innovations for promoting accessible urban development.

The advance unedited text is available at:http://www.un.org/disabilities/documents/desa/good_practices_urban_dev.pdf



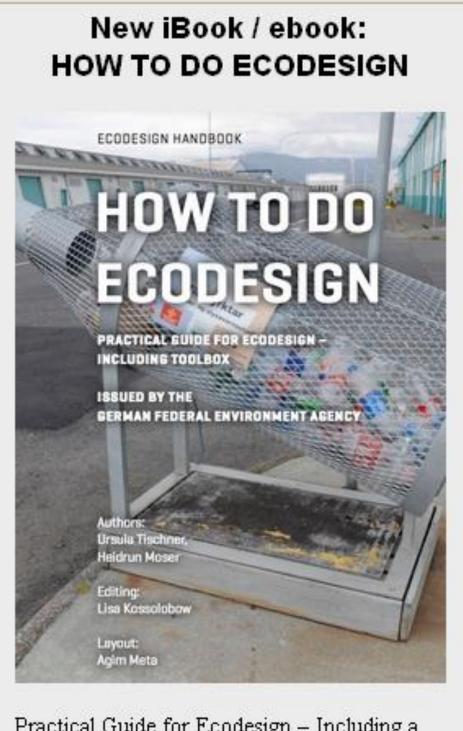
Dr Chih-Chun Chen and Dr Nathan Crilly of the Cambridge University Engineering Design Centre Design Practice Group have released a free, downloadable book, _A Primer on the Design and Science of Complex Systems_.

This project is funded by the UK Engineering and Physical Sciences Research Council (EP/Koo8196/1).

The book is available at URL:

http://complexityprimer.eng.cam.ac.uk





Practical Guide for Ecodesign – Including a Toolbox Author: Ursula Tischner



Appeals

I am looking for HCI researchers to work in one of our initiative on "designing for millions". Please view here (http://embeddedinteractions.com/designing_for_millions.html) for the details of the multiple projects under this umbrella. This call is for researchers for first two project - TB care & training for rural community health workers.

The projects are of collaborative work between EILab, WHO, State TB Cell, National Health Mission and IBM Research. The projects are co-funded by IMPRINT - Impacting Research Innovation and Technology, MHRD and IBM Research Labs India.

There are total 4 positions for HCI researcher in my lab. Major responsibilities include conducting study of HCI literature in specified domain, conducting user research and field deployments along with collaborative agencies. It will also include designing advance HCIs - multimodal interfaces, augmented and immersive virtual reality interfaces (through head mounted displays). The candidate will also be responsible for publishing research papers in top international conferences and journals.

We are open for candidates with varied background - from computer science, HCI and someone with strong knowledge in ICTD in healthcare.

If you are interested, please send me an email with your resume. We can discuss further over emails.

Keyur Sorathia, PhD

Embedded Interaction Lab (EILab), IIT Guwahati

Technology for Social Innovations



News

1.

World's first implanted bionic arm on test in global competition

A few years ago, a patient was implanted with a bionic arm for the first time in the world using control technology developed at Chalmers University of Technology. He is now taking part in Cybathlon, a new international competition in which 74 participants with physical disabilities will compete against each other, using the latest robotic prostheses and other assistive technologies – a sort of 'Cyborg Olympics'.



Cybathlon participant Magnus at a practice session in July. Photo: Chalmers University of Technology

The Paralympics will now be followed by the Cybathlon, which takes place in Zürich on October 8th. This is the first major competition to show that the boundaries between human and machine are becoming more and more blurred. The participants will compete in six different disciplines using the machines they are connected to as well as possible.

Cybathlon is intended to drive forward the development of prostheses and other types of assistive aids. Today, such technologies are often highly advanced technically, but provide limited value in everyday life.

Magnus, one of the participants, has now had his biomechatronically integrated arm prosthesis for almost four years. He says that his life has totally changed since the implantation, which was performed by Dr Rickard Brånemark, associate professor at Sahlgrenska University Hospital.

"I don't feel handicapped since I got this arm", says Magnus. "I can now work full time and can perform all the tasks in both my job and my family life. The prosthesis doesn't feel like a machine, but more like my own arm."

Magnus lives in northern Sweden and works as a lorry driver. He regularly visits Gothenburg in southern Sweden and carries out tests with researcher Max Ortiz Catalan, assistant professor at Chalmers University of Technology, who has been in charge of developing the technology and leads the team competing in the Cybathlon.

"This is a completely new research field in which we have managed to directly connect the artificial limb to the skeleton, nerves and muscles," says Dr Max Ortiz Catalan. "In addition, we are including direct neural sensory feedback in the prosthetic arm so the patient can intuitively feel with it."

Today Magnus can feel varying levels of pressure in his artificial hand, something which is necessary to instinctively grip an object firmly enough. He is unique in the world in having a permanent sensory connection between the prosthesis and his nervous system, working outside laboratory conditions. Work is now under way to add more types of sensations. At the Cybathlon he will be competing for the Swedish team, which is formed by Chalmers University of Technology, Sahlgrenska University Hospital and the company Integrum AB.

The competition has a separate discipline for arm prostheses. In this discipline Magnus has to complete a course made up of six different stations at which the prosthesis will be put to the test. For example, he has to open a can with a can opener, load a tray with crockery and open a door with the tray in his hand. The events at the Cybathlon are designed to be spectator-friendly while being based on various operations that the participants have to cope with in their daily

Max Ortiz Catalan.

"However, the competition will not really show the unique advantages of our technology, such as the sense of touch and the bone-anchored attachment which makes the prosthesis comfortable enough to wear all day," says Max Ortiz Catalan.

Magnus is the only participant with an amputation above the elbow. This naturally makes the competition more difficult for him than for the others, who have a natural elbow joint.

"From a competitive perspective Cybathlon is far from ideal to demonstrate clinically viable technology," says Max Ortiz Catalan. "But it is a major and important event in the human-machine interface field in which we would like to showcase our technology. Unlike several of the other participants, Magnus will compete in the event using the same technology he uses in his everyday life."

2.

Disability Awareness, Accessible Tech Fair: October 12

UC Davis' annual Disability Awareness Symposium and Accessibility Technology Fair will be held Wednesday, Oct. 12. The symposium will feature three UC Davis physicians addressing the theme, "Traumatic Brain Injuries: Myths and Realities."

The symposium and tech fair will be held on the Davis campus, and the symposium portion will be live-streamed to the Comprehensive Cancer Center auditorium on the Sacramento campus. The speakers, all of whom work with either professional or UC Davis intercollegiate athletes, are:

Eric Giza, associate professor of clinical orthopaedic surgery and UC Davis Health System official team physician for the Sacramento Republic FC soccer team

Melita Moore, assistant clinical professor of orthopaedics and UCDHS head team physician for Aggie athletics

Brandee L. Waite, associate professor of physical medicine and rehabilitation, director of the PMR Sports Medicine Fellowship, and UCDHS official team physician for Sacramento Republic FC

Accessibility Technology Fair

Several campus units will participate in the fair, along with offcampus vendors. Also look for representatives of the "Helmet Hair, Don't Care!" campaign, in which Student Health and Counseling Services is offering free helmets (and burritos).

The helmets are for students who sign the Helmet Hair, Don't Care! Pledge (either electronically or in person). The pledge states: "As a UC Davis student, I pledge to always wear a bike helmet on every ride, even on short trips, because my brain is more important than helmet hair."

The burritos are for students who show up at the Bike Barn on Wednesday (Oct. 13), with helmet on!



Programme and Events



Legnani. Graphic Design: Groupa Ee

hoto: Delfino Sisto

FARAWAY, SO CLOSE 25th Biennial of Design Ljubljana, Slovenia 25. 5.–29. 10. 2017

The 25th edition of the Biennial of Design in Ljubljana is set to strengthen its role as an interdisciplinary collaborative platform where design is employed as a catalyst for change.

BIO 25, under the title Faraway, So Close, will be curated by Angela Rui, a Milan- and Rotterdam-based design critic and curator, and Maja Vardjan, curator of Museum of Architecture and Design (MAO).

In line with their focus on the humanistic side and expression of design, they will use the Biennial to decode through design the effects of environmental changes, asset migration, and reactions to the systemic crises.

In the face of the total failure of the theory of Positivism, we are now forced to confront the crucial and still largely hidden meaning of the consequences of "post-modernization", for which the city seems to have lost its authority as the territory where we look to find the source of quality existence.

Small changes are already taking place and gaining ground, and new inputs are slowly modifying our urban and rural environments. New frictions emerge out of the co-habitation of remote meanings and contemporary habits, as we look for new territories to signify, places to re-inhabit, ancient relations to re-enact, basic coexistences to re-imagine. Can this friction between distant conditions produce new scenarios for a different present time?

64 October 2016 Vol-11 No-10 Design For All Institute of India

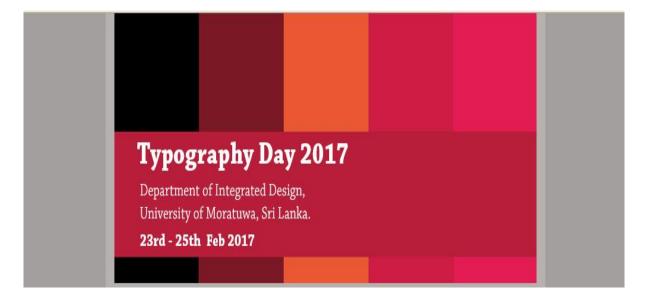
Along with the main subject-themes of the biennial, BIO 25 will de-centralize and will be interpreted as a shift towards new territories to be seduced by research and discourse, as well as by the idea of an event with which to produce knowledge. In the age of super information consumed in real time, the challenge of a biennial becomes increasingly closer to real conditions of everyday systems; to provoke and challenge the paradigms related to design and architecture through their pragmatic application, acting as a "permanent work in progress".

Slovenia, in accordance with its geographical conditions, will perform as a paradigm to stimulate, discuss and test the status of this global shift.

SAVE THE DATE FOR THE 25TH BIENNIAL OF DESIGN

Open Call	12 May - 5 July 2016
Kick-off event	15 September 2016
Process	Autumn 2016 - Spring 2017
Exhibition	25 May – 29 October 2017









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



International Labour Organisation (ILO) – Ministry of Tourism – Red Sea Governorate – Egyptian Hotel Association

Red Sea Accessible Tourism Competition 2016 "Tourism for All"



67 October 2016 Vol-11 No-10 Design For All Institute of India



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.

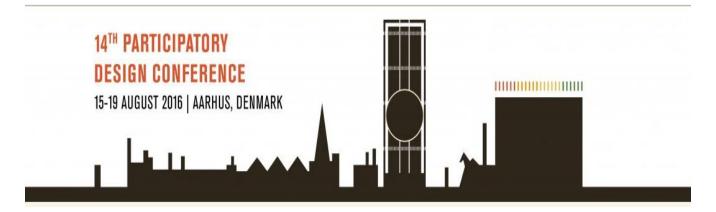


Joseph Binder Award 2016

Tel_(+43-1) 524 49 49-25 E-mail: heldi.resch⊛designaustria.at		1070 Wien Österreich www.designaustria.at	Österreich			
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Solution States INTERACT 2017 MUMBAI

6th IFIP TC.13 International Conference on Human-Computer Interaction -INTERACT 2017 Theme: Global Thoughts, Local Designs at IDC, IIT Bombay25-29 September, 2017http://interact2017.org/



The 13th International Conference on Cooperative Design, Visualization and Engineering Oct. 24-27, 2016, Sydney Email: cdve2016@cdve.org Web: CDVE2016: The 13th International Conference on Cooperative Design, Visualization and Engineering

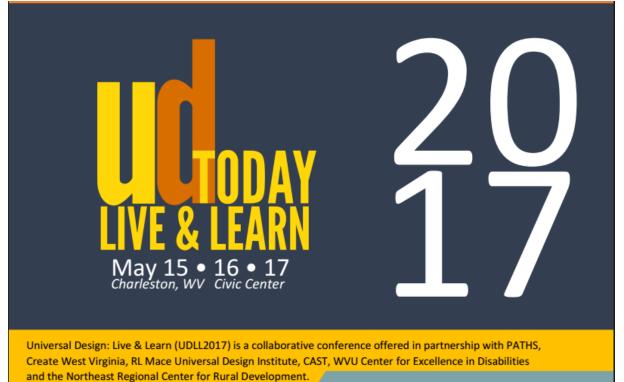


International Conference on 3D Printing and Rapid Manufacturing at the School of Fashion and Design, GD Goenka University, Sohna, Gurgaon, Haryana,

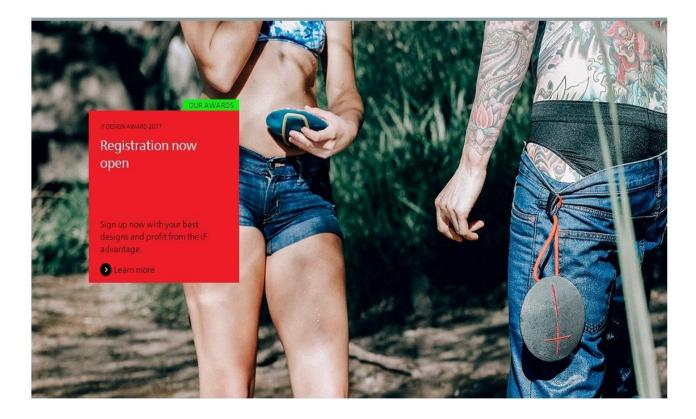
17- 18December2016

http://www.designconference.in/





UniversalDesign.Today









TypographyDay 2017 Focus on 'Typography and Diversity'

23-25 February 2016

by Department of Integrated Design, University of Moratuwa, Sri Lanka at

Colombo, Srilanka Call for Abstract for Papers (deadline 31 August 2016)

Call for Poster Design (deadline 31 October 2015) http://www.typoday.in

The 3rd Edition of Alpavirama Asian Short and Documentary Film Festival (http://www.nid.edu/alpavirama/index.html), organised by the Film & Video department of the National Institute of Design is going to be held between 4-8 October, 2016 at its Paldi, Ahmedabad campus.

Entries are invited from students/amateurs/professionals below 30 years of age for the SOUTH ASIAN COMPETITION section of Alpavirama 2016. Short fiction and documentary films, not-less-than 5 minutes and not-more-than 30 minutes long are eligible to participate. The film(s) should have been produced on or after 1st August, 2014 and should have been directed by a citizen of any of the following countries: Afghanistan, Bangladesh, Bhutan, India, Maldives, Myanmar, Nepal, Pakistan and Sri Lanka. Animation films are not eligible.

The last date for receiving the completed entry form along with the preview material is 1st July, 2016.

Principal Faculty & HOD, Film & Video, NID Festival Director: Alpavirama 2016





74 October 2016 Vol-11 No-10 Design For All Institute of India



All nominations should be submitted before midnight 11 November 2016



'Reimagining Aesthetic Unfolding – From Conditioning to Awakening'

2nd International Conference on Design Pedagogy and Contextual Aesthetics (ICDPCA)



Job Openings

1. Job Opening

TI Cycles of India (TICI) has been at the forefront of personal mobility solutions for over 6 decades. Standing for the core promise of fun, fitness and freedom, TI Cycles offers consumers a range of bicycles, fitness equipment and infant mobility solutions. TICI is known best for its flagship bicycle brands BSA, HERCULES, LADYBIRD, MACHCITY, ROADEO and MONTRA.

We are looking for creative and dynamic TEAM LEADER who can conceptualize to transform product through design with a strategic view point and see it through to execution.

- The candidate should have Bachelor or Master's degree in Design with 7-9 years' experience in Sports, FMCG, lifestyle/fashion, consumer durable, automobile or related industry.
- He should be a Positive thinker and a team player, able to interact with different business functions like marketing, engineering, manufacturing, sourcing etc. through effective presentation and interpersonal skills.
- Should have a good understanding of brand positioning and brand led design.
- Should have demonstrable experience in leading design language for products.
- Should have a flair for fashion and be updated with latest trend in fashion, color and materials and their influence on products JOB DESCRIPTION:
- Responsible for leading the Product launches for the business plan. Lead the design till launch.
- Creating conceptual designs for different brands and consumer segments.
- Simulate the design both digitally and physically and present to the business team to drive consensus.
- Trend spotting and Consumer life style mapping for insights development.
- Portfolio analysis and Competitive mapping.
- Track emerging technologies and work with vendors to develop new concepts.
- Developing Brand Design language and CMF strategy based on product laddering
- Conducting periodic Brand Design Audits.

In order to apply for the above position please send an email with your resume and portfolio ONLY to the email address mentioned below.

Email: Careerticycles@tii.murugappa.com

2.Job Opening

Barclays Technology Centre India is Technology arm Barclays Bank supporting Barclays bank globally. There are UX designer and Sr. UX designer openings at Pune location for experience level of 4 to 10 years. The job description is pretty standard. Any experience of working in banking & finance domain is a plus but not must. Please send your resumes to shrikant.ekbote@barclays.com.

3.Job Opening

CGI India looking for passionate UX designers for Solutions group in India.

https://www.cgi.com/

Job location – Mumbai/Bangalore/ Hyderabad

Positions – 2

About CGI Solutions group

CGI has a number of Intellectual Property (IP) offerings it provides to clients, both globally and locally. Over 70+ IPs are serviced by the Asia Pacific Solutions Delivery Center that includes full-scale product development, and consulting.

With a strong and growing member force across our India offices — Bangalore, Chennai, Hyderabad and Mumbai, the group offers expertise to a wide array of industries. Key industries include Government, Healthcare, Financial Services, Utilities and our cross-industry solutions include credit and human resource management.

Job Description

As a member of the user experience team, you are responsible for planning and executing design activities throughout the product development process. You produce storyboards, scenarios, wireframes, prototypes, and UX specifications. You need to collaborate with other Interaction Designers, UI developers, visual designers, Product Managers, functional experts and Developers.

Job Responsibilities

• Collaborate with functional teams to produce task flows, storyboards, wireframes, and interactive prototypes

 $\cdot\,$ Work independently with members of product management, functional and development on the design of products

• Contribute to design research, white papers, and product UI specifications

 Educate individual developers, product managers and functional teams about UX process and deliverables

Eligibility

• Bachelors or Master's degree in Interaction design, Industrial Design, Visual Design, Human-Computer Interaction, or related discipline

• 4 to 8 years of industry experience designing and prototyping UIs for products/services

 \cdot Strong conceptual and analytical skills and demonstrated ability to prototype and design elegant UI solutions to user problems

 \cdot Must have knowledge of UI design principles across platforms (Web, Mobile, Tablets)

 \cdot Good communication and people skills in working in a multi-disciplinary, collaborative environment

- · Should have knowledge of Axure, Photoshop, HTML, CSS, other prototyping tools
- Must have portfolio available for review

Please revert back with your latest CV and portfolios. Send email to pranavdatta [dot] natekar [at] cgi [dot] com

4. Job Opening

We are looking for UX designer who can do Interaction and visual designer in California and Texas, USA. Candidate must have valid working H1B visa or Green card.

This opportunity is around data visualization. Designer needs to do awesome UX work on analytics platform. Send you visa detail, portfolio and resume to uxjobs@techendeavour.com

5.Job Opening

Furlenco is looking for an experienced furniture designer, who can create world class furniture for Furlenco's customers. The role provides you with an opportunity to study, research, plan, own and manage your furniture designing process.

What we want:

• 2+ years of solid furniture designing experience with a degree from a reputed design institute.

• You will go the extra mile to study, research and discuss designs with manufacturers and clients before preparing final designs.

- You are comfortable generating sample designs using CAD, card models, sketches or hard prototypes.
- You are well informed about the design trends and developments

• You are proficient in using software packages such as AutoCAD, Inventor, SolidWorks and Photoshop

What you get:

- Opportunity to work with an organisation that emphasises hugely on Design
- Exposure to expanding your portfolio by working with various materials, including wood, metal, plastic and textiles.
- Opportunities to pursue your interests across functions in a start-up where a job title is not considered the final definition of who you are rather it's just the starting point.
- Motivating work environment, surrounded by sharp, friendly co-workers.

Who we are:

Furlenco, India's first home furniture rental company based in Bangalore, is founded by Ajith Karimpana. We started in 2011 as Rent UR Duniya and rebranded ourselves as Furlenco in 2012. We are a new concept in the furniture space that has made home furnishing quick, easy and affordable.

We seek to build an organisation that's known for cutting edge technology, bleeding design and an awesome culture of inclusiveness and autonomy.

You absolutely want to experience us if:

- You want to know, what it means to be a part of a diverse team that consistently challenges accepted norms and defines new ones.

- Where the culture is as simple as taking important decisions on roof tops over a cup of coffee or resolving conflicts over a game of ping-pong

If interested send your resume and portfolio at keyur@furlenco.com

6.Job Opening

Opening for the post of Project Coordinator for the Project "Design & development of Web based creative educational courses"

Desired profile: Post graduate in Design with experience in UX/Interaction Design.

Working Knowledge in:

1. Market study and Ethnography - User Characteristics detailing.

2. Usability

3.Web application design & knowledge of SDLC

4.PHP, CSS, Java script.

5. Web server handling and Database server handling.

Relevant experience of 3-5 years is expected.

Interested candidates please send the resume on hr@mitid.edu.in



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Forthcoming Events and Programs:

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