OTH REGENSBURG   BAU〉INDUSTRIE Bayern

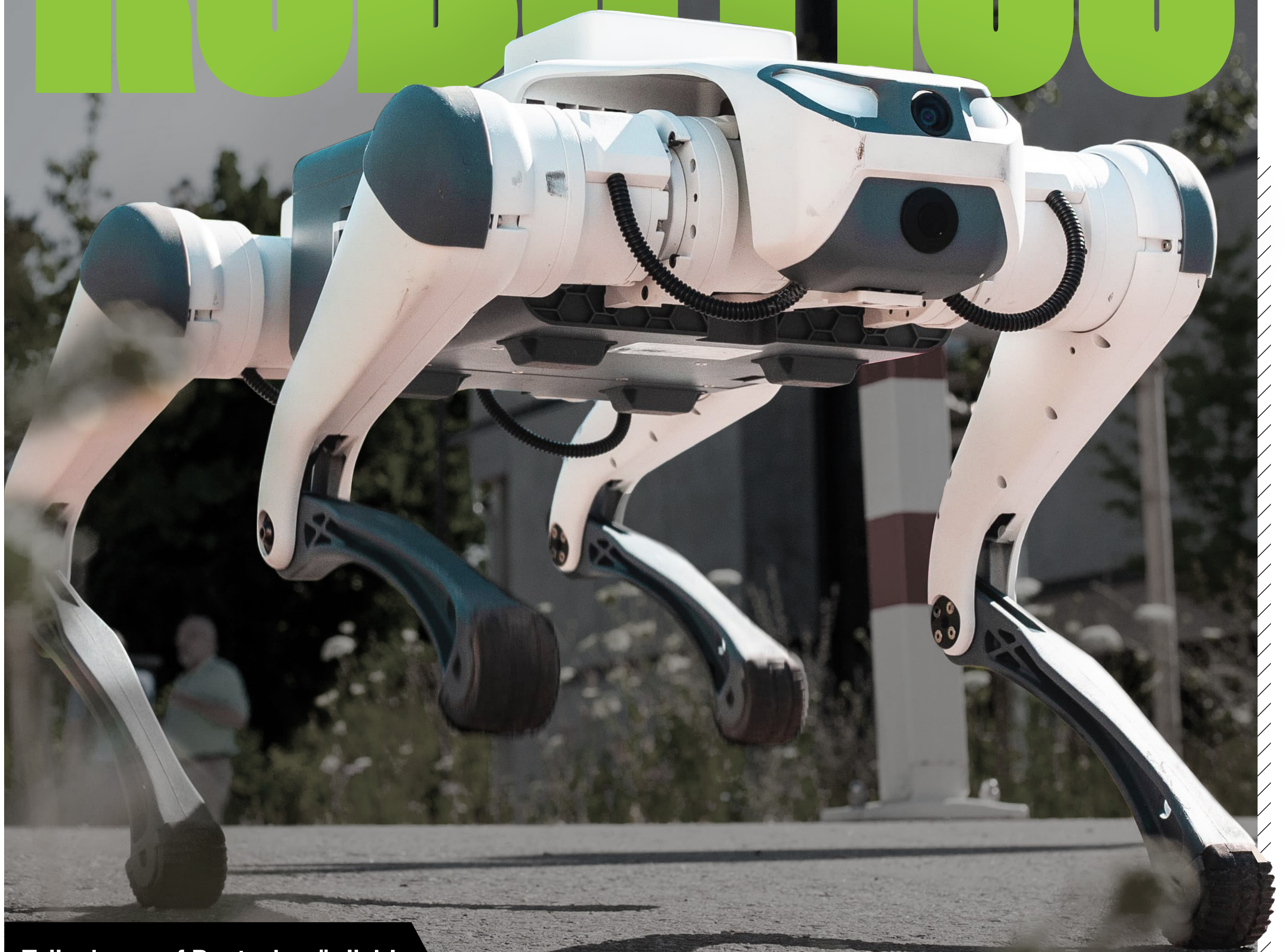BUILDING LAB   鹿島 KAJIMA CORPORATION   M A I A   KIT Karlsruher Institut für Technologie   Interreg   WALZEL

solutions for the
future of construction:

ROBOTICS

Teilnahme auf Deutsch möglich!
Übersetzungshilfe durch studentische Hilfskräfte.

20 — 21 OCT

BUILDING LAB & PILOT HALL

↘ Rudolf-Vogt-Straße 16,
93053 Regensburg,
Germany

↘ Ferdinand Tausendpfund GmbH,
Bukarester Straße 1,
93055 Regensburg, Germany

**Number of participants
limited, registration
mandatory:**

Join us at this year's *Construction Robotics Solutions Lab:* a two-day event with symposium, demo and a workshop exploring the future of robotics in construction.

(A small contribution towards expenses of €50 will be charged for all non-speakers, and €25 for students.)

OTH REGENSBURG

CONSTRUCTION ROBOTICS SOLUTIONS LAB SYMPOSIUM AND WORKSHOP

CoRoSL2025

LOCATION
Building Lab & Pilot Hall

TIME
20. & 21. October 2025

Organizing Committee
Thomas Linner, Florian Weininger, Reza Maalek, Soungho Chae, Rongbo Hu

PROGRAMM

01 Symposium | Lead topic: Essential Components and Case Studies in Successful Construction Robotics Development

| Time: 20 October 2025, 09:30-16:30 CET
| Location: Building Lab, OTH Regensburg, Rudolf-Vogt-Str. 16, 93053 Regensburg, Germany
| Organizing Lead: Thomas Linner & Soungho Chae

Welcome & Introduction (9:30-9:45 CET)

1) **Welcome Note**
   Martin Schneider, CEO Branch Bavaria North, Bavarian Contractors Association & Prof. Dr.-Ing. Andreas Appelt, Dean of the Faculty of Civil Engineering, OTH Regensburg

2) **Synergizing Robotics and AI: Toward Intelligent Construction Workflows**
   Prof. Dr.-Ing. Thomas Linner & Prof. Dr.-Ing. Mathias Obergrießer, Building Lab, OTH Regensburg, Germany

   SESSION 1 | Foundations & Ecosystem (09:45 - 10:45 CET)
   Focus: Legal frameworks, market landscape, investments, and system-level perspectives

3) **Laws, Norms, and Grey Zones in Construction vs. Industrial Robotics**
   Prof. Dr. Martin Weiss, Laboratory for Numerical Mathematics and Robotics, OTH Regensburg, Germany

4) **The Construction Robotics Market: Insights from a Major Robotics Company**
   Ralph Christnach & Gerald Mies, CEOs Germany & Europe, Estun Robotics, Germany

5) **Robots in Infrastructure Construction**
   Prof. Dr.-Ing. Thomas Bock, retired Professor, former director of the Chair of Building Realisation and Robotics, Technical University of Munich, Germany

   Coffee Break (10:45 – 11:15 CET)

   SESSION 2 | Human-Centered Design & Collaboration (11:00 - 12:15 CET)
   Focus: User experience, design methodologies, and human-robot interaction

6) **User-Centered Design in Human-Robot Cooperation: Putting People First**
   Dr. Christian Colceriu, Design Lab Lead, Krones AG, Germany

7) **Applying Human-Centered Design to Construction Robotics: A Practical Example**
   Dr. Wen Pan, CEO. Nova Spraytec, Germany

CONSTRUCTION ROBOTICS SOLUTIONS LAB SYMPOSIUM AND WORKSHOP

8) Robotics for SMEs & Crafts: Adoption Challenges and Pathways to Bridge the Productivity Gap
Prof. Dr.-Ing. Michael Bühler, Professor of Construction Management. Konstanz Institute of Technology, Germany & Prof. Dipl.-Ing. Florian Weininger, Design-to-Fabrication Laboratory, OTH Regensburg, Germany

9) Causes for slow Progress in commercial Construction Robot Development and Path Forwards
Jakub Suchánek, Co-founder and CEO of Fabrica AI, Czech Republic / Singapore

Lunch Lounge (12:15 – 13:15 CET)

SESSION 3 | Technology & Application (13:15 - 14:30 CET)
Focus: Specific technologies, systems integration, and construction-site applications

10) BIM2Robot: Leveraging BIM, Digital Infrastructure, and Sensing for Construction Robotics
Prof. Dr. Reza Maalek, GOLDBECK endowed Professor and Chair of Digital Engineering in Construction, Karlsruhe Institute of Technology, Germany

11) Construction Applications and Technologies: Insights from a Major Robotics Company
Alois Buchstab, Vice President Business Development & Acceleration, Kuka Deutschland GmbH

12) Tor Alva and the Future of Building: Innovations in Digital Fabrication and Computational Design
Prof. Dr. Benjamin Dillenburger, ETH Zürich, Switzerland & Prof. Dr. Ming Shan (Charmain) Ng, Kyoto Institute of Technology, Japan

13) Practice Report Robotics – Integrative Construction Site Processes and Lessons Learned from On-Site Deployment
Karina Breitwieser, Institute of Construction Management and Construction Economics, TU Wien & Jörg Reinold, SVP New Business & Ventures, Wienerberger AG

Coffee Break (14:30 - 14:45 CET)

SESSION 4 | Implementation & Innovation Pathways (14:45 - 16:00 CET)
Focus: Real-world deployment, technology transfer, and autonomous solutions.

14) From Research to Industry: PERI Genio - Robotic Scaffolding Assembly
Peter Rübel, Business Unit Scaffolding, PERI SE & Prof. Dr. Christian Schlette, Head of Center for Large Structure Production, SDU, Denmark

15) Automating the Building Block: Additive Prefabrication for Robotic Construction - From material efficiency to robotic compatibility
Bruno Knychalla, Founder Additive Tectonics GmbH, Germany

16) Practical Case Study: Highly Autonomous Construction Robots and the Success Story of Weibuild
Dr. Frank Mao Jiazhen, Construction Robotics, CTO and Co-Founder, Weibuild, China

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CONSTRUCTION ROBOTICS SOLUTIONS LAB SYMPOSIUM AND WORKSHOP

17) Lessons from Other Industries: What Construction Robotics Can Learn from Aerospace and Beyond
Dr. Scott Howe, Robotics Engineer, NASA Jet Propulsion Laboratory (retired), California/ US
Summary & Closing (16:00 - 16:30 CET)

18) Summary of Learnings and Future Use Cases for Scaling up Construction Robotics
Dr. Soungho Chae & Dr. Rongbo Hu, Kajima Technical Research Institute Singapore. Kajima Corporation, Japan & Singapore

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Optional Tour Through Building Lab & Takeaway Snacks (16:30 – 17:00 CET)

O2 Demo Day | Lead Topic: Demonstrating and Validating the Performance of Construction Robots
| **Time:** 21 October 2025, 09:30-12:00 CET
| **Location:** Pilot Hall, Ferdinand Tausendpfund GmbH, Bukarester Straße 1, 93055 Regensburg
| **Organizing Lead:** Florian Weininger, Rongbo Hu

Key Note: Testing of robotic Prototypes on the Construction Site: how to make it chaotic and complicated; and how to do better
Sascha Alexander Caran, Strabag Innovation & Digitalisation, Ed. Züblin AG

Live demonstrations of construction robots (for painting, plastering, concrete work, bricklaying, logistics, inspection, formwork automation, etc.) **in TRL-5-equivalent relevant environments** (e.g., walls, ceilings, construction-like terrain), **set up in the Pilot Hall.**

O3 Workshop | Lead Topic: Demonstrating and Validating the Performance of Construction Robots
| **Time:** 21 October 2025, 13:30-15:45 CET
| **Location:** Building Lab, OTH Regensburg, Rudolf-Vogt-Str. 16, 93053 Regensburg, Germany
| **Organizing Lead:** Reza Maalek

Pre-Workshop

a) **Feedback Collection:** Gathering participant input via a web-based app throughout the symposium
b) **Summary Analysis:** New LLM-based identification of key research questions from feedback

Workshop

c) **Live Polling** (13:30–13:45 CET): Determining priority research questions through live participant voting
d) **Grouping** (13:45–14:00 CET): Dividing participants into breakout groups
e) **Ideation and Brainstorming** (14:00 – 15:00 CET): Systematic generation of solutions by participants addressing selected priority research questions

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Coffee Break (15:00 – 15:30 CET): Participant coffee-break, while analysis of findings by LLM tool concludes

f) **Group Presentation** (15:30 – 16:00 CET): Presentation of group findings with support from LLM
g) **Wrap-up Session** (16:00 – 16:30 CET): Final remarks, definition of scope, additional insights, and next steps for possible proposal development

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