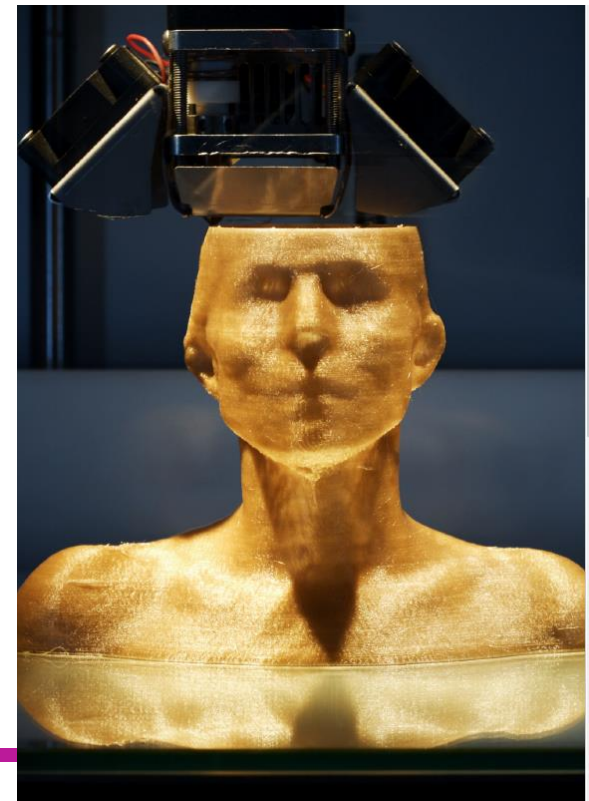


FiTech Summer Boost 2019

Additive Manufacturing and 3D-Printing

FiTECH
**SUMMER
BOOST** 2019!



3rd lecture: Redesign of components		
12	Intro	Jouni Partanen
12:10	2nd miniseminar: showing 3D prints	
12:40	3D scanning	Jan Akmal
13:05	Topology optimization	Mika Salmi
13:30	Design Rules for metal AM	Heidi Piili LUT
14:00	Break	
14:15	1st Support appointment: Selection of Best idea	
14:45	Discussion and plan for next lecture, homework assignment	Jouni Partanen

Teaching Staff



Dr. Heidi Piili
Docent
LUT

Prof. Antti
Salminen
LUT



Jan Akmal
PhD Student
Aalto University

Dr. Mika Salmi
Staff Scientist
Aalto University

Pekka Törnqvist
Laboratory
Manager
Turku AMK



Sergei Chekurov
Post Doc
Siddharth Jayaprakash
Niklas Kretzschmar
Tuomas Puttonen
PhD Students
Aalto university

Teaching staff for the course

- Aalto University, ENG, SCI, BIS
- Lappeenranta University of Technology
- Tampere University
- University of Oulu
- University of Vaasa

Shark Tank

- EOS Finland
- Nokia, DIMECC
- Benefon, Business Finland

Course Structure

05/2019

The first part of the course presents widely AM and 3D printing technologies and design aspects that are deepened by weekly group assignments. The assignments are presented before next week lecture in a miniseminar.

- 5 x 3 h lectures
- 4 x weekly group assignments
- 4 x miniseminars before the lecture

06-07/2019

In the second part, students will run a project in AM.

- Project: groups of five identify the problem, innovate AM solution, design AM model and print AM prototypes.
- Lecturers direct and support the project development in 3–5 appointments in Turku.
- Groups select one person, five in total, to take part in **Nottingham conference** (www.additiveinternational.com/about/).

08/2019

Third part is for dissemination of project results.

- Groups evaluate group activity
- Groups present their project in a “Shark Tank” 16th of August 2019

Schedule:

WEEK	M	Weekly events
Fri 17th	MAY	1st lecture: Introduction to AM and 3D printing Project assignment
Fri 24th		2nd lecture: Concept creation and Design
wed 29th		3rd lecture: Redesign of components 1st support appointment
Fri 7th	JUNE	4th lecture: Business opportunities and IPR
Fri 14th		5th lecture: 3D printing clinic
Tue 25th		2nd support appointment
Fri 5th	JULY	3rd support appointment
Fri 19th		4th support appointment
Fri 2nd	AUG	5th support appointment
Fri 16		3D printing of final parts "Shark Tank"

<https://www.additiveinternational.com/about/>



9TH - 11TH JULY, 2019
BELFRY HOTEL, NOTTINGHAM UK

Assessment Methods and Criteria:

Weekly activity in lectures: weight 10%, scale 1-5

Grade from home assignments : weight 30%, scale 1-5

Grade from final Project : weight 60%, scale 1-5

Thank you!

Jouni Partanen

Aalto University

Dept of Mechanical Engineering

jouni.partanen@aalto.fi, tel. +358 50 576 9804