STTF 2013

SUSTAINABLE TECHNOLOGIES AND TRANSDISCIPLINARY FUTURES

From Collaborative Design to Digital Fabrication

STTF2013 Summer School, July 8–12
ISCTE-IUL University Institute of Lisbon – Portugal

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OVERVIEW

The intersection of technological development with sustainability has reached complex times that postulate a wider scope in conceptual and practical terms.

Imagining and producing sustainable technologies lies now on the ability of technical and social domains to merge their own concerns and solutions with no bias. Our collective futures depend on this paradigm change.

It is crucial to shift circuits toward technical objects and systems that comply simultaneously with topics as lower operational costs, or cradle to cradle trends, and others as convivial tailoring to local needs, or deference to economic, cultural and ethical issues of stakeholders.

We need to get used to move continuously between established approaches on new materials or alternative energy choices, and groundbreaking perspectives on culturally laden artifacts or citizen science.

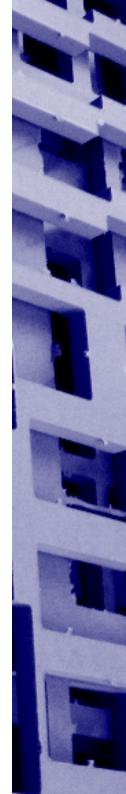The STTF2013 Summer School of ISCTE-IUL University Institute of Lisbon offers a path in this direction.

Through the integration of both technical and social fields in an action research model of experimentation and learning, participants from multiple areas will discover how to address and untangle these new challenges, within an innovative transdisciplinary environment of collective thinking and acting.

STTF2013 is intended for Master and PhD students, researchers, and professionals from STS, Product and Service Design, Social Sciences and Humanities, Architecture and Engineering, Communication and Media, Environmental Studies, Economics and Management, Computer Sciences, and others.

Regardless of individual experience, everyone will have the opportunity to work together in sociotechnical processes of design, construction and discussion, with all four pillars of sustainability as background.

From codesign and scenario workshops, to rapid prototyping and open production exercises, STTF2013 participants will be encouraged to develop a new set of skills to deal with subjects such as digital fabrication, 3D simulation and printing, new sustainable materials, adaptable and interactive systems, participatory innovation, DIY creativity and new making cultures, appropriated and value sensitive artifacts, societal implications of technology, qualitative social methods, or critical science and technology studies.

KEYNOTE SPEAKERS

Jerry Ravetz is Associate Fellow at Institute for Science, Innovation and Society at University of Oxford. He did his PhD in Mathematics at Trinity College, Cambridge, and was Reader in the History and Philosophy of Science at the University of Leeds. He works mainly on the management of uncertainty in risks and environmental issues, governance of new sciences of matter and life focusing on nanotechnology, science and sustainability, and new forms of democratic accountability.

Liz Sanders is the founder of MakeTools, a company that explores new spaces in the emerging design landscapes, and is currently Associate Professor in the Department of Design at The Ohio State University. Liz has a PhD in Experimental and Quantitative Psychology and a BA in both Psychology and in Anthropology. She is a pioneer in the use of social methods in the design of consumer, office and medical products, spaces, systems, and interfaces, working as a design research consultant in industry and business since 1981.

Tomas Diez is Director of the FabLab Barcelona and faculty member at IAAC (Institute for Advanced Architecture of Catalonia). He holds a Bachelor in Urban Planning and Sociology by the University Simon Bolivar, a Master in Advanced Architecture by IAAC, and a Diploma on Digital Fabrication by Fab Academy from the MIT Center for Bits and Atoms. His research relates to the use of digital fabrication tools to transform reality, and how new technologies can change the ways we consume, produce and relate with each other.

Bernadette Bensaude-Vincent is Professor of Philosophy of Sciences and Techniques at Université Paris 1 Panthéon-Sorbonne, and Director of CETCOPRA (Centre d'Études des Techniques, des Connaissances et des Pratiques). She is member of Institut universitaire de France, Académie des technologies, and president of the association VivAgora, dedicated to the public debate of scientific and technological choices. Her research topics span from the history and philosophy of chemistry to materials science and nanotechnology, with a continuous interest in science and public issues.

Alex Schaub is Manager of the Fablab Amsterdam, and Technician and Manager at Waag Society, Institute for Art, Science & Technology. He has a BA in Image & Sound, and graduated from the Institute of Sonology with a MA in Music, in the Royal Conservatory, The Hague. Alex began his career designing production machines for the Swiss Watch company Ronda SA. He is now involved in several art projects, like Sonic Kitchen, an immersive performance integrating food, sound and image.

PROGRAMME

FIRST DAY ACTIVITIES

ISCTE-IUL Welcome & "Getting to Know Each Other" will open STTF2013 activities, and provide a first opportunity for participants and organizers to meet each other, to discuss backgrounds, and address any initial questions.

Opening Seminar by Jerry Ravetz (University of Oxford, UK) will offer a foundational perspective on the intersection of transdisciplinary and sustainable frameworks. The talk will converge on the themes of combined scientific fields in face of uncertainty, robust knowledge for sustainability, mutual learning between experts and laypersons, and technological change and democratic debate.

"From Collaborative Design to Digital Fabrication" 101 will allow participants to get acquainted with STTF2013 transdisciplinary rationale, and the ways through which it will be developed during the Summer School, from initial debates to concrete objects.

Quick Topic Debates will provide Guest Researchers (to be announced) with 20 to 30 minutes to introduce a topic for discussion and stimulate a debate around it.

MASTERCLASSES

Each Masterclass is divided in two parts. In the first part, participants are provided with conceptual frameworks and methodological tools, according to each speaker's expertise. In the second part, these tools will be employed in practical exercises coordinated by the speakers and the organizers, bearing in mind the design, construction and discussion of artifacts to be constructed or reconstructed afterwards.

A) *Collective Creativity and Generative Tools in Codesign Spaces*, by Liz Sanders (MakeTools, US).

B) *Digital Fabrication, Citizens and New Production Paradigms*, by Tomas Diez (FabLab Barcelona, ES).

C) *Ethics, Public Participation and Social Scenario Exercises*, by Bernadette Bensaude-Vincent (Université Paris 1 Panthéon-Sorbonne, FR).

D) *Rapid Prototyping and Open Design Platforms*, by Alex Schaub (FabLab Amsterdam, NL).

HANDS ON SOCIOTECHNICAL WORKSHOPS

Participants will work in interdisciplinary groups, applying their recently acquired frameworks and tools in the development of concrete artifacts that will serve as key outputs of STTF2013.

Participants will work in interdisciplinary groups, applying recently acquired frameworks and tools in the development of concrete artifacts. The challenge for each group is to envision, discuss and create and recreate surprise objects and systems which will be unveiled at the beginning of STTF2013.

All participants should intervene in all workshop stages from discussion to production, mixing social and technical methods with assistance and supervision of organizers and guests, and complying with principles of extended sustainability around two themes: 'Low Carbon Societies' and 'Smart Sensible Cities'.

The first theme will enclose projects on subjects like energy sources and efficiency, or resource management and reuse. In the second, projects will be related to matters such as mobility and sensorial surroundings, or knowledge and citizen empowerment.

The Workshops are divided in two categories, according to their duration, activities and goals.

Follow Up Workshops will be testbeds for participants to apply what they learned in preceding Masterclasses, and start developing the group projects. Work at this stage will be both conceptual and practical, involving concrete debates and experiences around the social and technical configurations of projected artifacts.
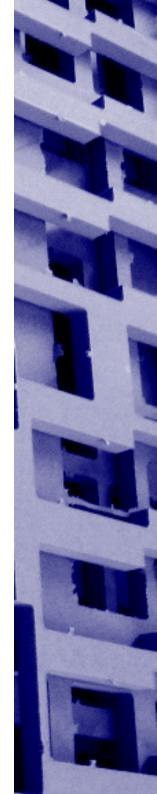
Intensive Workshops are the final places of debate, design and fabrication of the artifacts. Participants will work with both social and technical tools to achieve expected results. This will include moving between social scenario analysis or ethnometodological methods for design, and virtual or physical material experiments or the use of digital fabrication software and hardware.

SOCIAL EVENTS

These events include a Welcome Dinner, a Sunset Documentary Session in the venue of cultural association ZDB (Zé Dos Bois) Gallery, a half day field excursion to sites in Lisbon related with STTF2013 goals , a Closing Session with Student Work Exhibition, and at last, a Final Dinner.

SCHEDULE

	MONDAY, JULY 8	TUESDAY, JULY 9	WEDNESDAY, JULY 10	THURSDAY, JULY 11	FRIDAY, JULY 12
09:00	ISCTE-IUL Welcome Session + "Getting To Know Each Other"	Masterclass A: Liz Sanders	Masterclass C: Bernadette Bensaude-Vincent	Field Excursion	Intensive Workshop @VitruviusFabLab-IUL
09:30					
10:00					
10:30	Tea/Coffee Break	Tea/Coffee Break	Tea/Coffee Break		Tea/Coffee Break
11:00	Opening Seminar: Jerome Ravetz	Masterclass A: - *continuation* -	Masterclass C: - *continuation* -		Intensive Workshop @VitruviusFabLab-IUL
11:30					
12:00		Follow Up Workshop @VitruviusFabLab-IUL	Follow Up Workshop @VitruviusFabLab-IUL		
12:30					
13:00	Lunch	Lunch	Lunch	Lunch	Lunch
13:30					
14:00	"From Collaborative Design to Digital Fabrication" 101	Masterclass B: Tomas Diez	Masterclass D: Alex Schaub	Intensive Workshop @VitruviusFabLab-IUL	Intensive Workshop @VitruviusFabLab-IUL
14:30					
15:00					
15:30	Tea/Coffee Break	Tea/Coffee Break	Tea/Coffee Break	Tea/Coffee Break	
16:00	Quick Topic Debates by Guest Researchers	Masterclass B: - *continuation* -	Masterclass D: - *continuation* -	Intensive Workshop @VitruviusFabLab-IUL	STTF2013 Closing Session + Student Work Exhibition
16:30					
17:00		Follow Up Workshop @VitruviusFabLab-IUL	Follow Up Workshop @VitruviusFabLab-IUL		
17:30					
18:00					
18:30					
19:00					
19:30			Sunset Documentary Session @ZDB Gallery's Rooftop		
20:00	Welcome Dinner				Final Dinner

ORGANIZERS

STTF2013 is a joint initiative of VitruviusFabLab-IUL (Digital Fabrication Laboratory) and CIES-IUL (Centre for Research and Studies in Sociology), research units of ISCTE-IUL (University Institute of Lisbon).

VitruviusFabLab-IUL is the recently established Fabrication Laboratory of ISCTE-IUL. It is composed by architects, computer scientists, designers, and social scientists, following interdisciplinary dynamics in projects and teaching. It aims at developing automated architectural models, innovative materials applications, modular building systems, and product design interventions, while equally promoting public engagement platforms through partnerships with other FabLabs, universities, industry, and civil society.

CIES-IUL is a research centre of ISCTE-IUL in the areas of sociology, political science, education studies, communication studies, and urban anthropology. It was founded in 1985 and is externally classified as Excellent by FCT. It has approximately 200 researchers, including 83 PhDs and 40 PhD students and runs a number of projects funded through competitive national and European calls. Moreover, CIES-IUL publishes the journal *Sociologia, Problemas e Práticas*, and refereed books through *Mundos Sociais*.

VENUE

ISCTE-IUL is a public research university, established on December 1972. It is now composed by 4 Schools with 15 Departments and 9 Research Centers, regularly evaluated nationally and internationally, and affiliated with organizations from academia, business and civil society. It has a high rate of post-graduate courses (nearly 50%) and is home to approximately 200 employees, 450 teachers, 500 researchers, and 9000 students, being the largest recipient institution in Portugal of the Erasmus-Socrates programme.

HOW TO GET HERE

ISCTE-IUL is located in Lisbon's University City and has two main entrances. One, on Av. das Forças Armadas for Building I and Autonomous Wing, and the other, on Av. Professor Aníbal Bettencourt for Building II, where STTF2013 will take place.

The campus is easily accessible by public transport. You can use train (Entrecampos), subway (Entrecampos—Yellow Line) or take a bus (#701, #754). But you can also rent a bike or bring your own, since Lisbon has now several urban bike lanes and circuits.

HOW TO APPLY

For application, please send expression of interest to sttf2013-at-iscte.pt, including CV + Cover Letter (1 page max) describing your motivation to participate in STTF2013 Summer School. Enrollment is limited to a maximum of 20 students.

STTF2013 offers 6 ECTS. Participant's progress will be assessed by evaluating engagement in school activities, and a final individual assessment will be shown on the personal certificate of completion, if requested.

FEES

Regular fee is EUR 550 (early EUR 450), and reduced fee for ISCTE-IUL students, faculty and staff is EUR 350 (early EUR 300). Depending on sponsors, full or partial scholarships may be available for ISCTE-IUL students.

Fees include tuition, attendance in all sessions of STTF2013, course materials, use of library, and other ISCTE-IUL facilities, plus lunches and tea/coffee breaks. Participants must bring their own computers to the Summer School. Fees do not cover accommodation, travel expenses, or welcome and final dinners.

IMPORTANT DATES

JANUARY 15: Open Call for Applications.

APRIL 1: Application Deadline.

APRIL 15: Notification of Selected Participants.

MAY 1: Early Registration and Payment Deadline.

JUNE 1: Late Registration and Payment Deadline.

FURTHER INFORMATION

To find out more about STTF2013 rationale, speakers, programme, organizers, application, venue, or even Lisbon, visit our website at http://sttf2013.iscte-iul.pt

For additional inquiries, send email to sttf2013@iscte.pt or call CIES-IUL Front Desk +351 210 464 018

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