

Dörfler, Kathrin

Dr.

Tenure Track Professor W2

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Technical University of Munich

TT Professorship Digital Fabrication

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Education

- 2013–2018 PhD / Dr. Sc. ETH, Chair of Architecture and Digital Fabrication, NCCR Digital Fabrication, Prof. Fabio Gramazio and Prof. Matthias Kohler, ETH Zurich, Switzerland
- 2005–2012 M.Sc. Architecture, completion of Master's Degree with distinction, University of Technology Vienna, Austria
- 2008–2009 Study exchange, Universidade de São Paulo (USP), FAU, Brasil
- 2004–2008 Study of Digital Art, University for Applied Arts Vienna (Die Angewandte), Austria
- 2003–2004 Study of Architecture, TU Graz, Austria

Career

- since 2019 TT Professor (W2) for Digital Fabrication, TUM Department of Architecture and TUM Department of Civil, Geo and Environmental Engineering, Technical University of Munich, Germany
- 2018–2019 Postdoc, Chair of Architecture and Digital Fabrication, NCCR Digital Fabrication, Prof. Fabio Gramazio and Prof. Matthias Kohler, ETH Zurich, Switzerland
- 2013–2018 Research Assistant, Chair of Architecture and Digital Fabrication, NCCR Digital Fabrication, Prof. Fabio Gramazio and Prof. Matthias Kohler, ETH Zurich, Switzerland
- 2012–2013 University Assistant at the Institute for Art and Design, Faculty of Architecture, TU Vienna
- since 2012 Architecture Research Studio dorfundrust, co-founded with Romana Rust
- 2010–2011 soma Architecture, Vienna, Austria
- 2007–2009 Gaupenraub +/-, Office for Architecture, Vienna, Austria
- 2006–2007 MVD, Studio for Architecture and Graphic Design, Vienna, Austria

Research interests

Robotic Fabrication, Digital Fabrication, In-situ Fabrication, Mobile Fabrication, Adaptive Fabrication, Mixed Reality Fabrication, Human-Robot-Collaboration

Selected Research Projects

2020-2024 “Principles of Mobile Additive Manufacturing”,
Project B05, DFG SFB Transregio TRR277
“Additive Manufacturing in Construction”,
TU Munich / TU Braunschweig

Honours and Awards

2021 Deutscher Ziegelpreis 2021, “Climate Active Bricks”, Finalist

2018 ICRA Best Automation Paper Award, Winner, International Conference on Robotics and Automation (ICRA 2018) (Co-Author)

2018 Eurobotics Technology Transfer Award, Finalist, Tampere, Finland

2017 Concrete Innovation Award, Winner, Concrete Innovation Conference (CIC 2017) in Tromsø, Norway (Co-Author)

2017 ICRA Best Paper Award, Finalist, International Conference on Robotics and Automation (ICRA 2017) (Co-Author)

2016 Swiss Technology Award, Winner in the category “Inventors” at the 11th Swiss Innovation Forum in Basel, Switzerland

2013 archdiploma'13, Architecture Diploma Awards at University of Technology Vienna

2012 GAD Awards'12, Architecture Diploma Awards at University of Technology Graz, 2nd prize

Teaching

Since 2021 “Computational Design and Fabrication”

Since 2021 “L.E.A.R.N. – Learning Environment for Architectural Robotics for Newbies”, <https://www.le-ar-n.org/>, online teaching platform, in collaboration with Prof. Dr. Stefana Parascho, Princeton School of Architecture

Since 2019 “Robotic Fabrication in Architecture”

Since 2019 Research-Based Design Project “Digital Fabrication”

Workshops and Summer Schools

- 2021 1st AAEC Network Member Symposia, Research Insides
by the SFB TRR 277 Additive Manufacturing in Construction
- 2020 COMPAS FAB workshop, with Gonzalo Casas, Dr. Romana Rust,
Beverly Lytle, ETH Zürich

Commission of Trust

- Since 2021 Conference Co-Chair, Association for Computer Aided Design in
Architecture (ACADIA) 2021
- 2021 Jury member, Tallinn Architecture Biennale 2022,
Installation competition
- 2021 Jury member, Zukunft Bau, BBSR Research Prototype,
Realisation competition
- 2021 Jury member, VDI Award „Prädikat Ingenieurskunst“
- 2021 External expert in faculty recruitment, OTH Regensburg
- 2021 External expert in faculty recruitment, TH Nürnberg
- Since 2020 External PhD examiner:
2021, Bastian Wibranek, DDU, TU Darmstadt
2020, Lauren Vasey, ICD, Universität Stuttgart
2020, Giulio Brugnaro, UCL London

Board of Directors / Committees

- Since 2021 Core member, Munich Data Science Institute (MDSI)
- Since 2020 Academic Director, TUM Venture Lab Built Environment
- Since 2019 Board member of the SFB Transregio TRR 277
“Additive Manufacturing in Construction”
- Since 2019 Board member of TUM.wood
- Since 2019 Board member of the Parity Board, Faculty of Architecture

Selected Talks

- 2021 "Human-in-the-Loop – How Human-Machine Collaboration
Will Shape the Future of Digital Design and Fabrication", Lecture by
Kathrin Dörfler & Romana Rust, Lecture at Talking Matters Online
Lecture Series by Matters of Activity, TU Berlin
- 2021 Dialogue Series: Kathrin Dörfler & Brian Ringley
Robotics Institute, University of Toronto
- 2020 “Towards Human-Robot Futures”,
Public Lecture, University of Michigan,

- 2020 "Towards Human-Robot Futures",
Public Lecture, University of Michigan,
- 2020 "Towards Human-Robot Futures",
Public Lecture am RMIT Melbourne, Australia,
- 2019 Keynote Symposium GCD 6, TU Vienna,
„Robotic On-site Fabrication“

Selected Exhibitions

- 2019 São Paulo Architecture Biennale 2019,
"Care Protocols"

Selected Publications

- 2021 Atanasova, Lidia, D. Mitterberger, T. Sandy, F. Gramazio, M. Kohler, K. Dörfler "Prototype as Artefact: Open-Ended Collaborative Assembly Processes" (Status: forthcoming), ACADIA 2020 Distributed Proximities.
- 2021 Fleckenstein, Julia, P. Molter, A. Chokhachian and K. Dörfler, "Climate Active Bricks: How robotic fabrication technology can contribute to improving urban microclimates." Review #3, TUM AR faculty magazine.
- 2021 Dielemans, Gido, D. Briels, F. Jaugstetter, K. Henke, and K. Dörfler, "Additive Manufacturing of Thermally Enhanced Lightweight Concrete Wall Elements with Closed Cellular Structures", JFDE (Journal of Facade Design and Engineering): Special issue PowerSkin 2021, DOI: [10.7480/jfde.2021.1.5418](https://doi.org/10.7480/jfde.2021.1.5418).
- 2020 Mitterberger, Daniela, K. Dörfler, T. Sandy, F. Salveridou, M. Hutter, F. Gramazio, and M. Kohler. "Augmented Bricklaying: Human-machine interaction for in situ assembly of complex brickwork using object-aware augmented reality." Construction Robotics Springer Journals, 2020, Volume 4, Issue 3-4, pp 151-61, DOI: [10.1007/s41693-020-00035-8](https://doi.org/10.1007/s41693-020-00035-8).
- 2019 Dörfler, Kathrin.; N. Hack, T. Sandy, M. Giftthaler, M. Lussi, J. Buchli, F. Gramazio, M. Kohler, "Mobile robotic fabrication beyond factory conditions: Case study Mesh Mould wall of the DFAB HOUSE", Construction Robotics Springer Journals, 2019, Volume 3, Issue 1-4, pp 53-67 DOI: [10.1007/s41693-019-00020-w](https://doi.org/10.1007/s41693-019-00020-w).
- 2018 Buchli, Jonas.; M. Lussi, M. Giftthaler, K. Dörfler, T. Sandy, N. Hack, N. Kumar, "Digital in situ fabrication—Challenges and opportunities for robotic in situ fabrication in architecture, construction, and beyond." Cement and Concrete Research pp. 66 – 75, Elsevier, Amsterdam, 2018. DOI: [10.1016/j.cemconres.2018.05.013](https://doi.org/10.1016/j.cemconres.2018.05.013).
- 2017 Hack, Norman.; T. Wangler, J. Mata-Falcon, K. Dörfler, N. Kumar, N. Walzer, K. Graser, L. Reiter, H. Richner, J. Buchli, W. Kaufmann, R.J. Flatt, F. Gramazio, M. Kohler, "Mesh Mould: An on-site, robotically fabricated, functional formwork", Concrete Innovation Conference Tromsø 2017.
- 2016 Dörfler, Kathrin; T. Sandy, M. Giftthaler, F. Gramazio, M. Kohler, J. Buchli "Mobile Robotic Brickwork: Automation of a Discrete Robotic Fabrication Process

Using an Autonomous Mobile Robot.”, Robotic Fabrication in Architecture, Art and Design pp: 204-217 Sydney, 2016. DOI [10.1007/978-3-319-26378-6_15](https://doi.org/10.1007/978-3-319-26378-6_15).

2014 Dörfler, Kathrin; S. Ernst, L. Piskorec, J. Willmann, V. Helm, F. Gramazio, M. Kohler, “Remote Material Deposition: Exploration of Reciprocal Digital and Material Computational Capacities”, What's the Matter? Materiality and Materialism at the Age of Computation, p.361 -377, Barcelona, 2014. DOI: [20.500.11850/93836](https://doi.org/20.500.11850/93836).

2012 Dörfler, Kathrin; F. Rist, R. Rust. “Interlacing - An Experimental Approach of Integrating Digital and Physical Design Methods.” Robotic Fabrication in Architecture, Art and Design, pp.82-91, Vienna, 2012. DOI: [10.1007/978-3-7091-1465-0_7](https://doi.org/10.1007/978-3-7091-1465-0_7).