

Disability Interactions and Innovations

Overview

Creative solutions which allow disabled people to use computers, and technology more broadly, are usually captured under the term 'accessibility'. They can be categorized into: (i) assistive technology (AT) targeted at a specific person or a subset of people, and (ii) inclusive (universal) design approaches which incorporate accessible design features into the mainstream product or service. With an ageing population, there is a need for an increased focus on designs which can accommodate the needs for disabled people to fully contribute to society.

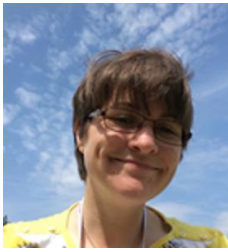
Disability has often spurred designers to create novel technology which has later become universal; for example, both the typewriter and the commercial email client originated from a need to communicate by blind and deaf people. The design constraints imposed by disability have pushed ingenuity to thrive within the design process. Recent technological advances in AI, Internet of Things and pervasive computing provide great scope for designers and researchers to explore this symbiosis when considering future innovations for disability as well as for society at large. This course explores the new approach of Disability Interaction (DIX) which combines challenge-based design with user-centered design principles to push the boundaries of the possible.

The primary objectives of the course are

- Exposing participants to the fundamentals of user-centered design and challenge-based design
- Building in confidence in capturing user needs, turning these into insights and problem statements to spur innovation. Exposure to practical problems and their solutions, case studies and live projects in disability interaction and innovation.
- Demonstrating novel routes to market and ability to scale solutions through case study examples.
- Enhancing the capability of the participants to identify and solve challenges for society which enables more inclusive societies.

Course Information	Dates – 25 to 29 September 2023
You Should Attend If...	<p>Students and professionals working in the areas of biomechanics, robotics, human-computer interaction, design and medicine (especially orthopaedics, prosthetics and rehabilitation)</p> <p>Number of participants for the course will be limited to Thirty.</p>
Fees	<p>The participation fees for taking the course is as follows:</p> <p>Participants from abroad : US \$ 500 Students : INR 1000 Faculty : INR 3000 Industry / Research Organizations : INR 10000 Government Organizations : INR 5000</p> <p>The above fee includes all instructional materials, computer use for tutorials and assignments, laboratory equipment usage charges, 24 hr free internet facility.</p> <p>Mode of payment: Online transfer: Click here to pay: https://elearn.nptel.ac.in/gian/</p>
Accommodation	<p>The participants may be provided with hostel accommodation, depending on availability, on payment basis. Request for hostel accommodation may be submitted through the link:</p> <p>http://hosteldine.iitm.ac.in/iitmhostel/</p>
Registration Procedure	<p>Please follow the following steps for the registration:</p> <ol style="list-style-type: none"> 1. Go to GIAN website (http://www.gian.iitkgp.ac.in/GREGN/index) First time users need to register and pay a one-time fee of INR 500 / 2. Enroll for the course: Disability Interactions and Innovations. Once you enroll for the course, an Enrollment/Application number will be generated, and the course coordinators will be notified.

The Faculty



Prof. Cathy Holloway is the Academic Director of Global Disability Innovation Hub ([GDI Hub](#)) and Professor of Interaction Design & Innovation at UCL's Interaction Centre ([UCLIC](#)). Cathy contributed to the Global Report on Assistive Technology as an author, via the Expert Advisory Panel, and sits on WHO Technical Advisory Group for Assistive Technology. Cathy has co-led GDI Hub to be the first WHO Collaborating Centre on Assistive Technology, with a project portfolio of over £60m, across 41 countries, reaching over 28 million people globally. Cathy has published over 190 papers in assistive technology and accessibility alongside a recent book: [Disability Interactions](#) – creating inclusive innovations. Cathy is also creating new assistive products with her team for low-resource settings.



Prof. Sujatha Srinivasan heads the TTK Center for Rehabilitation Research and Device Development (R2D2) in the Department of Mechanical Engineering and the National Center for Assistive Health Technologies at IIT Madras. She received a PhD in Mechanical Engineering from the Ohio State University, Columbus, USA. She has been at IIT Madras since 2008 and her translational research focuses on applying design and biomechanics to develop functional and affordable assistive/rehabilitation devices for people with movement disability, of which four have been commercialized with industry partners through a unique collaborative approach. More details are available at <https://r2d2.iitm.ac.in>

Course Co-ordinator

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For detailed syllabus, please visit: r2d2.iitm.ac.in/resources/courses/gian2023