

GEORG NEMETSCHKE INSTITUTE

Artificial Intelligence for the Built World

General Assembly
November 30, 2022



10:30 Opening

Introduction

Prof. Ian Smith, GNI Director

10:40 GNI Postdoc Program

Decision support system for energy-efficient design using ML and BIM

Manav Singh, Ph.D.

10:55 Questions

11:00 Coffee

11:30 GNI PhD's

11:30 Intelligent interfaces

Klara Santer

11:35 Questions

11:40 Probabilistic digital twin

Dafydd Cotoarbă

11:45 Questions

11:50 GNI Projects

11:50 AICC Artificial intelligence for smart design and testing of cement and concrete

11:50 Victor Kostic (PI - Prof. Christoph Gehlen)

11:55 Luis Schnürer (PI - Prof. Alisa Machner)

12:00 Prof. Daniel Cremers

12:05 Questions

12:10 INFRA.RELEARN Intelligent infrastructure maintenance with deep reinforcement learning

12:10 Prof. Daniel Straub

12:15 Carmen Buliga (PI - Prof. Daniel Straub)

12:20 Daniel Hettegger (PI - Prof. Alois Knoll)

12:25 Questions

12:30 SPAICR Spatial AI for cooperative construction robotics

12:30 Prof. Kathrin Dörfler

12:37 Prof. Stefan Leutenegger

12:44 Questions

12:50 Lunch

14:00 GNI Projects

AI4TWINNING – Artificial intelligence for the automated creation of multi-scale digital twins of the built world

14:00 Prof. André Borrmann

14:15 Prof. Daniel Cremers

14:30 Prof. Thomas Kolbe

14:45 Alejandro Rueda (PI - Prof. Frank Petzold)

15:00 Prof. Ludwig Hoegner

15:15 Zhaiyu Chen (PI - Prof. Xiaoxiang Zhu)

15:30 Questions

15:40 Coffee

16:10 GNI Projects

16:10 RADELN Data-driven bicycle infrastructure and network design using machine learning

Prof. Klaus Bogenberger

16:25 Questions

16:30 DeepMonitor Deep physics based structural health monitoring

Dr.-Ing. Stefan Kollmannsberger

16:45 Questions

16:50 Closing

Prof. Ian Smith, GNI Director

17:00 Get Together