Abstract
What is Augmented Reality? In this talk, we will embark on this question and discuss use case examples to envision the more general concept of Ubiquitous Augmented Reality. We will then describe some general requirements and architectural concepts towards conceptualizing and implementing systems establishing reusable Ubiquitous AR systems.

Biography
Prof. Gudrun Klinker, Ph.D. studied computer science (informatics) at the Friedrich-Alexander Universität Erlangen, Universität Hamburg (Diplom) and Carnegie-Mellon University (Ph.D.) in Pittsburgh, PA, USA, focusing on research topics in computer vision. In 1989, she joined the Cambridge Research laboratory of Digital Equipment Corporation in Boston, MA, working in the visualization group on the development of a reusable tele-collaborative data exploration environment to analyze and visualize 3D and higher-dimensional data in medical and industrial applications. Since 1995, she has been researching various aspects of the newly emerging concept of Augmented Reality, first at the European Computer-industry Research Center, then at the Fraunhofer Institute for Computer Graphics, and since 2000 at the Technical University of Munich. Here, her research focus lies on developing approaches to ubiquitous augmented reality that lend themselves to realistic industrial applications.

Prof. Klinker is one of the co-founders of the International Symposium of Augmented Reality (ISMAR). She has served on numerous program committees such as VR, VRST, 3DUI, and UIST. She is author and co-author of more than 100 reviewed scientific publications.

http://campar.in.tum.de/Main/GudrunKlinker
Art of the Exploit: An Introduction to Critical Engineering

Julian Oliver, Critical Engineer and Artist

Abstract
Art has long been celebrated as an important frame for critical reflection upon contemporary life. In the post-industrial era however, complex tools, formal languages and hidden infrastructure increasingly influence how we communicate, move and remember; now an inextricable part of our Environment.

So it follows that to ignore the languages and ideas that comprise engineering - from Computer Networking and Programming to BioTechnology and Electronics - is to be unable to describe, and thus critically engage, the world we live in. While this presents a challenge for the traditional artist, it is one that an engineer not working in service to science and industry - a Critical Engineer - is able to meet.

In this lecture Julian will introduce projects and interventions made by himself and others that foreground engineering, rather than art, in the creative and critical frame, offering highly public insights into the hidden mechanisms and power struggles within our technical environment. In doing so, he will introduce the Critical Engineering Manifesto, while discussing his own personal shift away from 'media artist' to that of 'critical engineer'.

Projects such as the Transparency Grenade, PRISM, Packetbruecke and Newstweek will be covered in detail.

Biography
Julian Oliver is a New Zealander, Critical Engineer and artist based in Berlin. His work and lectures have been presented at many museums, galleries, international electronic-art events and conferences, including the Tate Modern, Transmediale, the Chaos Computer Congress, Ars Electronica, FILE and the Japan Media Arts Festival.

Julian has received several awards, most notably the distinguished Golden Nica at Prix Ars Electronica 2011 for the project Newstweek (with Daniil Vasiliev).

Julian has also given numerous workshops and master classes in software art, data forensics, creative hacking, computer networking, counter-surveillance, object-oriented programming for artists, augmented reality, virtual architecture, video-game development, information visualisation and UNIX/Linux worldwide. He is an advocate of Free and Open Source Software and is a supporter of, and contributor to, initiatives that promote and reinforce rights in the networked domain.

Articles about Julian’s work, or work he’s made with others, have appeared in many news channels. Among them are The BBC (UK), The Age (AU), Der Spiegel (DE), El Pais (ES), Liberation (FR), The New York Times (US), La Vanguardia (ES), The Guardian Online (UK), Cosmopolitan (US), Wired (DE, US, UK), Slashdot (US), Boing Boing (US), Computer World (World) and several television stations worldwide.

http://julianoliver.com/
Superhuman Sports: Beyond Human Limits

Masahiko Inami, Keio University

Abstract
Superhuman Sports, a form of "Human-Computer Integration" to overcome somatic and spatial limitation of humanity by merging technology with the body. In Japan, official home of the 2020 Olympics and Paralympics, we hope to create a future of sports where everyone, strong or weak, young or old, abled or disabled, can play and enjoy playing without being disadvantaged. In order for us to realize to be equal athletes in the area of super-human sports, augmented human can be the technology that empowers us to overcome the biological barriers of individuals and of our specie. Our goal for Superhuman Sports is to push human performance into new peaks. This talk will show our vision and discuss a capability of Mixed and Augmented Reality for Superhuman Sports. Also, it includes our approaches with concrete steps such as Telexistence, Optical Camouflage, Stop-Motion Goggle and Galvanic Vestibular Stimulation.

Biography
Masahiko Inami is a professor in the School of Media Design at the Keio University (KMD), Japan. His research interest is in humanI/O enhancement technologies including perception, HCI and robotics. He received BE and MS degrees in bioengineering from the Tokyo Institute of Technology and PhD in 1999 from the University of Tokyo. He is known as the inventor of Optical Camouflage system. He received Laval Virtual Technopole Mayenne Trophee, TIME Magazine Coolest Inventions2003, IEEE Virtual Reality 2004 Best Paper Award, ICAT 2004 Best Paper Award and more. His installations have appeared at Ars Electronica Center. He recently proposed and organized the Superhuman Sports.

http://superhuman-sports.org/academy/eindex.html

http://superhuman-sports.org/academy/eindex.html