Conference Documentation

Date: 25th of September 2020
Location: Berlin, Germany

Welcome!

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Following the series of OMILAB Days during the NEMO Summer School, the OMILAB Day 2020 provides participants with insights on results achieved and planned development within the context of the OMILAB network. Innovative results in the frame of research initiatives and projects are presented and discussed.

The OMILAB Day is considered a forum of exchange between nodes, interested stakeholders, developers and users. Ideas on modelling approaches and how they support novel business models are discussed, as well as providing means for evaluation and assessment, and enabling creativity.
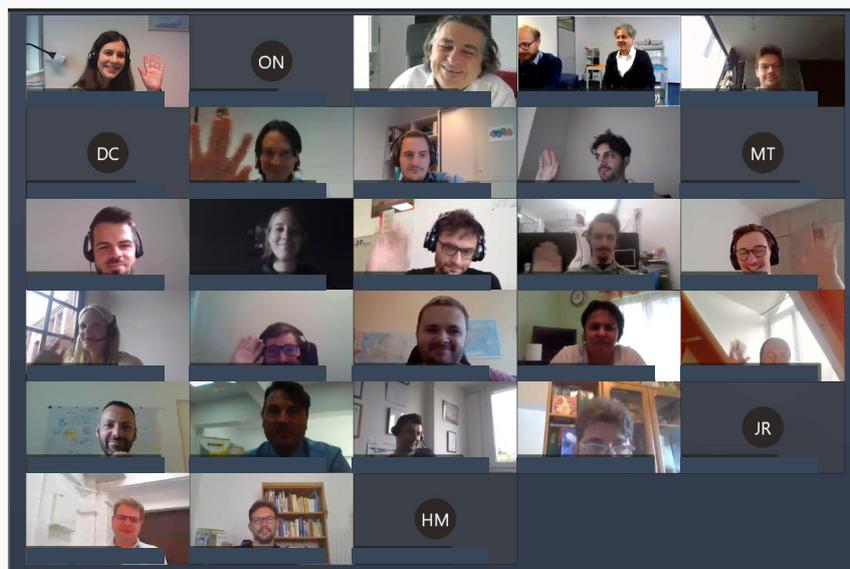
OMiLAB Day 2020

Visit: https://www.omilab.org/

The Academic OMILAB in Korea:
A Welcome Message

JEONBUK
NATIONAL UNIVERSITY

Prof. Dr. Moonkun Lee
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The OMiLAB Korea has been established in November 2015 at the JeonBuk National University, with the aim to initiate the Open Model Community in Korea, as well as, to expand this community to East and South Asia.

In a short video created speacilly for the OMiLAB Day 2020, Prof. Lee presents the lab's research and development focus, as well as the activities conducted. The lab's main focus is on formal methods and IoT, with core competence on formal specification and verification. Among the tools developed by OMiLAB Korea are: SAVE, PRISM and SREE, all available as open source.

Prof. Lee has been a speaker at the NEMO Summer School Series since the second edition and joins the event each year in Vienna together with students from JeonBuk National University.

Visit: http://omilab-korea.org/

The Industrial OMILAB Innovation Corner in Vienna: Modelling of Intelligent Behaviour

Dr. Robert Woitsch
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The digital transformation is a global megatrend that is triggered by the evolution of digital technology, which has the potential for every organisation to either optimize their current business via a digital innovation or by transforming the business via digital disruption. The challenge for every organisation is therefore to select and personalise the appropriate digital innovation.

There are a plethora of methods and assessment frameworks, here we introduce the OMiLAB Innovation Corner that assists in (1) creating a new business, (2) design the organisational model, and (3) engineer proof-of-concept prototypes as a "communication media".

The unique value proposition of OMiLAB Innovation Corner is the model-based foundation that supports decision-makers in key phases of the innovation. First, the creation of new business models by providing digital design thinking tools is assisted. Second, the design of the digital organisation by providing extended modelling capabilities is supported. Third, proof-of-concept engineering providing robots and sensors are enabled.

We share our practical experiences by introducing (a) how new business models are created in the H2020 project Change2Twin to help to manufacture SMEs in their digital transformation, (b) how conceptual models are designed in the H2020 project BIMERR to create digital twins of renovation processes and (c) how proof-of-concept engineering is performed in the FFG project complAI to analyse different robotic behaviour.

Visit: https://www.adoxx.org/live/development-spaces

OMILAB@Work:
The EU Project DigiFoF

Prof. Dr. Adrian Florea
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The requirement for digital transformation was initially felt in industrial domains. However, the pandemic showed the need for it across all areas of society. The Digital Design Skills for Factory of the Future (DigiFoF) Erasmus+ KA2 strategic project was created as a possible solution to the challenges caused by digitalization in the manufacturing industry.

In my opinion, there are three kinds of challenges: one which targets the companies and their strategy to revitalize existing manufacturing systems using interconnected embedded systems, to optimize the factory floor and increase reliability, repeatability, and revenues; other which targets the employees and their interest for owning adequate digital skills required at work; and the last one aiming at the educational system, which should include Bachelor and Master study programs able to prepare students for future jobs.

One of the major objectives of the project is the implementation of OMiLABs, as a smart innovation environment for digital engineers, in 5 European High Education Institutions (HEIs): Sibiu (Romania), Saint-Étienne (France), Bialystok (Poland), Bergamo (Italy), and Oulu (Finland).

As of February 2020 at the Lucian Blaga University of Sibiu, OMiLAB has started to collaborate with professors, experts, and Master students in the areas of Embedded Systems, Cyber Physical Systems, Modelling, Artificial Intelligence, and Computer Vision.

Co-Speakers: Mr. Ion Mironescu   Mr. Octavian Baltes
                Mr. Daniel Craciunean   Ms. Maria Muntean

Visit: https://digifof.eu/

Innovation through Digitalisation, Intelligent Enterprise

universität wien

Prof. Dr. Dimitris Karagiannis
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The fast-paced evolution of technologies and the availability of efficient hardware and software components have been driving the digitalisation of physical objects in recent years. Enterprises need to reflect strategically on these changing circumstances to stay competitive and transparently develop and adapt their roadmap for digital transformation to support innovation processes.

This observation motivates this talk, introducing the Open Models Laboratory (OMi-LAB – www.omilab.org) as an open digital ecosystem designed to support the design of novel business ideas, the decomposition into conceptual models enabling model-value functionality and feasibility assessments as experiments for assessment.

OMiLAB Node @University of Vienna, Austria

Visit: https://austria.omilab.org/

OMILAB NPO
Status and Progress

Prof. Dr. Knut Hinkelmann
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Prof. Dr. Hinkelmann has just joined the OMiLAB NPO Team, as Managing Director. His history with OMiLAB started already in 2008, conducting the first feasibility study together with Prof. Dr. Karagiannis. He has been teaching in the NEMO Summer School Series since 2015.

His research interests are: Digitalization of Business Processes and Knowledge Work, Knowledge Representation and Reasoning, Semantic Metamodeling

Among the ongoing activities of the OMiLAB, a new event is announced, namely MODELathon 2021. Stay tuned!
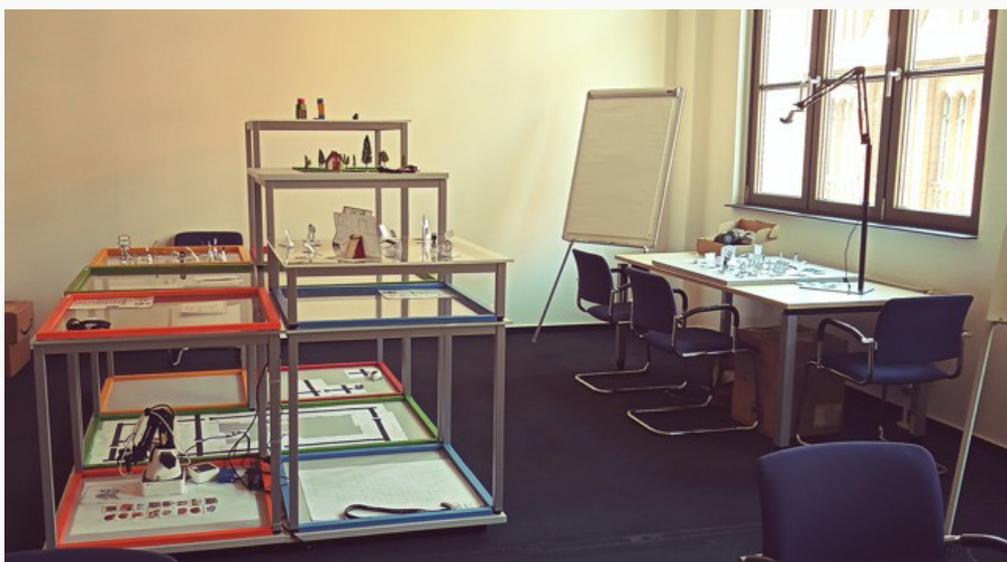

OMiLAB Node @Berlin, Germany

Visit: https://www.omilab.org/activities/
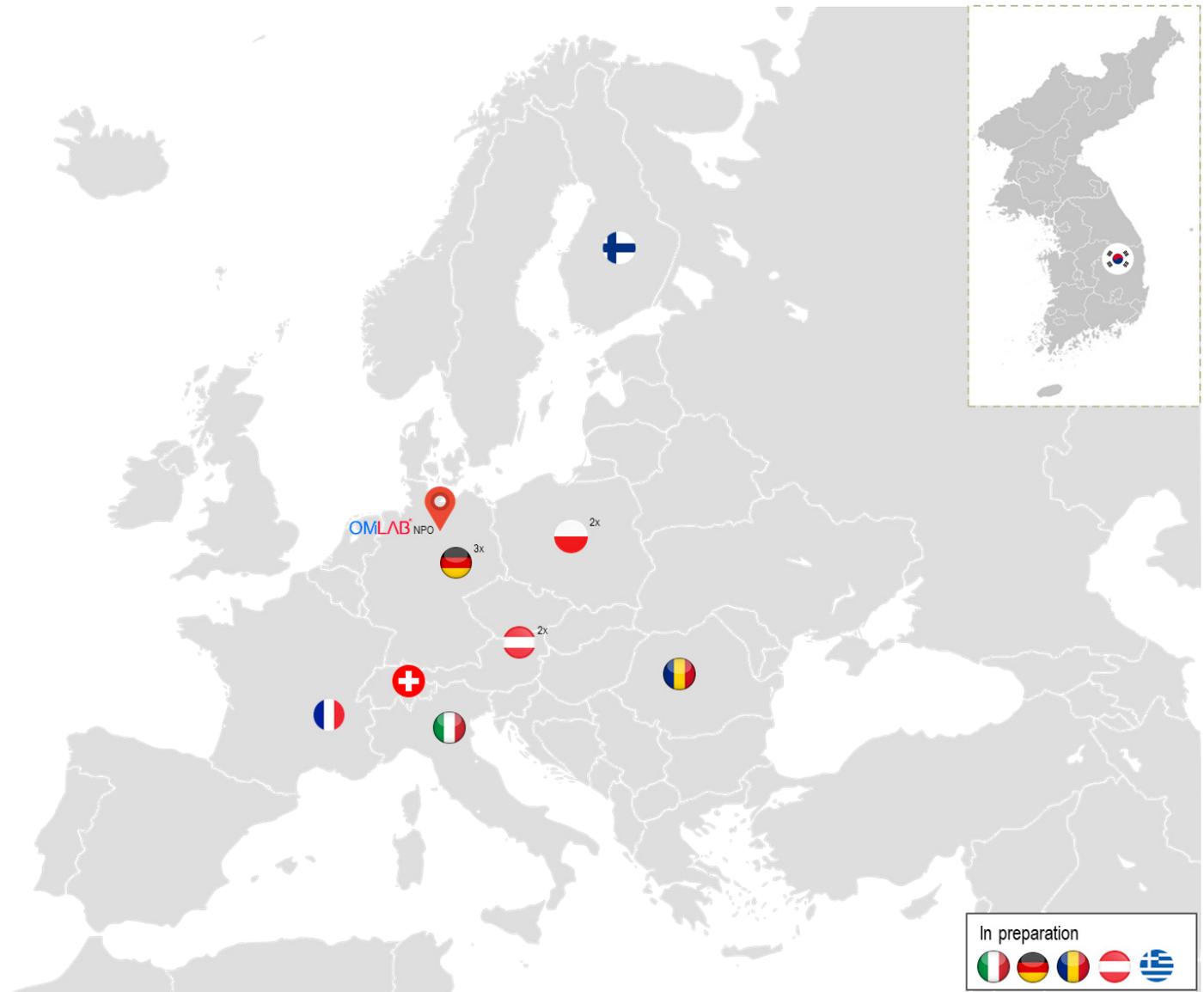
OMiLAB Nodes

Current status (as of September 2020):

13 OMiLAB Nodes	AT: Vienna (x2)	IT: Bergamo
	CH: Olten	KR: JeonBuk
9 countries	DE: Berlin, Kaufering, Rostock	PL: Bialystok, Warsaw
	FI: Oulu	RO: Sibiu
2 continents	FR: St. Etienne	

OMiLAB Day 2020 Participants statistic

Country distribution:
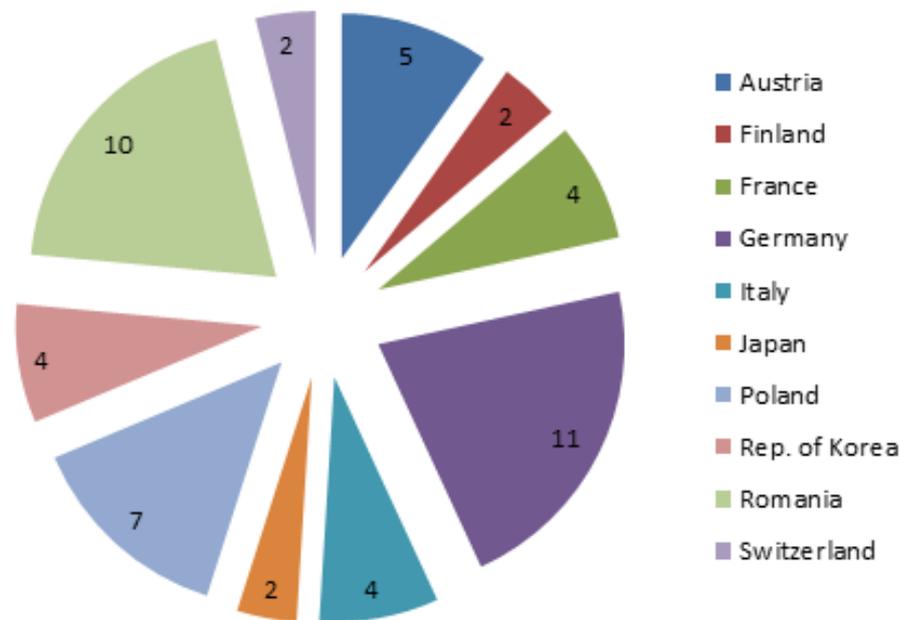
Total: 51 participants

From 13 different organizations:

Stay in touch

▱► JOIN OUR NEWSLETTER: Send us an e-mail to info@omilab.org to receive the latest news regarding research, innovation and events from the OMiLAB Team!

▱► NEMO 2021 Summer School: July 19th - 30th at University of Vienna

▱► OMiLAB Day 2021: July 23rd at the Vienna Node

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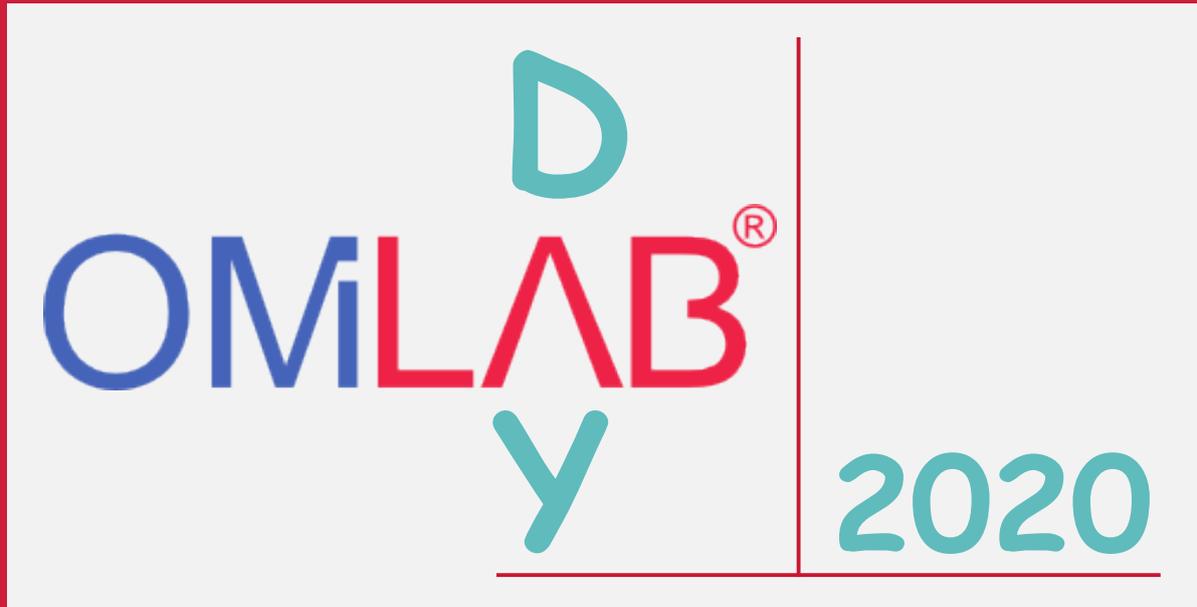
Thank you!

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