UBISS 2019

10TH INTERNATIONAL UBI SUMMER SCHOOL 2019

JUNE 10-15, 2019

OULU, FINLAND

UBICOMP.OULU.FI/UBISS

UBICOMP UNIVERSITY OF OULU

THE NEXT GENERATION 6G FOR UNIVERSITY OF OULU

SCIENCE WITH ARCTIC ATTITUDE

6G FLAGSHIP UNIVERSITY OF OULU

UBISS 2019 10 years of hard work and fun

UBISS CONCEPT

The purpose of the annual international UBI Summer Schools (UBISS) is to provide researchers, students, and industry and public sector professionals with an opportunity to gain hands on experience and insight on selected topics under the tutelage of distinguished experts. UBISS typically comprises of 3-6 parallel 6-day "hands on" workshops where the instructor(s) first provide a theoretical framing of the topic of the workshop and then supervise students' group projects whose outcome is presented in the result seminar in the last day. Thus, the instructor(s) work intimately with their students throughout the week, in contrast to many other summer/winter schools, where a particular instructor is available only for a limited amount of time in form of lectures or a tutorial. To stimulate interaction between attendees, UBISS has a rich social program in form of get together party, dinner boat cruise and school dinner.

Students are selected through an open international call so that all prospective students submit an online application where they identify their preferred workshop(s) and justify why they should be accepted to a particular workshop. The instructor(s) select from the pool of applications students who then confirm their seat through registration. The instructor(s) prep their students with a reading package studied in advance and pre summer school assignments. Students completing their project and passing the written exam given in the last day of the summer school will be awarded 5 ECTS credits towards their studies, subject to the approval by a student's home institution. The design and implementation of future UBISS is informed by the feedback that students provide in a comprehensive post summer school questionnaire.

The first UBISS was organized in summer 2010, to provide the prospective participants of the 1st International UBI Challenge 2011 with an opportunity to gain hands-on experience on the urban computing infrastructure in Oulu that was utilized in the UBI Challenge. Prof. Albrecht Schmidt (back then in University of Stuttgart, now in LMU Munich) proposed arranging a summer school for this purpose. The first UBISS enrolled 72 participants from 20 countries in six parallel workshops. The excellent feedback from both instructors and students participating in the inaugural and subsequent summer schools has convinced us to host UBISS as an annual tradition, with a highly multidisciplinary collection of workshops over the years. So far, over 500 students from all over the world have attended an UBISS, many of them multiple times. Dr. Eduardo Velloso became the first former UBISS student to return as a 'junior' co-instructor to Prof. Hans Gellersen in UBISS 2016, incarnating the endless cycle of academics passing on their knowledge to later generations. Additional two former UBISS students, Dr. Denzil Ferreira and Dr. Simo Hosio, returned as 'junior' co-instructors in UBISS 2018.

UBISS 2018 enrolled 82 students from 15 countries in four parallel workshops

WORKSHOPS

A FROM REALITY TO VIRTUALITY: THE SCIENCE AND ART OF CREATING VR EXPERIENCES

Prof. Frank Steinicke
University of Hamburg
Germany

Eike Langbehn
University of Hamburg
Germany

B THE IOT – WIRELESS TECHNOLOGIES AND APPLICATIONS: A JOURNEY FROM ZIGBEE TO 5G

Prof. Roberto Verdone
University of Bologna
Italy

Assist. Prof. Chiara Buratti
University of Bologna
Italy

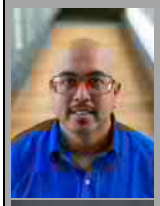
C CRITICAL MAKING: DESIGNING FOR ACTIVISM

Assoc. Prof. Eric Paulos
University of California, Berkeley
USA

Assist. Prof. Jill Miller
University of California, Berkeley
USA

Assoc. Prof. Georgi V. Georgiev
University of Oulu
Finland

D UBIQUITOUS COMPUTING: ENABLING TECHNOLOGICALLY ADVANCED LIVING



Prof. Anind K. Dey
University of Washington
USA

Assist. Prof. Edison Thomaz
University of Texas at Austin
USA

Adj. Prof. Denzil Ferreira
University of Oulu
Finland

PROGRAM AT A GLANCE

Monday June 10	**8:30**	**Registration and UBI Café Open** Location: University of Oulu, Linnanmaa, Erkki Koiso-kanttilan katu 3, door E
	9:00-12:30	**11TH INTERNATIONAL UBICOMP SEMINAR 2019** Location: University of Oulu, Linnanmaa campus, L10
	12:30-14:00	Lunch in Restaurant Kastari
	14:00-15:00	**Campus Tour** 5G Test Network, Fab Lab Oulu, Perception Engineering Lab, AWARE
	15:00-16:00	**Summer School Kick Off** Location: University of Oulu, Linnanmaa campus, L10
	16:00-18:00	**Workshops Kick Off** Location: University of Oulu, Linnanmaa campus, workshops' forts
	18:30-22:00	**Get Together Party** Location: Walhalla, Jaalakuja 1 Bus to Walhalla departs from summer school site at 18:15 After party bus to Nallikari, downtown and Linnanmaa campus
Tuesday June 11	**10:00-18:00**	**Hard work in the workshops**
Wednesday June 12	**10:00-18:00**	**Hard work in the workshops**
	19:00-22:00	**Dinner Boat Cruise aboard M/S Alexandra** Location: Market Place Pier Bus to pier departs from summer school site at 18:15 (via Nallikari) At 22:00 and 24:00 bus from market place to Nallikari and Linnanmaa campus
Thursday June 13	**10:00-18:00**	**Hard work in the workshops**
Friday June 14	**10:00-18:00**	**Hard work in the workshops**
Saturday June 15	**9:00-12:00**	**Final Exam** Location: University of Oulu, Linnanmaa campus, L10
	12:00-13:00	Lunch in Restaurant Kastari
	13:00-18:00	**Result Seminar** Location: University of Oulu, Linnanmaa campus, L2
	18:00-18:30	**Debriefing** Location: University of Oulu, Linnanmaa campus, workshops' forts Bus to Nallikari departs from summer school site at 18:30
	20:00-	**School Dinner** Location: Johteenpooki, Kansankentäntie 11 Bus to Johteenpooki departs from Nallikari at 19:45

11TH INTERNATIONAL UBICOMP SEMINAR 2019

Date	**Monday, June 10, 2019**
Time	**9:00 – 12:30**
Location	**University of Oulu, Linnanmaa campus, lecture hall L10**
Web	http://ubicomp.oulu.fi/11th-international-ubicomp-seminar-2019/
Program	
9:00	Opening words
9:10	**UBIQUITOUS COMPUTING: ENABLING TECHNOLOGICALLY ADVANCED LIVING** Prof. Anind K. Dey, University of Washington, USA
9:35	**THE IOT – WIRELESS TECHNOLOGIES AND APPLICATIONS: A JOURNEY FROM ZIGBEE TO 5G** Prof. Roberto Verdone, University of Bologna, Italy
10:00	**FROM REALITY TO VIRTUALITY: THE SCIENCE AND ART OF CREATING VR EXPERIENCES** Prof. Frank Steinicke, University of Hamburg, Germany
10:25	**CRITICAL MAKING: DESIGNING FOR ACTIVISM** Assoc. Prof. Eric Paulos, University of California, Berkeley, USA
10:50	Coffee
11:15	**UBICOMP RESEARCH REPORT** Prof. Timo Ojala, University of Oulu, Center for Ubiquitous Computing, Finland
11:45	**Q&A WITH THE SPEAKERS**
12:20	Closing words

Q&A with the speakers ongoing in the 2nd International UBICOMP Seminar 2010.

Panelists from left: Anind Dey (Carnegie Mellon University, USA), Marcus Foth (Queensland University of Technology, Australia), Zach Shelby (Sensinode, Finland), Jürgen Scheible (Aalto University, Finland), Vassilis Kostakos (University of Madeira, Portugal), Adam Greenfield (Urbanscale, USA), Mikael Wiberg (Uppsala University, Sweden). Moderator: Timo Ojala (University of Oulu, Finland).

WORKSHOP A

FROM REALITY TO VIRTUALITY: THE SCIENCE AND ART OF CREATING VR EXPERIENCES

Instructors: Prof. Frank Steinicke, University of Hamburg, Germany
Eike Langbehn, University of Hamburg, Germany

Teaching assistant: Dr. Matti Pouke, University of Oulu

Liaison student: Katherine Mimnaugh, University of Oulu, katherine.mimnaugh@oulu.fi

Forts: TS133 & TS135

SCHEDULE

DATE	TIME	TOPIC	LOCATION
Monday June 10	9:00-12:30	11th International UBICOMP Seminar 2019	L10
	12:30-14:00	Lunch	Kastari
	14:00-15:00	Campus Tour	
	15:00-16:00	Summer School Kick Off	L10
	16:00-18:00	Lecture: Introduction to XR	TS133
	18:30-22:00	Get Together Party	Walhalla
Tuesday June 11	10:00-12:00	Lecture: Perception, Cognition & Action	TS133
	12:00-13:00	Lunch	Kastari
	13:00-15:00	Lecture: Immersive Technology, Presence and Cybersickness	TS133
	15:00-15:30	Coffee	UBI Café
	15:30-18:00	Project: Introduction to Unity3D & VR Programming	TS135
Wednesday June 12	10:00-12:00	Lecture: 3D Tracking	TS133
	12:00-13:00	Lunch	Kastari
	13:00-15:00	Lecture: 3D Capturing & Head-Mounted-Displays	TS133
	15:00-15:30	Coffee	UBI Café
	15:30-18:00	Project: Hands-on	TS135
	19:00-22:00	Dinner Boat Cruise	Market place
Thursday June 13	10:00-12:00	Lecture: 3D User Interfaces	TS133
	13:00-14:30	Lunch	Kastari
	13:00-15:00	Project: Hands-on	TS135
	15:00-15:30	Coffee	UBI Café
	15:30-18:00	Project: Hands-on	TS135
Friday June 14	10:00-12:00	Project: Hands-on	TS135
	12:00-13:00	Lunch	Kastari
	13:00-15:00	Project: Hands-on	TS135
	15:00-15:30	Coffee	UBI Café
	15:30-18:00	Project: Hands-on	TS135
Saturday June 15	9:00-12:00	Final Exam	L10
	12:00-13:00	Lunch	Kastari
	13:00-18:00	Result Seminar	L2
	18:00-18:30	Debriefing	TS135
	20:00-	School Dinner	Johteenpooki

INSTRUCTORS

Frank Steinicke is a professor for Human-Computer Interaction at the Department of Informatics at the University of Hamburg. His research is driven by understanding the human perceptual, cognitive and motor abilities and limitations in order to reform the interaction as well as the experience in computer-mediated realities. Frank Steinicke regularly serves as panelist and speaker at major events in the area of virtual reality and human-computer interaction and is on the IPC of various national and international conferences. He serves as the program chair for IEEE VR 2017/2018, which is the most renowned scientific conference in the area of VR/AR. Furthermore, he is a member of the Steering committee of the ACM SUI Symposium and the GI SIG VR/AR, and currently editor of the IEEE Computer Graphics & Applications Department on Spatial Interfaces.

Eike Langbehn is a doctoral candidate and research associate at the Human-Computer Interaction group at the University of Hamburg. Before, he worked as a Unity3D developer at a games company and studied computer science. His research is focused on techniques for exploiting perceptual limitations and illusions with the goal to enable natural walking in a room-scale virtual reality setup, e.g. redirected walking. Eike has published in the most competitive conferences of the field including ACM SIGGRAPH and IEEE VR. He is actively involved in the research community and serves as reviewer for several national and international conferences and journals. Furthermore, he is regularly invited as a speaker at events and gatherings in the area of virtual reality and game development and is committed to the organisation of hackathons and game jams.

SYNOPSIS

Virtual Reality (VR) became increasingly important since its vision from a technological perspective was first introduced by Ivan Sutherland in 1965. Nowadays, many different application domains are interested in using such immersive technology ranging from architecture, health and medicine, psychology, simulation, training, engineering, construction, archaeology, tourism to entertainment, games, education, data visualization, or art and culture. However, building VR experiences also provides challenges for users and developers. Designing natural interactions in a 3D space, avoiding motion sickness, or inducing a high sense of presence in the user – all these goals require a fundamental understanding of the underlying concepts of the technology as well as the human perception, cognition, and motor action.

This workshop will cover:

- basic knowledge about human information processing and the human perceptual system, which is important to understand VR-related topics such as motion sickness,
- the reality-virtuality framework to better frame terms such as virtual, augmented and mixed reality,
- core concepts and definitions of VR such as presence and immersion,
- introduction to software frameworks, in particular, the Unity3D game engine and VR frameworks,
- foundations of immersive technology, e.g., 3D tracking, stereoscopic displays, real-time rendering, and
- design and implementation of 3D user interfaces: object selection & manipulation, system control, and locomotion.

In addition to the theoretical part, attendees will implement a VR experience that contains all the aspects from the lectures. Therefore, we use the Unity3D engine and C#, which will be introduced in the lectures as well. After the workshop, students have a solid theoretical knowledge about VR and are able to program modern VR applications with industry-leading tools.

To attend the workshop, students do not need to have expertise in VR, Unity3D or C#. However, it is necessary to have basic programming skills in at least one modern programming language (e.g., Java or C++). Furthermore, it is beneficial to have basic knowledge in computer graphics.

STUDENTS

First name	Last name	Organization	Country
Toni	Alatalo	University of Oulu	Finland
Francisco	Díaz-Barrancas	University of Extremadura	Spain
Ciprian	Florea	University of Oulu	Finland
Sina	Haselmann	University of Hamburg	Germany
Matthias	Hoppe	LMU Munich	Germany
Malte	Husung	University of Hamburg	Germany
Megumi	Iwata	University of Oulu	Finland
Florian	Lang	LMU Munich	Germany
Wheidima	Melo	University of Oulu	Finland
Katherine	Mimnaugh	University of Oulu	Finland
Usman	Muhammad	University of Oulu	Finland
Roger	Norum	University of Oulu	Finland
Pauli	Pouke	University of Oulu	Finland
Nico	Reski	Linnaeus University	Sweden
Jonas	Schjerlund	University of Copenhagen	Denmark
Markku	Suomalainen	University of Oulu	Finland
Elmeri	Uotila	University of Oulu	Finland
Jani	Vallirinne	University of Oulu	Finland
Adhi	Widagdo	University of Oulu	Finland

VR workshop in UBISS 2016

WORKSHOP B

THE IOT – WIRELESS TECHNOLOGIES AND APPLICATIONS: A JOURNEY FROM ZIGBEE TO 5G

Instructors: Prof. Roberto Verdone, University of Bologna, Italy
Assist. Prof. Chiara Buratti, University of Bologna, Italy

Teaching assistant: Dr. Konstantin Mikhaylov, University of Oulu

Liaison student: Arash Sattari, University of Oulu, arash.sattari@oulu.fi

Fort: TS128

SCHEDULE

DATE	TIME	TOPIC	LOCATION
Monday June 10	9:00-12:30	11th International UBICOMP Seminar 2019	L10
	12:30-14:00	Lunch	Kastari
	14:00-15:00	Campus Tour	
	15:00-16:00	Summer School Kick Off	L10
	16:00-17:30	Lecture: Introduction to the IoT Ecosystem & Fundamentals	TS128
	17:30-18:00	Lecture: Presentation of Hands-on Sessions & Setting up of Groups	Lobby
	18:30-22:00	Get Together Party	Walhalla
Tuesday June 11	10:00-11:00	Lecture: Invent/Conceive/Design/Assess Paradigm	TS128
	11:00-11:30	Lecture: Zigbee Based Use Cases & Task Assignments	TS128
	11:30-12:00	Coffee	UBI Café
	12:00-13:30	Project: Zigbee Hands-on Session	TS128
	13:30-14:30	Lunch	Kastari
	14:30-16:00	Project: Zigbee Hands-on Session	TS128
	16:00-16:30	Coffee	UBI Café
	16:30-17:15	Lecture: Application Domains: Smart Cities, Industry 4.0	TS128
	17:15-18:00	Project: Group Brainstorming (INVENT)	TS128
	After dinner	Project: Zigbee: Autonomous Hands-on Session (optional)	
Wednesday June 12	10:00-11:00	Project: Zigbee: Discussion of Results	TS128
	11:00-11:30	Project: LoRa Based Use Cases & Task Assignments	TS128
	11:30-12:00	Coffee	UBI Café
	12:00-13:30	Project: LoRa: Hands-on Session	TS128
	13:30-14:30	Lunch	Kastari
	14:30-16:00	Project: LoRa: Hands-on Session	TS128
	16:00-16:30	Coffee	UBI Café
	16:30-18:00	Project: Group Brainstorming (CONCEIVE/DESIGN/ASSESS)	TS128
	19:00-22:00	Dinner Boat Cruise	Market place
Thursday June 13	10:00-11:00	Project: LoRa: Discussion of Results	TS128
	11:00-11:30	Project: NB-IOT Based Use Cases & Task Assignments	TS128
	11:30-12:00	Coffee	UBI Café
	12:00-13:30	Project: NB-IOT: Hands-on Session	TS128
	13:30-14:30	Lunch	Kastari
	14:30-16:00	Project: NB-IOT: Hands-on Session	TS128
	16:00-16:30	Coffee	UBI Café
	16:30-18:00	Project: NB-IOT: Hands-on Session	TS128
	After dinner	Project: LoRa and NB-IOT: Autonomous Hands-on Session (optional)	

Friday June 14	10:00-11:00	Project: NB-IOT: Discussion of Results	TS128
	11:00-11:30	Project: Feedback	TS128
	11:30-12:00	Coffee	UBI Café
	12:00-13:30	Project: Hands-on Session on Any Platform	TS128
	13:30-14:30	Lunch	Kastari
	14:30-16:00	Lecture: The 5G Ecosystem: Technologies and Applications of the IoT	TS128
	16:00-16:30	Coffee	UBI Café
	16:30-18:00	Project: Preparation of Pitch	TS128
Saturday June 15	9:00-12:00	Final Exam	L10
	12:00-13:00	Lunch	Kastari
	13:00-18:00	Result Seminar	L2
	18:00-18:30	Debriefing	TS128
	20:00-	School Dinner	Johteenpooki

INSTRUCTORS

Roberto Verdone got his Master degree in Electronics Engineering, and his Ph.D., both from the Univ. of Bologna. Since 2001 he is Full Professor in Telecommunications at the Univ. of Bologna. He teaches courses on Mobile Radio Networks, Internet of Things, Vehicular Communications, and on Project Management and Soft Skills. In 2001 he founded a research group (Radio Networks) working on RRM for mobile systems, MAC, routing and topology aspects of wireless sensor networks, architectures and technologies for the IoT. In particular, he is active in the field of the integration of the IoT with 5G networks. He is part of the Networld2020 Expert Group. In such role, in 2015 he edited a White Paper on "Experimental facilities for 5G in Europe", contributed by about 50 experts from major European stakeholders. He published about 200 research papers, on IEEE journals / conferences. In the past 15 years he has been involved / has coordinated more than ten European research projects, including four Networks of Excellence, and many industrial projects (with Telecom Italia, Microsoft, CEA-LETI, and others). During the last decade he was General Chairman for the COST Action 2100 on mobile radio communications, and co-chaired the follow-up Actions IC1004 and IRACON. He is senior member of IEEE. In Sept. 2018 he hosted IEEE PIMRC in Bologna, acting as General Chairperson. In 2016 he co-founded an innovative start-up (Idesio), which offers end-to-end IoT services in various application domains, including Smart Cities and Smart Manufacturing.

Chiara Buratti received her Ph.D. degree in electronics, computer science, and systems from the University of Bologna in 2009. Since 2011 she is Assistant Professor at the University of Bologna. Her research focuses on Wireless Sensor Networks and Internet of Things, with particular reference to MAC and routing protocols, Zigbee and LoRa technologies. She has collaborated in many European projects, such as Newcom, Newcom++, Cruise, eDiana and Wiserban. She has been Responsible of the Bologna site of the EuWIn platform developed within the NoE Newcom# and Co-Chair of the EWG-IoT of the Cost Action IRACON. She won the "2012 Intel Early Career Faculty Honor Program Award" and she has been Enseignant Chercheur Invitè at CNRS, LIMOS lab, dell'Università Blaise Pascal, Clermont-Ferrand (France). She has co-authored more than 80 technical papers.

SYNOPSIS

The IoT is a fascinating ecosystem comprising many components, which are tightly interrelated: devices (the Things), wireless networks, the Internet, the application domains. Complete understanding of the IoT world requires end-to-end approaches that include all such components, plus a bit of business models. This workshop aims at testing the participants' abilitities in diving into the IoT world.

Before the workshop, participants will be provided with material to get in touch with the wireless communication technologies that will be used during the workshop: Zigbee, LoRa, and 5G. When in Oulu, after a short introduction to

the IoT ecosystem and the approaches needed for successful implementation of IoT applications, they will be given the chance to put the hands on different platforms implementing the three technologies. They will be grouped in teams of up to three members, and asked to develop their own innovative IoT application. Participants will program devices, measuring link and network KPIs like throughput and latency; they will implement innovative IoT applications, and test them by personalising the devices with sensors of different types; they will develop simple web applications able to interact with the wireless devices. Application domains of the IoT attracting growing interest of many stakeholders include Smart Cities, and Industry 4.0. These will be considered as primary reference domains for the workshop, with lessons learnt from real-world use cases discussed during the brainstorming sessions.

In summary, the workshop will include:

- introduction and summary of material provided before the workshop (about 20% of time);
- hands-on project (about 60% of time);
- brainstorming sessions oriented at the discussion of participants' projects and outcomes (about 20% of time).

Participants will learn:

- fundamentals of Zigbee, LoRa and 5G wireless technologies;
- how to program and test wireless devices in a networked context;
- how to develop a successful IoT application.

Preferred participant profile are graduate students (engineers, PhD students) and advanced M.Sc. students with background in telecommunications, electrical engineering, and computer science and engineering.

STUDENTS

First name	Last name	Organization	Country
Ernest Ofosu	Addo	University of Siena	Italy
Sisay Tadesse	Arzo	University of Trento	Italy
Muhammad	Asad Ullah	University of Oulu	Finland
Giampaolo	Cuozzo	University of Bologna	Italy
Dian	Echevarria	University of Oulu	Finland
Rouhollah	Ehsani	University of Oulu	Finland
Eugene	Frimpong	Tampere University	Finland
Henrique	Hilleshein	University of Oulu	Finland
Ingólfur	Hjörleifsson	University of Iceland	Iceland
Junnaid	Iqbal	University of Oulu	Finland
Puneeth	Jubba Honnaiah	University of Luxembourg	Luxembourg
Tanesh	Kumar	University of Oulu	Finland
Yi	Lu	Tampere University	Finland
Osmel	Martinez Rosabal	University of Oulu	Finland
Nelson	Mayedo	University of Oulu	Finland
Hong Tri	Nguyen	University of Oulu	Finland
Niloofar	Okati	Tampere University	Finland
Jude	Okwuibe	University of Oulu	Finland
Elena	Peralta	Nokia & Tampere University	Finland
Arash	Sattari	University of Oulu	Finland
Yushan	Siriwardhana	University of Oulu	Finland
Marco	Skocaj	University of Bologna	Italy
Eduardo	Tominaga	University of Oulu	Finland
Xiyu	Wang	Aalto University	Finland

WORKSHOP C

CRITICAL MAKING: DESIGNING FOR ACTIVISM

Instructors: Assoc. Prof. Eric Paulos, University of California, Berkeley, USA
Assist. Prof. Jill Miller, University of California, Berkeley, USA
Assoc. Prof. Georgi V. Georgiev, University of Oulu, Finland

Teaching assistants: Chris Myers, University of California, Berkeley, USA
Jani Ylioja, University of Oulu

Liaison student: Yazan Barhoush, University of Oulu, yazan.barhoush@oulu.fi

Forts: Fab Lab Oulu & TS127

SCHEDULE

DATE	TIME	TOPIC	LOCATION
Monday June 10	9:00-12:30	10th International UBICOMP Seminar 2018	L10
	12:30-14:00	Lunch	Kastari
	14:00-15:00	Campus Tour	
	15:00-16:00	Summer School Kick Off	L10
	16:00-17:00	Lecture: Introduction to Workshop	TS127
	17:00-18:00	Workshop: Student Intro Presentations and Group Formation	TS127
	18:30-22:00	Get Together Party	Walhalla
Tuesday June 11	10:00-11:00	Lecture: Protests 1	TS127
	11:00-12:00	Lecture: Protests 2	TS127
	12:00-13:00	Lunch	Kastari
	13:00-14:00	Activity: Design Matrix + Brainstorm Headline	TS127
	14:00-17:30	Activity: Brainstorm	TS127
	17:30-18:00	Activity: Idea Reportout	TS127
Wednesday June 12	10:00-11:00	Lecture: Cardboard Prototyping	TS127
	11:00-12:00	Activity: Prototyping	TS127
	12:00-13:00	Lunch	Kastari
	13:00-14:00	Lecture: Protest as Art and Design	TS127
	14:00-15:00	Skills: Digital Fabrication and Modeling	Fab Lab
	15:00-16:00	Skills: Electronics	Fab Lab
	16:00-17:00	Skills: Programming	Fab Lab
	17:00-18:00	Studio Worksession	Fab Lab
	19:00-22:00	Dinner Boat Cruise	Market place
Thursday June 13	10:00-12:00	Studio Worksession	Fab Lab
	12:00-13:00	Lunch	Kastari
	13:00-14:00	Activity: X-Critique	Fab Lab
	14:00-17:30	Studio Worksession	Fab Lab
	17:30-18:00	Project Status Check	Fab Lab
Friday June 14	10:00-11:00	Lecture: How to Present	TS127
	11:00-12:00	Studio Worksession	Fab Lab
	12:00-13:00	Lunch	Kastari
	13:00-18:00	Studio Worksession	Fab Lab
Saturday June 15	9:00-12:00	Final Exam	L10
	12:00-13:00	Lunch	Kastari
	13:00-18:00	Result Seminar	L2
	18:00-18:30	Debriefing	TS127
	20:00-	School Dinner	Johteenpooki

INSTRUCTORS

Eric Paulos is the founder and director of the Hybrid Ecologies Lab, an Associate Professor in Electrical Engineering Computer Science Department at UC Berkeley, Director of the CITRIS Invention Lab, Chief Learning Officer for the Jacobs Institute for Design Innovation, a Co-Director of the Swarm Lab, and faculty within the Berkeley Center for New Media (BCNM). Previously, Eric held the Cooper-Siegel Associate Professor Chair in the School of Computer Science at Carnegie Mellon University where he was faculty within the Human-Computer Interaction Institute with courtesy faculty appointments in the Robotics Institute and in the Entertainment Technology Center. Prior to CMU, Eric was Senior Research Scientist at Intel Research in Berkeley, California where he founded the Urban Atmospheres research group. His areas of expertise span a deep body of research territory in urban computing, sustainability, green design, environmental awareness, social telepresence, robotics, physical computing, interaction design, persuasive technologies, and intimate media. Eric received his PhD in Electrical Engineering and Computer Science from UC Berkeley. Eric is also the founder and director of the Experimental Interaction Unit and a frequent collaborator with Mark Pauline of Survival Research Laboratories.

Jill Miller is an Assistant Professor at University of California Berkeley's Department of Art Practice and Berkeley Center for New Media. She teaches courses on digital fabrication, new media, and public art practices. She is a visual artist who collaborates with communities in the form of public interventions, workshops, and performances. Her work has been shown nationally and internationally, and collected in public institutions worldwide including CA2M Centro de Arte Dos de Mayo in Madrid and the Hirshhorn Museum and Sculpture Garden in Washington D.C. She uses her art practice to engage ideas around social issues, including feminism, gender identity, disability access, and more. For example, The Milk Truck, an emergency breastfeeding advocacy vehicle, stood up to local establishments who were harassing breastfeeding mothers in Pittsburgh, Pennsylvania while teaching the community about laws that protect mothers' rights. She uses humor as a strategy to open conversations about difficult subject matter. In past work, she searched for the legendary Bigfoot in the Sierra Nevada mountains, inserted herself into the art historical work of John Baldessari, and became a private investigator who performed surveillance on art collectors. Jill received her MFA in from University of California, Los Angeles and her BA with high honors from University of California, Berkeley, in English.

Eric and Jill have taught collaboratively in the past, most recently creating the course Critical Practices for the Jacobs Institute of Design Innovation, which was an experimental class focused on the intersection of digital fabrication and community activism.

Georgi V. Georgiev is an Associate Professor in Digital Fabrication at the Center for Ubiquitous Computing, University of Oulu. His research interests include in design creativity, digital fabrication and prototyping, design cognition, user interaction and experience, and design thinking. Georgi's research focuses both on early stage of design process, when the new and innovative ideas are generated, and user's perspective on the design outcome that is essential for understanding challenges for success of digital technologies. He is actively involved in foundation, organization and development of the Special Interest Group Design Creativity (SIG DC) at the Design Society, six International Conferences on Design Creativity (ICDC), as well as in the editorial team of International Journal of Design Creativity and Innovation since its inception. Georgi was previously with Kobe University, Japan and Japan Advanced Institute of Science and Technology (JAIST). He has experience from university-industry collaborative research projects in Japan and holds PhD in knowledge science for his research in the area of design creativity from JAIST.

SYNOPSIS

Sometimes designers need to make problems rather than solve them. In this workshop, students will spend one week developing a prototype for a tool that addresses social change or activism. As designers and artists, we recognize that life has layers and complications, and that we all exist in unique ecosystems (especially when we come from different parts of the world for this one week course). Together we will find common ground and collaborate on projects that are provocative, brave, and meaningful. Using digital fabrication tools, students will brainstorm, design, and prototype a tool of resistance (hailing from UC Berkeley, the birthplace of the American Free Speech Movement, professors Jill Miller and Eric Paulos embrace "resistance" as a positive democratic tool for ensuring that free speech thrives in society). Students will choose their theme area and design and build a protest tool to use in a public space. Areas of focus may include: environmental activism, gender equality, animal rights, immigration, democracy, dystopian futures, or other areas selected by students. With design research as a lens, students will envision and create an object or experience that critically explores a socially and culturally relevant issue.

Throughout the week, we will look at the history of protest strategies used by activist groups around the world. In parallel, we will have skill-based workshops that focus on 3D printing, laser cutting, and electronics tool kits. Inspired by the history of activism around the world, students will research and design a tool to be used at a future protest or they will build one that could have enhanced a past protest. Some protest events and strategies students will explore include: Julia Butterfly Hill's two-year occupation of a 1500 year old redwood tree in Northern California; The Free Speech Movement in Berkeley; Martin Luther King and civil rights protests; the Women's March; the Occupy Movement; French Yellow Vest protests; Sea Shepherds; Pussy Riot, #MeToo movement, 2018 Rome protests, and so on. Looking to these historical moments, we will pinpoint spaces where avant garde design could have enhanced, changed or altered the protestors' messages.

Together we will harness our curiosity and discover new strategies for activism. Join us and make design your partner in protest!

Learning outcomes include:

- designing and fabricating with 3D printers,
- designing and laser cutting different materials,
- proficiency in using a simple electronics kit,
- a new understanding of public art and social activism.

All students interested in design and activism are encouraged to apply. Students will work collaboratively in groups and are not expected to have full command of all skill sets used in the course. However, students who have experience in the following areas are ideal: Adobe Illustrator, Laser cutting, Fusion 360 or other 3D modeling software, 3D printing, Arduinos, Raspberry Pi, contemporary art, and collaborating with others.

View into Fab Lab Oulu (https://www.oulu.fi/fablab/)

STUDENTS

First name	Last name	Organization	Country
Nasrin	Akter	University of Oulu	Finland
Yazan A	Barhoush	University of Oulu	Finland
Marta	Cortés Orduña	University of Oulu	Finland
Nils	Ehrenberg	Aalto University	Finland
Felix	Epp	Aalto University	Finland
Jonada	Ferracaku	University of Oulu	Finland
Heidi	Hartikainen	University of Oulu	Finland
Nijar	Hossain	University Of Oulu	Finlad
Perla	Innocenti	University of Northumbria at Newcastle	UK
Md Saroar	Jahan	University Of Oulu	Finland
Walther	Jensen	Aalborg University	Denmark
Maria	Karyda	Aalto University	Finland
Kailin	Li	University of California, Berkeley	USA
Alexandra	Nilles	University of Illinois at Urbana-Champaign	USA
Ralitsa	Noneva	Technical University of Sofia	Bulgaria
Kristina	Pironkova	Technical University of Sofia	Bulgaria
Parsa	Sharmila	University of Oulu	Finland
Delyanka	Sirakova	Technical University of Sofia	Bulgaria
Juuso	Tolonen	University of Oulu	Finland
Evgenia-Xenia	Vafeiadou	University of London & University College London	UK
Peetu	Virkkala	University of Oulu	Finland
Bounab	Yazid	University of Oulu	Finland
Patrycja	Zdziarska	Indiana University	USA

Fab Lab workshop in UBISS 2018

WORKSHOP D

UBIQUITOUS COMPUTING: ENABLING TECHNOLOGICALLY ADVANCED LIVING

Instructors: Prof. Anind K. Dey, University of Washington, USA
Assist. Prof. Edison Thomaz, University of Texas at Austin, USA
Adj. Prof. Denzil Ferreira, University of Oulu, Finland

Liaison student: Elina Kuosmanen, University of Oulu, elina.kuosmanen@oulu.fi

Fort: TS101

SCHEDULE

DATE	TIME	TOPIC	LOCATION
Monday June 10	9:00-12:30	11th International UBICOMP Seminar 2019	L10
	12:30-14:00	Lunch	Kastari
	14:00-15:00	Campus Tour	
	15:00-16:00	Summer School Kick Off	L10
	16:00-17:00	Introductions of Participants & Overview of Workshop	TS101
	17:00-18:00	Lecture: Ubiquitous Computing	TS101
	18:30-22:00	Get Together Party	Walhalla
Tuesday June 11	10:00-11:00	Lecture: Android	TS101
	11:00-11:30	Coffee	UBI Café
	11:30-12:00	Lecture: Kotlin	TS101
	12:00-13:00	Lunch	Kastari
	13:00-14:00	Lecture: AWARE	TS101
	14:00-14:15	Coffee	UBI Café
	14:15-17:00	Lecture: Raspberry PI	TS101
	17:00-18:00	Project: Team formation, brainstorming, pitching	TS101
Wednesday June 12	10:00-11:00	Lecture: Industry Perspective	TS101
	11:00-18:00	Project: Work (lunch and coffee breaks at will)	TS101
	19:00-22:00	Dinner Boat Cruise	Market place
Thursday June 13	10:00-18:00	Project: Work (lunch and coffee breaks at will)	TS101
Friday June 14	10:00-17:00	Project: Work (lunch and coffee breaks at will)	TS101
	17:00-18:00	Project: Presentations	TS101
Saturday June 15	9:00-12:00	Final Exam	L10
	12:00-13:00	Lunch	Kastari
	13:00-18:00	Result Seminar	L2
	18:00-18:30	Debriefing	TS101
	20:00-	School Dinner	Johteenpooki

INSTRUCTORS

Anind K. Dey is a Professor and Dean of the Information School at the University of Washington. Anind is renowned for his early work in context-aware computing, an important theme in modern computing, where computational processes are aware of the context in which they operate and can adapt appropriately to that context. His research is at the intersection of human-computer interaction, machine learning, and ubiquitous computing. For the past few years, Anind has focused on passively collecting large amounts of data about how people interact with their phones and the objects around them, to use for producing detection and classification models for human behaviors of interest. He applies a human-centered and problem-based approach through a collaboration with an amazing collection of domain experts in areas of substance abuse (alcohol, marijuana, opioids), mental health, driving and transportation needs, smart spaces, sustainability, and education. Anind was inducted into the ACM SIGCHI Academy for his significant contributions to the field of human-computer interaction in 2015.

Edison Thomaz is Assistant Professor in the Department of Electrical and Computer Engineering at The University of Texas at Austin, where he directs the Human Signals laboratory. His research focuses on the computational perception of human signals (e.g., behavioral, emotional, physiological) while leveraging ubiquitous and wearable sensing. A core area of interest is studying systems and methods for recognizing and modeling the entire span of people's everyday activities and context. This work intersects with several disciplines, from ubiquitous computing and HCI to human-centered machine learning and signal processing. Prof. Thomaz is particularly motivated by applications in the domain of health and personalized medicine such as building health models and tools that can characterize and forecast various states of health and disease from sensor data. Over the last few years, a key area of interest is his laboratory has been automated dietary monitoring (ADM) where Prof. Thomaz has pioneered novel sensors and computational methods. At UT Austin, he is a member of the Decision, Information, Communications and Engineering (DICE) track and the Wireless Networking and Communications Group (WNCG), an industry affiliate program with companies such as Samsung, Intel and AT&T. He is an associate editor of PACM IMWUT, local chair for CSCW 2019, workshop chair for PerCom 2020 and serves on numerous program and organizing committees (e.g., Pervasive Health, CHI, ISWC). Additionally, he co-directs the Life Sensing Consortium (LSC), a multi-disciplinary, multi-university collaborative network of researchers who use sensing technologies to conduct interdisciplinary sensing research to promote positive life outcomes. Prior to his Ph.D., Prof. Thomaz held industry positions at Microsoft and France Telecom. He holds BSc degree in CS from UT Austin, MSc from MIT Media Lab and Ph.D. from Georgia Tech.

Denzil Ferreira is Adjunct Professor, Senior Research Fellow and an Academy of Finland Research Fellow at the University of Oulu, Faculty of Information Technology and Electrical Engineering (ITEE), the Deputy Director of the Center for Ubiquitous Computing and the Principal Investigator of the Community Instrumentation and Awareness (CIA) research group. His main research interest is on technology-driven human behavior sensing and modeling, where he juxtapose methods from large-scale data analysis, sensor instrumentation, applied machine learning, mobile and ubiquitous computing to understand and study a variety of human behavioral and social phenomena in naturalistic settings. Combined, they enable a better understanding of how people use technology and most importantly, why they may use such technology. He believes technology should be imagined, developed and shared to tackle the most challenging societal issues. To facilitate this venture, he created AWARE (http://awareframework.com) during his PhD. AWARE is an interdisciplinary and collaborative mobile context and sensors' data collection tool. By supporting and encouraging multidisciplinary collaboration from the ground up, AWARE is today one of his major academic accomplishments. Engaged in research efforts worldwide, AWARE is open-source and it is widely adopted by researchers and engineers in different domains. He is a Review Editor for Frontiers in Human-Media Interaction, IEEE Communications Society Magazine. He acts as an expert Proposal Reviewer in the Flanders Research Foundation, and the Icelandic Research Fund. He is an Associate Editor of PACM IMWUT and participates in multiple program committees from ACM and IEEE conferences. He organises the Ubiquitous Mobile Instrumentation workshop, collocated with ACM UbiComp since 2012.

SYNOPSIS

Thanks to the rapid technological development, wearable, mobile, and deployable sensor technologies, we can now allow people to engage with technology anywhere and anytime. In addition to the benefits for end users, researchers and developers can also benefit from the powerful infrastructure for improving the quality of life of everybody. This workshop brings together researchers with an interest in using technology as a tool to empower user. Topics covered by this workshop include: mobile-enabled sensing and context understanding technologies, portable computation, mobile sensing and strategies for data collection and presentation, context-aware platforms, and end-user applications.

The workshop will be conducted as mini-track lectures and hands-on prototyping sessions, brainstorming, and development hackathon for the final ubiquitous computing application. Participants should have Android Studio, Arduino IDE installed on their laptops and an Android smartphone running Android 4.4 or higher (do not forget the USB cable for debugging your applications). We will provide the sample-code for the prototyping session, development slides and one-to-one tutorials during this workshop. Participants should have experience in programming with object-oriented languages (e.g., Java, Kotlin, Python, etc.)

STUDENTS

First name	Last name	Organization	Country
Joshua	Adeegbe	University of Oulu	Finland
Murad	Ahmad	University of Oulu	Finland
Andy	Alorwu	University of Oulu	Finland
Marcel	Borowski	Aarhus University	Denmark
Fiona	Draxler	LMU Munich	Germany
Valerii	Kan	University of Oulu	Finland
Loukas	Konstantinou	Cyprus University of Technology	Cyprus
Elina	Kuosmanen	University of Oulu	Finland
Vlad	Manea	University of Copenhagen	Denmark
Hassan	Mehmood	University of Oulu	Finland
Thaha	Mohammed	Aalto University	Finland
Yuuki	Nishiyama	University of Oulu	Finland
Laura	Ojala	Prove Expertise	Finland
Kennedy	Opoku Asare	University of Oulu	Finland
Abhinay	Pandya	University of Oulu	Finland
Guerkan	Solmaz	NEC Laboratories Europe	Germany
Aku	Visuri	University of Oulu	Finland

Anind Dey's workshop in UBISS 2010

SOCIAL PROGRAM

GET TOGETHER PARTY

Monday June 10 at 18:30-22

Location: Walhalla, Jaalakuja 1**.**

Transportation: Bus to Walhalla departs from summer school site at 18:15. After party bus to Nallikari, downtown and Linnanmaa campus.

Program: Welcoming words, buffet, 30 Second Madness for students, Finnish Summer Olympics (weather allowing).

30 Second Madness: Remember to upload your 1 Madness slide in PDF format to your online registration. Memorable Madness Award(s) will be nominated by a distinguished jury and presented at the School Dinner.

Menu: Pizza, sushi, salad, drinks.

Dress code: Casual.

Walhalla

Class 2014 lining up for madness presentations

Boot throwing in the Finnish Summer Olympics

Class 2012 instructor Aaron Quigley completing his leg in the 'wife' carrying relay

Class 2015 students chilling at fireplace

Class 2013 throwing Finnish darts

DINNER BOAT CRUISE

Wednesday June 12 at 19-22

Synopsis: 3-hour at cruise on M/S Alexandra in front of Oulu river estuary.
Departure location: Market place pier.
Transportation: Bus to cruise departs from the summer school site at 18:15. **OBS!** The bus stops at Nallikari Holiday Village for **10 MINUTES** so that you can drop off your stuff – please make sure to be back on the bus in time! After the cruise buses from market place to Nallikari Holiday Village and Linnanmaa campus at 22:00 and 24:00.
Menu: Green salad, grilled salmon / grilled chicken / feta salad, ice cream & berries, red and white wine, cash bar.
Dress code: Casual.


M/S Alexandra


Class 2011 safely back ashore


Class 2012 instructors fishing: Aaron Quigley is taming the "big one", while Jonna Häkkilä and Keith Cheverst are selecting next lucky lure


Class 2014 instructors enjoying dessert
No worries – the boat is not sinking ☺


Class 2016 enjoying sun set


Class 2017 instructor Alex Aurigi reeled in the pike that hit the lucky lure selected by Vice Rector Helka-Liisa Hentilä

SCHOOL DINNER

Saturday June 15 at 20-

Location: Johteenpooki, Kansankentäntie 11.

Transportation: Bus to School Dinner departs from Nallikari Holiday Village at 19:45.

Program: Welcoming words, dinner buffet, speeches, presentation of awards, music, sauna and outdoor hot tub (towels are provided), late night sausages and Timppa's famous outdoor fireplace pancakes.

Menu: green salad, smoked salmon with dill pesto potato salad, feta salad with citron vinaigrette, beef fillet with spicy au gratin, shallot red wine sauce, potatoes au gratin, oven baked vegetables, barley bread and rye bread with spread, cheese cake with raspberry dressing, coffee and tea.

Dress code: Casual.

Johteenpooki

Class 2011 Memorable Madness Award recipients

Class 2012 instructors skinny dipping at Nallikari Beach

Class 2013 instructors

Class 2015 project team "Lost Connection" posing with their Distinguished Project Award along instructor Mark Shepard

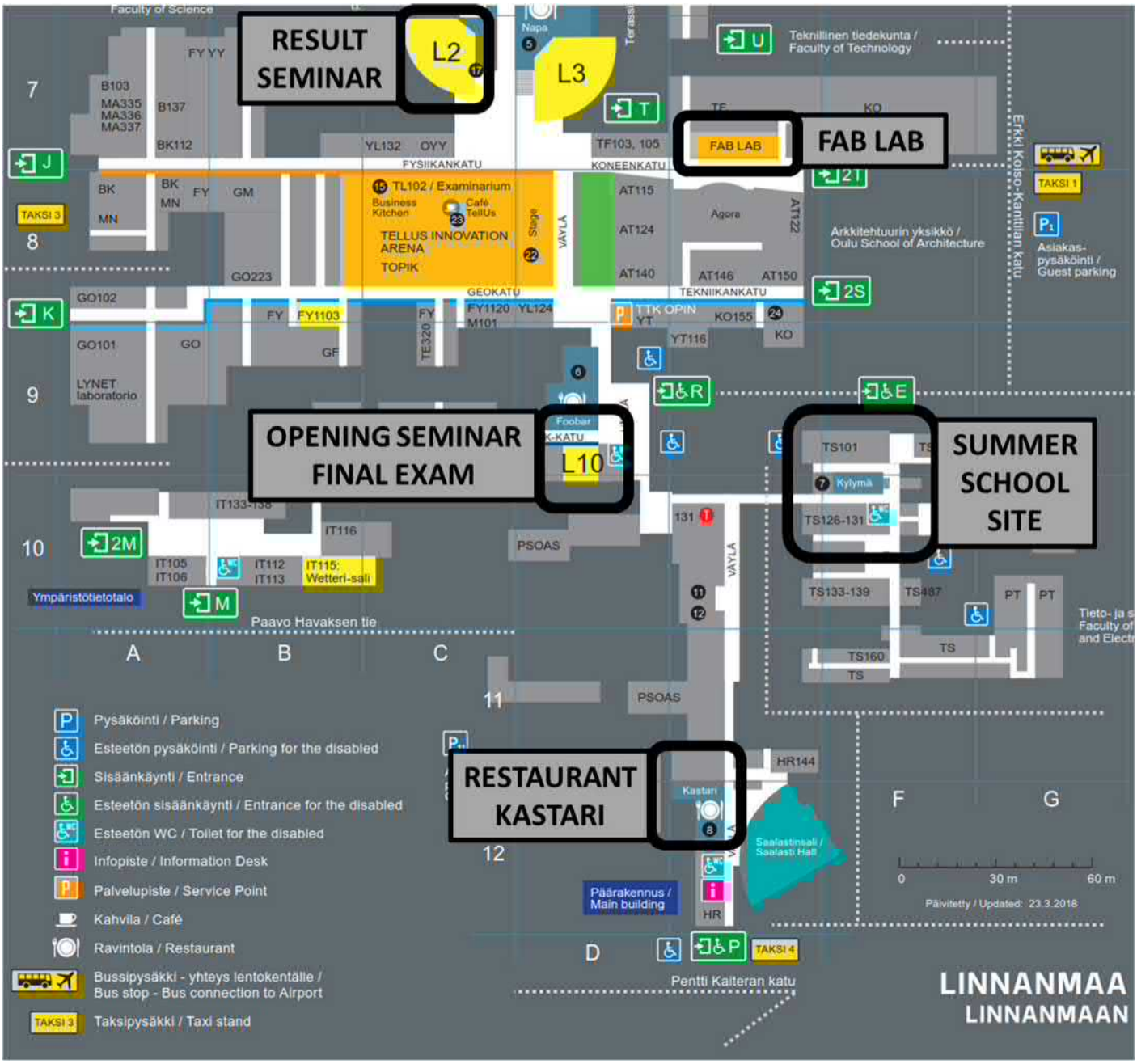
Class 2017 Distinguished Project Award recipients

SUMMER SCHOOL SITE

UNIVERSITY OF OULU, LINNANMAA CAMPUS, TIETOTALO BUILDING, DOOR E

Address: Erkki Koiso-Kanttilan katu 3

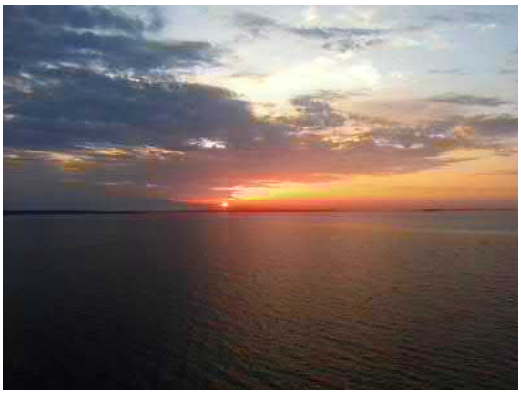
KEY LOCATIONS ON CAMPUS



ACCOMMODATION IN NALLIKARI HOLIDAY VILLAGE

Out of town students have the opportunity to purchase low-cost accommodation for just 35 EUR/day per person in twin bed room in luxurious villa in Nallikari Holiday Village located in a scenic setting next to Nallikari Beach.

- Address: Leiritie 10, Oulu.
- Phone: +358 44 703 1353.
- Onsite security guard daily at 19-05, phone +358 44 703 1329.
- Web: http://www.nallikari.fi.
- Email: reception@nallikari.fi.
- Reception is open daily 8–23.
- Check-in time is 15:00.
- Check-out time is 12:00.
- Free WiFi: SSID *Nallikari-Guest*, password *nallikari2019*.
- Café Loma (http://kahvilaloma.fi/) in reception building is open daily 8-23.
    - Breakfast served daily at 8-12 for 12.90 EUR/person, includes bacon, fried egg, croissant, smoothie, fresh juice, coffee/tea.
    - Soup lunch served daily at 11-16 for 8.90 EUR/person.
    - Grill open daily at 11-22, serving food, nachos and salads.
- Bicycle rental from Café Loma: 15 EUR/8h, 20 EUR/24h.
- Fatbike rental from Lappis (https://www.lappis.fi/fatbikes-oulu/): 25 EUR/2h, 35 EUR/day, 40 EUR/2h, 70 EUR/weekend, 100 EUR/weekdays, 130 EUR/week.
- Tickets to local bus system can be bought from reception: 8 EUR/24h, 12 EUR/48h, 32 EUR/7 days.



Sunset in Nallikari

Poiju villa

Nallikari beach

TRANSPORTATION

PREBOOKED TAXIS FOR ARRIVAL/DEPARTURE TRANSPORTATION

Out of town students are offered a chance to sign up for prebooked taxis for arrival/departure transportation between Oulu airport and train station and Nallikari Holiday Village.

UBISS 2019 CHARTER BUSES

In Nallikari Holiday Village the charter bus stops in front of the reception (Leiritie 10).

DATE	TIME	DEPARTURE LOCATION	DESTINATION
Mon June 10	8:15	Nallikari Holiday Village	Summer School Site
Mon June 10	18:15	Summer School Site	Walhalla (Get Together Party)
Mon June 10	22:00	Walhalla (Get Together Party)	Nallikari – downtown – Linnanmaa Campus
Tue June 11	9:15	Nallikari Holiday Village	Summer School Site
Tue June 11	18:30	Summer School Site	Nallikari Holiday Village
Wed June 12	9:15	Nallikari Holiday Village	Summer School Site
Wed June 12	18:15	Summer School Site	Market place (Dinner Boat Cruise) (via Nallikari Holiday Village)
Wed June 12	22:00	Market place	Nallikari Holiday Village - Linnanmaa Campus
Wed June 12	24:00	Market place	Nallikari Holiday Village - Linnanmaa Campus
Thu June 13	9:15	Nallikari Holiday Village	Summer School Site
Thu June 13	18:30	Summer School Site	Nallikari Holiday Village
Fri June 14	9:30	Nallikari Holiday Village	Summer School Site
Fri June 14	18:30	Summer School Site	Nallikari Holiday Village
Sat June 15	8:15	Nallikari Holiday Village	Summer School Site
Sat June 15	18:30	Summer School Site	Nallikari Holiday Village
Sat June 15	19:45	Nallikari Holiday Village	Johteenpooki (School Dinner)

UBI-postcard sent by Class 2010 students

LOCAL BUSES

One-time ticket valid for 1 hour costs 3.30 EUR. 24-hour ticket costs 8.80 EUR. Tickets are purchased with cash from the driver or as a mobile ticket using a mobile app available for Android and iOS devices in respective app stores and at http://www.payiq.net/oulu/. 0.20 - 0.50 EUR surcharge is added to mobile tickets depending on payment type. OBS! NO debit/credit card payments can be made in buses.

SUMMER SCHOOL SITE ↔ DOWNTOWN

Buses 1, 2, 3 and 8 operate frequently between the summer school site (bus stop "Yliopisto E" for buses going towards downtown) and downtown (bus stop "Toripakka P" for buses going to summer school site). Schedules are available at https://www.oulunliikenne.fi/ or in Google Maps (search for the desired bus stop).

BUS 15: NALLIKARI → DOWNTOWN

exit bus at bus stop "Toripakka E"

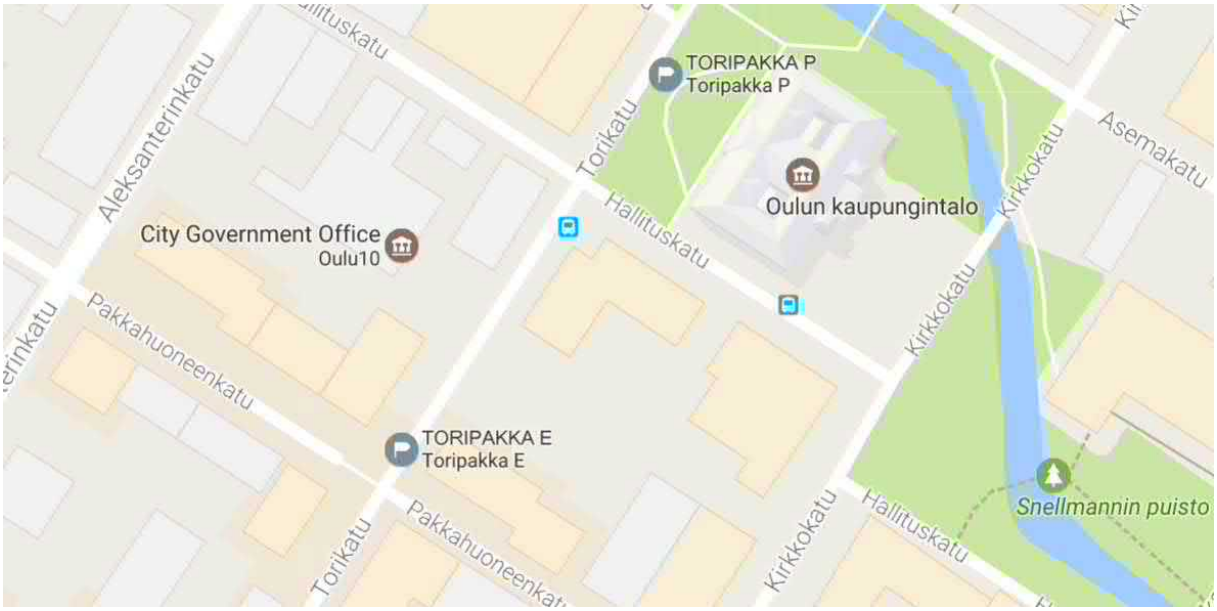
	MON-FRI	SAT	SUN
6	00		
7	00		
8	00	00	
9	00	00	
10	00	00	00
11	00	00	00
12	00	00	00
13	00	00	00
14	00	00	00
15	00	00	00
16	00	00	00
17	00	00	00
18	00	00	00
19	00	00	00
20	00	00	00
21	00	00	00
22	00	00	00

BUS 15: DOWNTOWN → NALLIKARI

board bus at bus stop "Toripakka P"

	MON-FRI	SAT	SUN
5	45		
6	45		
7	45	45	
8	45	45	
9	45	45	45
10	45	45	45
11	45	45	45
12	45	45	45
13	45	45	45
14	45	45	45
15	45	45	45
16	45	45	45
17	45	45	45
18	45	45	45
19	45	45	45
20	45	45	45
21	45	45	45
22	45	45	45

LOCATIONS OF TORIPAKKA E/P BUS STOPS AT DOWNTOWN OULU



COMMUNICATION AND SOCIAL MEDIA

EMAIL LISTS

Everybody:	ubiss-all@lists.oulu.fi	Workshop A:	ubiss-a@lists.oulu.fi
Students:	ubiss-students@ lists.oulu.fi	Workshop B:	ubiss-b@lists.oulu.fi
Instructors:	ubiss-instructors@ lists.oulu.fi	Workshop C:	ubiss-c@lists.oulu.fi
Staff:	ubiss-staff@ lists.oulu.fi	Workshop D:	ubiss-d@lists.oulu.fi

SOCIAL MEDIA (#UBISS2019)

facebook.com/ ubisummerschool

https://vimeo.com/groups/315324

PHONE NUMBERS

Workshops			
A	Instructor	Frank Steinicke	+491707383205
	Instructor	Eike Langbehn	+4917661757078
	Teaching assistant	Matti Pouke	+358405460916
	Liaison student	Katherine Mimnaugh	+358465815773
B	Instructor	Roberto Verdone	+393480176820
	Instructor	Chiara Buratti	+393290051178
	Teaching assistant	Konstantin Mikhaylov	+358442452292
	Liaison student	Arash Sattari	+358414777062
C	Instructor	Eric Paulos	+358449616334
	Instructor	Jill Miller	+358449616334
	Instructor	Georgi V. Georgiev	+358504300562
	Teaching assistant	Chris Myers	+14153743199
	Teaching assistant	Jani Ylioja	+358505951907
	Liaison student	Yazan Barhoush	+358417517625
D	Instructor	Anind K. Dey	+358449616332
	Instructor	Edison Thomaz	+16177336215
	Instructor	Denzil Ferreira	+358409675202
	Liaison student	Elina Kuosmanen	+358504821517

Summer school staff		
Chair	Timo Ojala	+358405676646
Co-chair of the organizing committee	Anabela Berenguer	+358456026793
Co-chair of the organizing committee	Ella Peltonen	+358504717446
Lab engineer	Hannu Rautio	+358405089952

General services		
Taxi	(24 hours)	+35860030081
City of Oulu tourist office	(office hours)	+358855841330
Directory services	(24 hours)	0100100, 020202
Emergency	(24 hours)	112

ASSORTED PRACTICAL MATTERS

REGISTRATION FEE: 250 EUR

Registration fee covers participation in one (1) workshop, social program, local transportation, daily lunches in a campus restaurant and free refreshments at the summer school site.

CREDITS AND CERTIFICATES

Credits: 5.0 ECTS (subject to approval by a participant's home university).

All participants should verify beforehand the passing criteria of (postgraduate) studies enforced by their home university. At some universities participation is sufficient for credits while some universities such as the University of Oulu require passing a final exam.

The passing criteria for the students of the University of Oulu are as follows:

1. Full participation in the selected workshop, including the opening seminar (11th International UBICOMP Seminar 2019).

2. Successful contribution to a project completed during the workshop. The project contributes 50% of the final grade on scale: Fail, 1 (lowest passing grade) - 5 (highest passing grade).

3. Passing the final exam based on a reading package selected by the instructor and the material presented during the workshop. The final exam contributes 50% of the final grade on scale: Fail, 1 (lowest passing grade) - 5 (highest passing grade).

A certificate of participation will be awarded to all students who complete requirements 1 and 2, and pay the registration fee. This certificate of participation does not include the final grade.

A separate certificate of passing the summer school with a particular final grade will be awarded to all students who complete requirements 1, 2 and 3, and pay the registration fee.

DAILY LUNCHES

Registration package includes lunch vouchers that are valid for a regular or a delicacy lunch in Restaurant Kastari on campus.
Lunch hours: Mon-Fri 10:00-14:00, Sat 12:00-13:00.

UBI CAFÉ

Our own UBI Café serves FREE coffee, tea, cold drinks, cookies, fruits and DIY sandwiches at the summer school site.
Opening hours: Mon 8:30-18:15, Tue-Fri 9:30-18:30, Sat 8:30-18:30.

PERSONAL LAPTOPS

Required for all students.
Student not being able to bring own laptop should contact their liaison student.
Finland uses 220 V / 50 Hz electricity with plug types C and F shown right.
Extension cords will be available in lecture halls.
Adapters can be borrowed from the helpdesk.

WIRELESS INTERNET ACCESS

panOULU WLAN (SSID *panoulu*) providing open (no authentication) and free (no payment) wireless Internet access is available in lecture halls and throughout the City of Oulu in a hotspot manner.

At the University of Oulu campus WLAN access points also advertise SSID *eduroam* that can be used with home organization's user account if the home organization is a member of the Eduroam roaming agreement. *eduroam* provides a secure connection and has higher capacity gateway to Internet.

PRINTING

Documents to be printed should be emailed in PDF format to ubiss_helpdesk@gmail.com with printing instructions (number of copies, size in A3 or A4, black-and-white vs color, 1-sided vs 2-sided). Ready prints are collected from the helpdesk.

UBISS LEGACY

UBISS 2018 (9th International UBI Summer School 2018), June 4-9, 82 students from 15 countries in 4 workshops A: HUMANISTIC HCI (Prof. Jeffrey Bardzell & Prof. Shaowen Bardzell, Indiana University, USA) B: WEARABLE AND MOBILE HEALTH AND BEHAVIOR TRACKING (Prof. Jakob E. Bardram, Technical University of Denmark, Denmark & Adj. Prof. Denzil Ferreira, University of Oulu, Finland) C: DESIGNING FOR THE MARGINS (EXTRA-URBAN INTERACTIONS) (Prof. Alan Dix, Swansea University, UK & Adj. Prof. Simo Hosio, University of Oulu, Finland) D: MAKE. WEAR. MATTER: EXPLORATIONS IN DESIGN, MAKING & CREATIVITY (Prof. Mark D. Gross & Prof. Ellen Yi-Luen Do, University of Colorado Boulder, USA; Adj. Prof. Georgi V. Georgiev, University of Oulu, Finland)
UBISS 2017 (8th International UBI Summer School 2017), June 12-17, 53 students from 9 countries in 4 workshops A: DESIGNING CITY FUTURES THROUGH AUGMENTED PLACE (Prof. Alessandro Aurigi & Dr. Katharine Willis, Plymouth University, UK) B: VIRTUAL CITY MODELS (Prof. Norbert Haala & Patrick Tutzauer, University of Stuttgart, Germany) C: DIGITAL PRODUCT REALIZATION: MAKING THINGS THAT MATTER (Dan Somen, Stanford University, USA & Dr. Georgi V. Georgiev, University of Oulu, Finland) D: AUGMENTED URBAN EXPERIENCE AND MEDIATED SPATIAL NARRATIVES (Reader Ava Fatah gen Schieck & Dr. Simon Julier & Petros Koutsolampros, University College London, UK; Dr. Ana Javornik, Newcastle University, UK)
UBISS 2016 (7th International UBI Summer School 2016), June 13-18, 68 students from 12 countries in 4 workshops A: UBICOMP IN THE WILD: DEVELOPING AND DEPLOYING PERVASIVE DISPLAYS (Prof. Nigel Davies & Dr. Sarah Clinch, Lancaster University, UK) B: EYEWORK: DESIGNING INTERACTIONS WITH EYE MOVEMENTS (Prof. Hans Gellersen, Lancaster University, UK & Dr. Eduardo Velloso, University of Melbourne, Australia) C: COLLABORATION AND PERSONAL DEVICES AROUND INTERACTIVE DISPLAYS (Prof. Giulio Jacucci, University of Helsinki, Finland & Petri Savolainen, HIIT, Finland) D: NEXT GENERATION VIRTUAL REALITY: PERCEPTION MEETS ENGINEERING (Prof. Steve LaValle & Dr. Anna Yershova, UIUC, USA)
UBISS 2015 (6th International UBI Summer School 2015), June 8-13, 56 students from 14 countries in 4 workshops A: SENSOR-BASED INTELLIGENT MOBILE INTERFACES (Dr. Per Ola Kristensson, University of Cambridge, UK) B: DESIGN FICTIONS FOR DATA GEOGRAPHIES (Associate Prof. Mark Shepard, The State University of New York, USA) C: DESIGNING GAMES FOR THE BODY (Associate Prof. Florian 'Floyd' Mueller, RMIT University, Australia) D: 3D WEB AND OPEN DATA FOR SMART CITIES HACKATHON (Prof. Timo 'Timppa' Ojala, University of Oulu, Finland)
UBISS 2014 (5th International UBI Summer School 2014), June 9-14, 59 students from 16 countries in 4 workshops A: DESIGNING URBAN INTERACTIONS FOR PARTICIPATORY PUBLICS (Prof. Martin Brynskov, Aarhus University, Denmark) B: URBAN AUGMENTED REALITY (Prof. Steven Feiner, Columbia University, USA) C: LEARNING FROM PEOPLE TO DESIGN FUTURE "ENJOYING MACHINES" (Prof. Oskar Juhlin, Stockholm University, Sweden) D: DESIGNING BODILY PLAY (Dr. Florian 'Floyd' Mueller, RMIT University, Australia)
UBISS 2013 (4th International UBI Summer School 2013), June 10-15, 76 students from 18 countries in 4 workshops A: EXPERIENCE-DRIVEN DESIGN OF UBIQUITOUS INTERACTIONS IN URBAN SPACES (Prof. Kaisa Väänänen-Vainio-Mattila, Tampere University of Technology, Finland & Dr. Jonna Häkkilä, University of Oulu, Finland) B: DESIGNING MOBILE AUGMENTED REALITY INTERFACES (Prof. Mark Billinghurst, University of Canterbury, New Zealand) C: DEVELOPING UBIQUITOUS COMPUTING DEVICES (Prof. Albrecht Schmidt, University of Stuttgart, Germany) D: URBAN RESOURCE NETWORKS (Prof. Malcolm McCullough, University of Michigan, USA)
UBISS 2012 (3rd International UBI Summer School 2012), May 28 - June 2, 51 students from 10 countries in 3 workshops A: INFORMATION VISUALISATION FOR UBICOMP DATA (Prof. Aaron Quigley, University of St. Andrews, Scotland) B: SUPPORTING COMMUNITY THROUGH INTERACTIVE PUBLIC DISPLAYS (Dr. Keith Cheverst, Lancaster University, UK) D: URBAN SENSORIA: HUMAN-CENTERED COMPUTING IN PRACTICE (Dr. Alejandro 'Alex' Jaimes, Yahoo! Research)
UBISS 2011 (2nd International UBI Summer School 2011), May 23-28, 36 students from 6 countries in 3 workshops A: OPEN PERVASIVE DISPLAY NETWORKS (Dr. Adrian Friday, Lancaster University, UK) D: EMBEDDED WEB SERVICES (Chief Nerd Zach Shelby, Sensinode Ltd., Finland) E: SOCIAL AND CULTURAL ASPECTS OF NEW MEDIA (Prof. Leopoldina Fortunati, University of Udine, Italy)
UBISS 2010 (1st International UBI Summer School 2010), May 31 - June 4, 72 students from 20 countries in 6 workshops A: REAL WORLD CONTEXT-AWARE SYSTEMS (Prof. Anind Dey, CMU, USA) B: URBAN INFORMATICS AND SUSTAINABLE CITIES (Prof. Marcus Foth & Dr. Jaz Choi, QUT, Australia; Patrick Hofmann, Google) C: URBAN SOCIAL NETWORKS ANALYSIS (Prof. Vassilis Kostakos, University of Madeira, Portugal) D: CREATING AND SHARING ARTISTIC EXPERIENCES WITH UBIQUITOUS TECHNOLOGY (Dr. Jürgen Scheible, Aalto University, Finland) E: IP-BASED WIRELESS SENSOR NETWORKS (Head of Research Zach Shelby, Sensinode, Finland) F: INTERACTIVE TEXTURES – RETHINKING MATERIALITY (Prof. Mikael Wiberg, Umeå University, Sweden)

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