Simone Mora, PhD

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My goal is to empower people to invent innovative Internet of Things (IoT) ecologies to serve human's needs and desires. I teach, design and develop methods and tools for collaborative ideation and rapid prototyping of IoT systems. I investigate how to apply IoT technology to smart sustainable cities and lifelong learning experiences.

Design science lies at the core of my research approach. I use human-centric methods to understand problems and opportunities for specific domains. I establish a creative dialogue among different stakeholders to elicit requirements and lead design explorations. I turn ideas into prototypes of hybrid artefacts and environments developing code and electronics, often augmenting and hacking everyday things. I evaluate results with quantitative and qualitative methods.

I speak English (fluent), Italian (mothertongue) and Norwegian (intermediate).

Work history

MAY18 - NOW

Postdoctoral Fellow
SENSEable City Lab, Massachusetts Institute of Technology (MIT)

As a research associate I contribute to achieving the lab's goal of delivering research insights at the intersection between cities, people, and technologies; via design and science.

Co-Founder
Tiles Technology AS

Tiles is a Norwegian startup that design and develop disruptive physical computer interfaces to support the needs of today's societies; with applications in fintech, healthcare and education.

2015 - 2018

Assistant Professor (20% post)
Dept. of Design, Norwegian University of Science and Technology (NTNU)

Teaching "Prototyping Interactive Media" - in this course, 2nd-year bachelor students learn how to design and build interactive and hybrid products. Focus is on designing screen-less, engaging and educational user experiences.

Postdoctoral Fellow
Dept. of Computer Science, Norwegian University of Science and Technology (NTNU)

Inventor and lead researcher of Tiles - a toolbox to accelerate ideation and prototyping of IoT products http://tilestoolkit.io

Inventor and lead researcher of Anyboard - a prototyping platform for making hybrid game experiences http://s.ntnu.no/anyboard

Researcher at Bank of Things - an exploration of how the IoT can improve future banking experiences http://bankofthings.webflow.io

Research associate of Socratic - a knowledge-based platform to support the social innovation lifecycle - http://socratic.eu

Research associate of Umi-Sci-Ed - an EU-H2020 project that aims at enhancing the attractiveness of science education and careers for young people via the use of latest technologies - http://umi-sci-ed.eu

Supervision of graduate and PhD students in the fields of tangible interfaces, IoT, HCI and smart cities

Lecturer in courses on prototyping and collaboration technologies

Organizer of conference workshops in the fields of IoT, making and design methods

Education

2010 - 2015

Ph.D. in Computer Science
Norwegian University of Science and Technology (NTNU)

As research associate of EU project MIRROR, I investigated how to use wearable computing, augmented reality, and mixed reality games to support data-driven and reflective training of crisis workers (e.g. firefighters, paramedics). Advisors: Prof. Monica Divitini, Dott. Babak Farshchian.

- PhD Dissertation title: "Leveraging sensing-based interaction for supporting reflection at work: the case of crisis training". Available as PDF.
- Inventor and lead researcher of CroMAR - a mobile augmented reality platform to support situated reflection and learning for crisis manager - http://research.idi.ntnu.no/CroMAR
- Inventor and lead researcher of WATCHiT - a sensor-based wristband computer for data collection on a crisis scene - http://research.idi.ntnu.no/WATCHiT
- Research associate of EU Project MIRROR - Design of technology tools for supporting reflection and learning in the workplace
- Supervision of graduate student thesis
- Lecturer in courses on ubiquitous computing and collaboration technologies

2014

Guest Researcher
SENSEable City Lab, Massachusetts Institute of Technology (MIT)

Co-design and construction of "DriveWave" installation http://senseable.mit.edu/wave
Advisor: Prof. Carlo Ratti

2013

Guest Researcher
Centre for Human Computer Interaction Design, City London University

Design and implementation of gamified experiences for supporting creative problem solving
Advisor: Prof. Neil Maiden

2009

Master of Science (MSc) in Computer Engineering
Università degli studi di Bergamo, Italy

I learned software engineering and security, signal theory and digital electronics design

- Master Thesis title: "A mobile extensible architecture for implementing ubiquitous discovery gestures based on object tagging". Advisor (for UniBg): prof. Stefano Paraboschi.
- Participant of the ERASMUS program at NTNU

2006

Bachelor of Science (BSc) in Industrial Engineering
Università degli studi di Bergamo, Italy

I learned math, physics, economy, project and risk management

- Bachelor Thesis title: "Outsourcing of Informatics process, an analysis driven by hte Total Cost of Owner ship evaluation" (written in Italian) - Advisor: Prof. Matteo Kalchschmidt

Selected publications (full list at http://simonemora.com/research/publications)

S. Mora | Leveraging sensing-based interaction for supporting reflection at work: the case of crisis training | Doctoral thesis at NTNU, 2015

S.Mora, F. Gianni and M.Divitini | Tiles: A Card-based Ideation Toolkit for the Internet of Things | In proceedings of the Designing Interactive Systems Conference (DIS), 2017

S.Mora, F. Gianni and M.Divitini | RapIoT Toolkit: Rapid Prototyping of Collaborative Internet of Things Applications | In proceedings of the International Conference on Collaboration Technologies and Systems (CTS), 2016. *Outstanding Paper Award*

S. Mora, M. Divitini and F. Gianni. | TILES: An Inventor Toolkit for Interactive Objects | In proceedings of the International Working Conference on Advanced Visual Interfaces (AVI), 2016.

S. Mora, A. Boron, & M. Divitini | CroMAR: Mobile augmented reality for supporting reflection on crowd management | International Journal of Mobile Human Computer Interaction, 2012

S. Mora, I. Di Loreto and M. Divitini | From interactive surfaces to interactive game pieces in hybrid board games | Journal of Ambient Intelligence and Smart Environments, 2016

S. Mora, T. Fagerbekk, M. Monnier, E. Schroeder and M. Divitini | Anyboard: a Platform for Hybrid Board Games | In proceedings of the International Conference on Entertainment Computing (ICEC), 2016.

L. Muller, M. Divitini, S. Mora, V. Rivera-Pelayo & W. Stork | Context Becomes Content: Sensor Data for Computer Supported Reflective Learning | IEEE Transactions on Learning Technologies, 2015

S. Mora and M. Divitini | WATCHiT: a modular and wearable tool for data collection in crisis management and training | In Proceedings of the European Conference on Ambient Intelligence (AMI), 2014

S. Mora and M. Divitini | Supporting debriefing with sensor data: A reflective approach to crisis training | In proceedings of Information Systems for Crisis Response and Management in Mediterranean countries conference (ISCRAM-MED), 2014

D. Cernea, S. Mora, A. Perez, A. Ebert, A. Kerren, M. Divitini, D.G. de La Iglesia and N. Otero | Tangible and Wearable User Interfaces for Supporting Collaboration among Emergency Workers | In proceedings of the 18th CRIWG Conference on Collaboration and Technology, 2012

S. Mora | Token-based Interaction with embedded digital information | In proceedings of the International Conference on Tangible, Embedded and Embodied Interaction (TEI), 2013

I. Di Loreto, S. Mora, M. Divitini | Don't Panic: Enhancing Soft Skills for Civil Protection Workers | In proceedings of the International Conference on Serious Games Development and Applications (SGDA), 2012.

S. Mora, V. Rivera-Pelayo, and L. Müller | Supporting Mood Awareness in Collaborative Settings | In proceedings of the 7th International Conference on Collaborative Computing (CollaborateCom), 2011

S. Mora, and B. Farshchian | A Unified Architecture for Supporting Direct Tag-Based and Indirect Network-Based Resource Discovery | In proceedings of the International Conference on Ambient Intelligence (AMI), 2010

Innovation Grants & Awards

2015   Design Driven Innovation Programme | 250kNOK (~32.000USD) -for design of "Future banking and the Internet of Things", together with Nice AS, Sparebank SMN, Evry AS

2014   NTNU Discovery forprosjekt | 150kNOK (~20.000USD) - for commercialisation of "TILES: a toolkit for rapid prototyping of interactive objects"
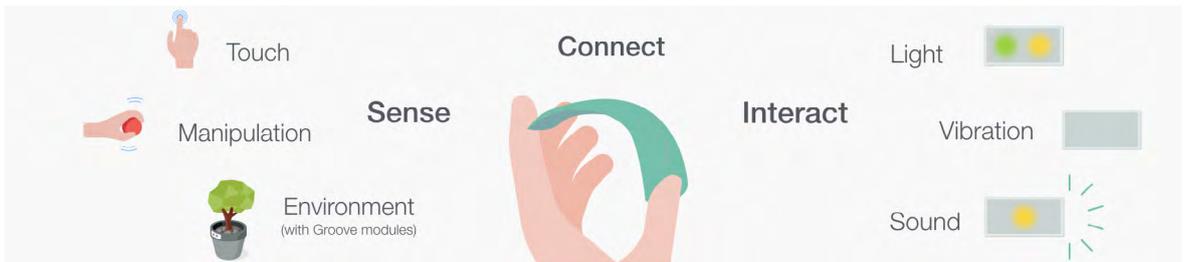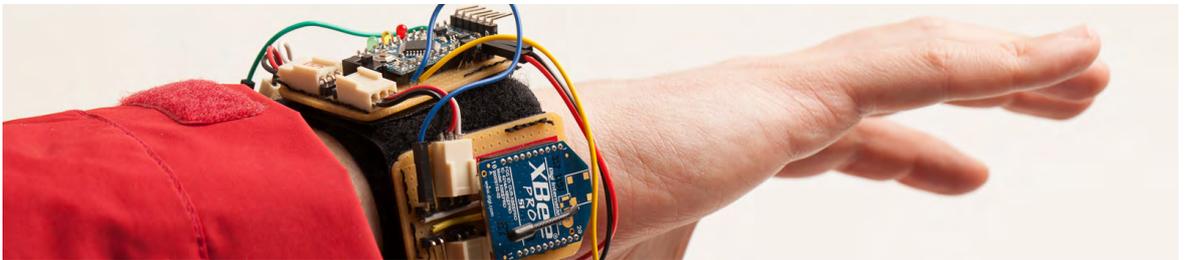
TILES IOT CARDS
TILESTOOLKIT.IO

TILES STICKERS
TILESTOOLKIT.IO

BANK OF THINGS
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WEBFLOW.IO

WATCHIT
RESEARCH.IDI.NTNU.NO
/WATCHiT

CROMAR
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