

Geodesign Technologies

PhD course: 26.-30. August 2019

At the University of Copenhagen (Denmark)

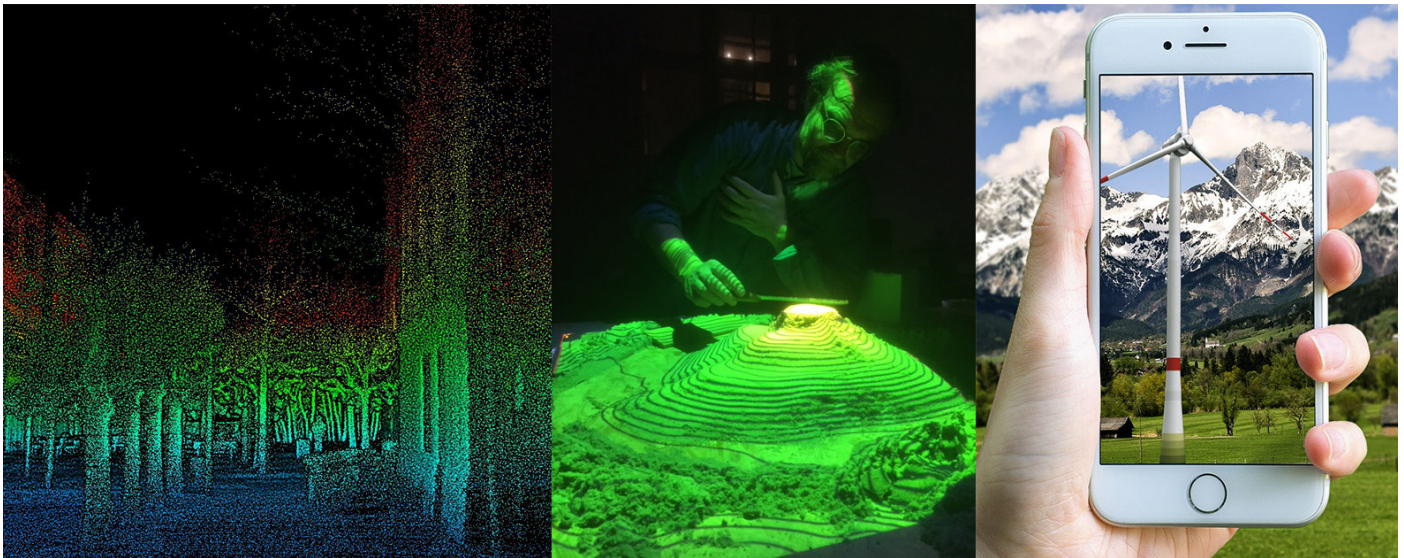
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- University of Copenhagen
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UNIVERSITY OF
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School of Arts, Design
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The PhD course will address *Geodesign Technologies as means of recording, representing, translating, simulating and communicating the Real World* in urban and landscape planning/design processes. The course goes beyond classic methods based on physical models made from cardboard or clay and well-established digital techniques framed by 2D GIS and 3D CAD. Accordingly, the aim of the course is to embrace, demonstrate and discuss new, emerging technologies vs the perceived world on one hand, and its digital vs physical representations on the other.

The course constitutes in particular the following topics:

- Sandbox: Tangible vs digital landscapes.
- Augmented, virtual, and mixed realities
- Drones for mapping, 3D modelling, and film making
- Perception, aesthetics and creativity aspects of Geodesign Technologies in relation to planning/design processes

Teaching will address *fundamental theoretical knowledge, discussion over concrete applications, and hands-on exercises* involving both technology and design assignments.

More details: <https://ign.ku.dk/english/geodesign-technologies/>

Enrollment form: <https://phdcourses.ku.dk/DetailKursus.aspx?id=106096&sitepath=NAT>

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Program

Monday 26/8	Tuesday 27/8	Wednesday 28/8	Thursday 29/8	Friday 30/8
INTRO	FROM REALITY TO DIGITAL	FROM DIGITAL TO TANGIBLE	FROM TANGIBLE TO REALITY	OUTRO
09.00 - 10.00: WELCOME & Introduction to geodesign technologies Hans Skov-Petersen	09.00 - 10.00: Drone-based film making and landscape design Rikke Munck Petersen	09.00 - 10.00: Digital media and Computational design methods in landscape and urban design Pia Fricker	09.00 - 10.00: Augmented and Virtual Reality (AR/VR) Patrick Moechel and Thomas Ott	09.00 - 11.00: Preparation of presentations
10.00 - 10.45: Student presentation	10.00 - 11:00: Ethical and social implications of drones Dylan Cawthorne	10.15 - 12.00: Design iteration by using the tangible Sandbox Mariusz Hermansdorfer, Kane Borg, Pia Fricker, and Hans Skov-Petersen	10.15 - 11.00: Interfacing digital models and augmented and virtual reality Patrick Moechel and Thomas Ott	
11.00 - 12.00: Introduction to the site and design obligation Anne Wagner	11:00-12:00 Intuitive Design by using the tangible sandbox Mariusz Hermansdorfer and Pia Fricker		11:15-12:00 Augmented and virtual reality Patrick Moechel and Thomas Ott	11.00 - 12.00: Presentation and evaluation of design proposals Moderated by Rikke Munck Petersen
12:00-13:00: Lunch	12:00-13:00: Lunch	12:00-13:00: Lunch	12:00-13:00: Lunch	12:00-13:00: Lunch
13.00 - 15.00: Drones and point clouds: Theory, background and Demo of the equipment. Lene Fischer	13.00 - 14.00: Introduction to Rhino Mariusz and Kane Borg	13.00 - 14.45: Robotic Interaction in the sandbox environment Kane Borg	13.00 - 13.45: Trimble SiteVision Geoteam (Danish Trimble Distributor)	13:00-14:00: Presentation and evaluation of design proposals (cont.) Moderated by Rikke Munck Petersen
15.00 - 16.30: Site perception and first design hypothesis via the point cloud Pia Fricker, Kane Borg, and Mariusz Hermansdorfer	14.15 - 16.30: Design formulating by using the tangible Sandbox Mariusz, Kane Borg and Pia Fricker	15:00-16:00 Design iteration Mariusz Hermansdorfer, Kane Borg, Pia Fricker, and Hans Skov-Petersen	14:00-15:00 Field work with AR Patrick Moechel, Thomas Ott and Geoteam	14.00 - 15.00: Evaluations of the applied technologies. Lessons learned
			15:00-16:00 Design iteration Mariusz, Kane, Pia, and Hans Skov-Petersen	15.00 - 16.30: Course evaluation
16:30-> Discussion on lessons learned	16:30-> Discussion on lessons learned Facilitate by Dylan Cawthorne	16:30-> Discussion on lessons learned	16:30-> Discussion on lessons learned	16:30-> PARTY

Color codes
Background lecture
Tech Lecture
Design and tech hands-on
Presentation, discussion and wrap up

Lecturers and contributors:

- Dylan Cawthorne, University of southern Denmark
- Patrick Moechel and Thomas Ott, Echtzeit GmbH
- **Pia Fricker** and Kane Borg, University of Aalto
- Rikke Munck Petersen, Anne Wagner, Lene Fischer and **Hans Skov-Petersen**. IGN, UNICPH
- **Mariusz Hermansdorfer**. IGN, UNICPH and Rambøll
- GeoTeam (Danish Trimble Distributor)

Course organisers shown in **bold**