Asst. Prof. Dr. Daniela Mitterberger

Date of birth	9th of October 1988
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Position title:	Assistant Professor, Co-Director of MAEID
Primary organization	Princeton University, School of Architecture MAEID
Location	Princeton, New Jersey, United States

Biography

Daniela Mitterberger is an architect and researcher working at the intersection of new media, human interaction, digital fabrication, and emerging technologies. Mitterberger is an Assistant Professor at Princeton University, where she develops advanced computational methods for enabling human-machine collaboration through adaptive digital fabrication and extended reality. Her lab, XAIA, focuses on digital fabrication and augmentation in architecture. Mitterberger leads the development of COMPAS XR, an open-source framework that integrates extended reality and robotics for applications in architecture, engineering, and digital fabrication.

Daniela Mitterberger received her doctoral degree at ETH Zurich (Dr. sc.) in 2023 on "Adaptive digital fabrication and human-machine collaboration for architecture". In 2023, she worked as a senior scientist at ETH Zurich and within the Design++ initiative. There she was the Co-lead of the Immersive Design Lab, a lab for collaborative research and teaching in the field of extended reality and machine learning in architecture and construction. She has previously been appointed and lectured in several international graduate and postgraduate programs, amongst others, at the MSD in Melbourne, UniSA in Adelaide, the University of Applied Arts and Academy of Fine Arts in Vienna, the University of Innsbruck, ETH Zurich, Tongji University in Shanghai, and IAAC in Barcelona.

Parallel to her academic career, Daniela Mitterberger also explores the boundaries between science and art with her multidisciplinary architecture office "MAEID [Büro für Architektur und Transmediale Kunst]", which she co-founded in 2015. The work of the office interweaves computation, living systems and machines and challenges the relationship between humans, space and performativity. MAEID's work has been awarded numerous international prizes and exhibited in renowned galleries, institutions and events, including the Venice Biennale 2021, Princess of Asturias Awards 2021, Seoul Biennale 2020, Ars Electronica Linz, MAK Vienna, Melbourne Triennial, Academy of Fine Arts Vienna and HdA Graz.

APPOINTMENTS AND POSITIONS

01.2024 - present	**Princeton University** | Assistant Professor (Tenure-track) | School of Architecture

- Founding and leading a research lab for XR, AI and robotics
- Acquiring and leading multidisciplinary research projects
- Teaching undergraduate, graduate and postgraduate students

01.2023 - 12.2023	**ETH Zurich** | Co-Lead of the Immersive Design Lab and Senior Researcher | Design++ and Gramazio Kohler Research

- Responsible for the immersive design lab with a focus on XR, AI and room acoustics
- Acquiring and managing research projects
- Teaching undergraduate and graduate students

10.2018 - 01.2023	**ETH Zurich** | Doctoral Researcher | Gramazio Kohler Research

- Research and/or project lead, amongst others for Augmented Bricklaying, Interactive Robotic Plastering and Tie a Knot
- Development of novel systems for XR, collaborative workflows between humans and machines and adaptive computational models

11.2018 - 03.2022	**University of Applied Arts Vienna** | Principal investigator | Co-corporeality FWF PEEK

- Leading and managing an interdisciplinary team for interactive architecture, biomaterials and AI
- Development of novel sensor systems for embodied computation
- Project management and acquisition of funding

07.2017 - 06.2018	**University of Innsbruck** | Guest Professor I Institute for experimental architecture and building construction

- Teaching undergraduate and graduate design studios with a focus on digital design, computing, media and storytelling

01.2016 - 01.2017	**University of Melbourne (MSD)** | Visiting Lecturer I Studio 17

- Teaching undergraduate and graduate design studios specializing in digital design, computing, media and storytelling

PROFESSIONAL EXPERIENCE

10.2015 - present	**MAEID - Office for Architecture and Transmedia Art** | Co-Founder and Director
11.2014 - 10.2015	**New Territories-Francois Roche** | Architect | Bangkok
2013	**Wolfgang Tschapeller** | Architect | Vienna

PROFESSIONAL PREPARATION:

2018 - 2023	**ETH Zürich, Zürich** | Doctor of Sciences - Dr. sc. ETH Zurich (Nominated for ETH medal)
	Field of study: Architecture and Digital Fabrication
2011 - 2014	**Academy of Fine Arts Vienna, Vienna** I MArch Degree (Summa Cum Laude)
	Field of study: Architecture and Digital Fabrication
2013 - 2013	**Royal Danish Academy of Fine Arts, Copenhagen** I Graduate Student
	Field of study: Architecture
2011- 2011	**Hong Kong University (HKU), Hong Kong** I Graduate Student
	Field of study: Architecture
2007- 2011	**Academy of Fine Arts Vienna, Vienna** I BArch Degree (Summa Cum Laude)
	Field of study: Architecture

THIRD-PARTY FUNDS

| 2024 | **Office of the Dean of Research - Princeton** | 150.000 € | "Robotic Territories" for Collaborations between Artists and Scientists or Engineers | Princeton |

2024   **Office of the Dean of Research - Princeton** | 150.000 € | "Robotic Territories" for Collaborations between Artists and Scientists or Engineers | Princeton

2024   **TUM Global Incentive Fund** | 10.000 € | "Speak Robot" for speech-to-robot-control interface for Robotic Fabrication in Architecture | Princeton and TU Munich

2020   **Project fellowship** | 85.000 € | "Magic Queen" for Biennale 2021 | Government of Austria

2019   **FWF PEEK** | 400.000 € | Program for Art & Science | Co-Lead Mitterberger, Imhof, Derme; University of Applied Arts Vienna, Angewandte.

2018   **Project funding** | 10.000 € | "Chronotop" | Government of Austria

SELECTED SOFTWARE RELEASES

2024   **COMPAS XR -**open source XR software for AEC, 2024 June. **Mitterberger, D.**, Kenny, J., Casas, G. available from: https://github.com/gramaziokohler/compas_xr.git

SELECTED PUBLICATIONS & PAPERS (2024-2019) - Blue and Bold - First or last author

2024   **Cooperative Augmented Assembly (CAA): Augmented Reality for On-Site Cooperative Robotic Fabrication,** in Constr. Robotics (2022). https://doi.org/10.1007/s41693-024-00138-6 Vasiliki, E., Kenny, J., Atanasova, L., Doerfler, K., Casas, G., **Mitterberger, D.** [journal article]

2024   **Rethinking Digital Construction: A Collaborative Future of Humans, Machines and Craft,** in Architectural Design (2024). https://doi.org/10.1002/ad.3103, **Mitterberger, D.** and Doerfler, K. [article]

2023   **Diss. ETH No. 29197: Augmented Human & Extended Machine: Adaptive Digital Fabrication and Human-machine Collaboration for Architecture** (2023). **Mitterberger, D.** [dissertation]

2023   **Ecologia come testo, testo come ecologia,** Timothy Morton, a cura di Francesco D'Abbraccio e Andrea Facchetti. **Mitterberger, D.**, and Derme, T. [foreword]

2023   **Sylva: An Autonomous Hydroponic Garden Cared for by Two Robots,** in ACADIA - Habits of the Anthropocene (2023). Derme, T. and **Mitterberger, D.** [conference proceedings]

2023   **Robotic on-site adaptive thin-layer printing: Challenges and workflow for design and fabrication of bespoke cementitious plasterwork at full architectural scale,** in Archit. Struct. Constr. 3, 145-156 (2023). https://doi.org/10.1007/s44150-022-00062-9, Ercan Jenny, S., **Mitterberger, D.**, Lloret-Fritschi, E. et al. [journal article]

2022   **Tie a knot: human–robot cooperative workflow for assembling wooden structures using rope joints,** in Constr. Robotics 6, 277–292 (2022). https://doi.org/10.1007/s41693-022-00083-2, **Mitterberger, D.**, Atanasova, L., Dörfler, K., Gramazio, F. and Kohler M. [journal article]

2022   **Degrees of Life: Human-Bacteria Interaction in Architectural Space,** [winner: best project] in ACADIA - Hybrids & Haecceities (2022). **Mitterberger, D.** and Derme, T. [conference proceedings]

2022   **Augmented human, extended machine: extended reality systems for robotic fabrication in architecture, engineering, and construction**, in ACM XRDS (2022). https://doi.org/10.1145/3558196, **Mitterberger, D.** [article]

2022   **Interactive Robotic Plastering: Augmented Interactive Design and Fabrication for On-site Robotic Plastering,** [Honorable mention] in CHI Conference on Human Factors in Computing Systems (CHI '22). Association for Computing Machinery, New York, NY, USA, Article 174. https://doi.org/10.1145/3491102.35018, **Mitterberger, D.**, Ercan Jenny, S., Vasey, L., et al. [conference proceedings]

2022   **Extended Reality Collaboration: Virtual and mixed reality system for collaborative design and holographic-assisted on-site fabrication,** in Design Modeling Symbosium 2022. https://doi.org/10.1007/978-3-031-13249-0_24, **Mitterberger, D.**, Angelaki, E., Salveridou, F., et al. [conference proceedings]

2022	**The Synchronous Garden (SynG) New Perspectives between Architecture and Ecology** in Nonlinear Urbanism: Towards Multiple Urban Futures, Birkhäuser, 2022. https://doi.org/10.1515/9783035624410-004, **Mitterberger, D.**, and Derme, T. [article]
2022	**Mikroorganismen im Spannungsfeld von Wissenschaft und Kunst–Ein Potpourri,** in Ökologische Krisen und Ökologien der Kritik, 253 - 261 (2022). edited by Beinsteiner, A., Grünberger, N., Hug, T., Kapelari, S. Ascher-Jenull, J., Imhof, B., **Mitterberger, D.**, et al. [article]
2022	**Co-Corporeality of Humans, Machines, & Microbes.** Birkhäuser (2022). https://doi.org/10.1515/9783035625882, Imhof, B., **Mitterberger, D.** and Derme, T. [book]
2021	**CHRONOTOPE: Digital Craft and Embodiment in Architecture,** in INFLECTION: Journal of the Melbourne School of Design, Volume 08, Edited by Michaela Prunotto, Kate Donaldson, and Manning McBride. **Mitterberger, D.** [article]
2020	**Prototype as Artefact: Design Tool for Open-ended Collaborative Assembly Processes,** In Proceedings of the 40th Annual Conference of the Association of Computer Aided Design in Architecture (ACADIA). Atanasova, L., **Mitterberger, D.**, Sandy, T., et al. [conference proceedings]
2020	**Augmented bricklaying: Human–machine interaction for in situ assembly of complex brickwork using object-aware augmented reality** Construction Robotics 4, no. 3–4, pp. 151–161, **Mitterberger, D.**, Dörfler, K., Sandy, T., et al. [journal article]
2020	**Is Body Architecture?** article in ADATO Magazine, Point Nemo Publishing, edited by Anna Valentiny. **Mitterberger, D.** [article]
2020	**There has never been a Patient-0,** In Proceedings of the 40th Annual Conference of the Association of Computer Aided Design in Architecture (ACADIA), Volume 2. **Mitterberger, D.**, Derme, T., Vivaldi, J. and Vaillo, G. [conference proceedings]
2020	**The Bat That Therefore I am – Exploring The Eye of the Other**, by Rob La Frenais in conversation with **Mitterberger, D.** and Derme, T. [article]
2020	**Digital soil: Robotically 3D-printed granular bio-composites.** International Journal of Architectural Computing 18, no. 2. **Mitterberger, D.**, and Derme, T. [journal article]
2019	**Soil 3D - Printing : Combining Robotic Binder-Jetting Processes with Organic Composites For Biodegradable Soil Structures.** [Honorable mention] in Proceedings of the 39th Annual Conference of the Association for Computer Aided Design in Architecture (ACADIA). **Mitterberger, D.** and Derme, T. [conference proceedings]

FELLOWSHIPS & AWARDS

2024	**ROBARCH 24**	Best Workshop Award
2023	**JSPS Postdoctoral Fellowship**	Awarding excellent researchers with high future potential
2023	**Future of Construction 2023**	Best project award for sustainable construction I Project: CAA
2022	**ETH Medal for outstanding dissertation** I Nomination
2021	**ACADIA**	Best project award I Project: Degrees of Life
2021	**ACM CHI Conference 2021**	Honorable mention I Project: IRoP
2021	**Brick Award 2021**	Finalist I Project: Augmented Bricklaying
2020	**Archdaily Building of the Year 2021**	Finalist I Project: Augmented Bricklaying
2019	**3D Pioneers Challenge in Architecture**	Winner	Project: Augmented Bricklaying
2019	**Autodesk Emerging Research Award (ACADIA 2019)**	Finalist	Project: Soil 3D printing
2018	**Emergent Media Artist Europe** I Winner
2018	**A&T PhD Fellowship** I Winner I ETH Zurich
2018	**Architecture Competition IST Campus** I Honorable Mention I BIG Austria

ACADEMIC ENGAGEMENTS (Courses, Thesis supervision, summer schools)

09-12.2024	**Princeton University |** Lecturer	"Augmented human, extended machine" *PhD Reading course*
06.2024 - 09.2024	**ETH Zurich |** Master thesis supervisor	"An XR App Using Motion Capture for Bending-Active Structure" *Chia Hsuan Chao, Wataru Nomura - motion capturing and AR*
04.2024	**ETH Zurich |** Lecturer	"Immersive Realities" *Seminarweek - Immersive design through acoustic simulation and game engines*
01.2024 - 05.2024	**Princeton University |** Lecturer	"Embodied Computation" *Postgrad Seminar - Embodied computation through augmented reality and robotics*
06.2023 - 09.2023	**ETH Zurich |** Master thesis supervisor MAS DFAB	"Collaborative Augmented Assembly" *Joseph Kenny, Eleni Alexis - human-machine collaboration through AR*
03.2020, 10.2021	**ETH Zurich |** Lecturer	"New Ways of Worldmaking III and IV" *Seminarweeks on phone-based augmented reality*
06.2021 - 09.2021	**ETH Zurich |** Master thesis supervisor MAS DFAB	Immersive collaboration *Foteini Salveridou, Evgenina Angelaki - combining AR and VR applications for immersive collaboration*
01-04.2020	**ETH Zurich |** Lecturer MAS DFAB I T2 Design Studio "Intuitive Robotic Plastering" *Postgraduate program on human-machine interaction and computational design*
07.2020	**AA |** Visiting Lecturer I "Psychotropic topologies summer studio" *Human-machine interaction for interactive design and real-time architecture*
10.2019	**ETH Zurich |** Lecturer	"New Ways of Worldmaking II" *Seminarweek - Phone-based augmented reality and virtual reality applications*
08.2019 - 09.2019	**ETH Zurich |** Assistant instructor	"The Digital in Architecture FS19" *elective course on digital and robotic fabrication*
03 - 04.2019	**University of Melbourne (MSD) |** Visiting Lecturer I *Intensive Architectural Theory and History course*

PhD SUPERVISION

09.2024 - present	**Main Advisor** I Eleni Alexi	PhD thesis on recycled timber, extended reality and large scale robotics	Princeton University
09.2024 - present	**Main Advisor** I Joseph Kenny	PhD thesis on distributed systems, extended reality and human-machine interaction	Princeton University
10.2023 - present	**Second Advisor**	Yamini Patankar	Doctoral thesis on extended reality and conservation	main advisor Prof. Flatt at ETH Zurich
10.2023 - present	**Second Advisor**	Alexandra Moisi	Doctoral thesis on motion capturing and extended reality	main advisors Prof.Gramazio and Prof. Kohler at ETH Zurich

WORKSHOP LEADS

07.2024	**Kyoto Design Lab 2024**	Kyoto Institute of Technology *Workshop on augmented reality for digital craft*
05.2024	**ROBARCH 2024**	Robots in Architecture	University of Toronto (UofT), Toronto Metropolitan University (TMU), and the University of Waterloo (UW) *Workshop on augmented reality strategies for collaborative robotics*
09.2023	**Future of Construction 2023**	Symposium on Human-Machine Teams for Design and Sustainable Construction	TU Munich *Workshop on augmented reality strategies for collaborative robotics*

07.2022   **XOVER** | Direct Tomorrow Lab | Angewandte and Tongji University Shanghai | Shanghai, China
Workshop on interactive design methodologies

06.2022   **Future of Construction 2022** | Symposium on Construction Robotics and Computational Design for Sustainable Construction | ETH Zurich
Workshop on augmented reality strategies for architects

06.2022   **Playing Models: Architectural AI and Storytelling** | University of Florida | Orlando, USA
Workshop on artificial intelligence, augmented reality and narration

04.2022   **Robot see, robot do** | MRAC, IAAC | Barcelona, Spain
Human-machine collaboration workshop in mixed reality

12.2019   **[Human : Computer]** | Die Angewandte | Vienna, Austria
Computer vision, interactive systems and creative coding workshop

SELECTED INVITED LECTURES & PANELS

10.2024   **Michigan University** | Keynote | "Humans : Machines : Materials" | Tectonics Seminar 2024 | Michigan, USA

10.2024   **Princeton University** | Keynote | "Rethinking digital construction: a collaborative future of humans, machines, and craft" | Princeton Robotics Seminar 2024 | Princeton, USA

07.2024   **Kyoto Institute of Technology** | Keynote | "Extended Reality in Architecture" | Kyoto Design Lab | Kyoto, Japan

06.2024   **ETH Zurich** | Keynote | "COMPAS XR - opensource library for extended reality in AEC" | COMPAS XR release event | Zurich, Switzerland

03.2024   **ETH Zurich** | Keynote | "Strange Comfort: Intuitive Machines and Robotic Gardeners" | Design++ Lecture Series 2024 | Zurich, Switzerland

09.2023   **TU Vienna** | Keynote | "Augmented Human and Extended Machine" | Symposium on Geometry and Computational Design (GCD) | Vienna, Austria

04.2023   **Future of Construction Symposium** | Keynote | "Adaptive Digital Fabrication" | Symposium on Human-Machine Teams for Design and Sustainable Construction | TU Munich | Munich, Germany

03.2023   **Kyoto Institute of Technology** | Keynote | "Adaptive Digital Fabrication" | Digital Fabrication Lab | Kyoto, Japan

04.2023   **Züricher Hochschule der Künste (ZHdK**) | Keynote | "On Degrees of Life" | lecture series on "Immersive bodies, spaces and environments" | Immersive Arts Space | Zurich, Switzerland

11.2022   **Formnext** | Keynote | "Soil 3D Printing" | BE-AM symposium | Frankfurt, Germany

06.2022   **University of Florida** | Keynote | "Workmanship of Synthesis" | lecture series on "Playing Models: Architectural AI and Storytelling" | Orlando, USA

04.2022   **TU Delft** | Keynote | "Human-machine collaboration in architecture and digital fabrication" | panel discussion on Human-Robot Interaction for Post-Carbon Architecture | Delft, The Netherlands

04.2022   **Tongji University** | invited lecture on "Inside ETH" | "Human-machine collaboration in computational design and robotic fabrication" | DigitalFUTURES | Shanghai, China

04.2022   **UCL Bartlett** | invited lecture on "Synchronous Gardens" | Bio-Integrated Design Seminar | London, UK

12.2021   **University of Brno** | invited lecture on "The Magic Queen: New Perspectives Between Architecture and Ecology" | Brno, Czech Republic

11.2021   **Stadtmuseum Bruneck** | Keynote on "ALPINE SPACE - The Future" | Bruneck, Italy

09.2021   **Venice Biennale** | Angewandte Research Sessions | Panel discussion | Venice, Italy

07.2021   **Melbourne School of Design (MSD)** | invited lecture on "90 tons, 656 hours, 51 elements, and 20 people" | Melbourne, Australia

05.2021	**Tongji University** | invited lecture for "DigitalFUTURES" | Shanghai, China
12.2020	**University of Innsbruck** | invited lecture for "Independent Architecture Research Colloquia" | Innsbruck, Austria
06.2020	**University of Applied Arts** | invited lecture on "Alien Life: Between Brains, Bacteria, and Matter 2020" | Vienna, Austria
12.2019	**University of Applied Arts Vienna** | invited lecture on "Co-Corporeality: Responsive spaces in the era of Biomediality -Architecture, Artificial Intelligence, Biomaterial" | Vienna, Austria
09.2019	**Ars Electronica Linz** | invited lecture on "Machines, Architecture and Robots" | Linz, Austria
03.2019	**IMPAKT festival** | Keynote on "Augment and Disrupt: School of Non Humans" | Utrecht, The Netherlands
11.2018	**RIXC, Center for New Media Culture** | lecture for "POST-HUMAN AND AI at the GLOBAL CONTROL conference" | Riga, Latvia
10.2015	**Tokyo University, Digital Fabrication Lab** | invited lecture on "Prosthetic architecture in the nomadic

EXHIBITIONS / PERFORMANCES

05 - 11.2025	**Milan Triennale** | Interactive bacteria-machine garden | Milan, Italy
12.02 - 30.05.2024	**Delft University** | Robotic gardens | SHErobots exhibition | Delft, Netherlands
08.06 - 08.07.2023	**Collegium Helveticum** | Degrees of Life | Data Alchemy exhibition | Zurich, Switzerland
23.02 - 11.03.2022	**Zentrum Fokus Forschung** | Degrees of Life | University of Applied Arts | Vienna, Austria
04.11 - 05.11.2021	**FELT conference** | E.Feeder performance | Oslo, Norway
12.10 - 22.10.2021	**Princess of Asturias Awards** | Sylva | Asturia, Spain
16.09 - 31.10.2021	**Seoul Biennial** | "Re-mediated Zone" | Seoul, South Korea
18.06 - 04.07.2021	**Werkleitz Festival** | "The Eye of the Other" | Werkleitz, Germany
22.05 - 31.07.2021	**Venice Biennial (Arsenale)** | "Magic Queen" | Venice, Italy
26.11 - 20.12.2020	**Onassis Stegi** | "The Eye of the Other" | Athens, Greece
17.09 - 03.10.2020	**Kontejner** | "The Eye of the Other" | TOUCH ME FESTIVAL | Zagreb, Croatia
09.09 - 13.09.2020	**Art workshop Lazareti** | "The Eye of the Other" | "Quarantine" Exhibition | Dubrovnik, Croatia
21.06 - 23.06.2020	**Angewandte Festival** | "Co-Corporeality" | Vienna, Austria
03.01 - 18.01.2020	**Bandes Images** | "The Eye of the Other" | Bourges, France
03.11 - 28.11.2019	**Tokyo University of the Arts** | "Co-Corporeality" | Tokyo, Japan
19.10 - 27.10.2019	**Dutch Design Week** | Stone 3D printing | Eindhoven, The Netherlands
02.06 - 16.06.2019	**MAK Vienna** | "Co-corporeality" | Vienna, Austria
05/2019	**RHS Royal Chelsea Flower Show** | "Terrestrial Reef - Pahoehoe Beauty" | London, UK
2019	**ARS ELECTRONICA** | "The Eye of the Other" | Linz, Austria
2018	**ARS ELECTRONICA** | "Pahoehoe beauty- 3D printed soil habitat" I Linz, Austria
12/2017-04/2018	**NGV TRIENNAL** | "The Savage Mind" | Melbourne, Australia
2016	**FIELD 2A** | "The Savage Mind" | Tyrol, Austria
2015	**Archiprix 2015** | "Category Four" | Worlds best graduation projects, travel exhibition | Worldwide

PROJECTS

Most projects integrate cutting-edge technologies like **extended reality, machine learning, robotic fabrication, and computational design** to create innovative architectural designs and interactive systems that enhance human augmentation and human-machine collaboration, particularly in architecture, engineering, and construction. These projects emphasize adaptive and novel workflows, such as interactive human-machine processes and robotic gardens, while exploring the dynamic interplay between humans, machines, and advanced biological materials.

2025, 2026	**Princeton University / XAIA Lab:** **Robotic Territories** Interactive human and machine performance using AR, machine learning and motion tracking augmented reality, robotic fabrication, machine learning, motion tracking
2025	**MAEID:** **Daphne** (artificial ecologies series) Interactive bacterial and robotic garden using machine learning and machine vision robotic fabrication, machine learning, bacteria
2024	**Princeton University / XAIA Lab + TU Munich / TT Professorship Digital Fabrication:** **Augmented Timber Assembly**: human machine interaction in mixed reality Interactive human-machine collaborative workflow using phone-based augmented reality robotic fabrication, augmented reality, human-machine collaboration
2022, 2023	**ETH Zürich / Gramazio Kohler Research + TUM / TT Professorship Digital Fabrication:** **Collaborative Augmented Assembly**: human machine collaboration with augmented reality Interactive human-machine collaborative workflow using phone-based augmented reality robotic fabrication, augmented reality, human-machine collaboration
2022	**ETH Zürich / Gramazio Kohler Research + TUM / TT Professorship Digital Fabrication:** **Tie a Knot**: human–robot cooperative workflow with augmented reality human–robot cooperative workflow for assembling wooden structures using rope joints robotic fabrication, augmented reality, human-machine collaboration
2021	**ETH Zürich / Gramazio Kohler Research:** **Teleoperated construction site**: Virtual and mixed reality system for collaborative design and holographic-assisted on-site fabrication augmented reality, virtual reality
2021	**ETH Zürich / Gramazio Kohler Research:** **IRoP**: Interactive robotic plastering: Augmented interactive design and fabrication system for on-site robotic plastering robotic fabrication, augmented reality, human-machine collaboration
2021	**MAEID:** **Sylva** (artificial ecologies series) Interactive robotic garden using machine learning and machine vision robotic fabrication, machine learning, bio-materials
2021	**MAEID:** **Magic Queen** (artificial ecologies series) Soil 3D printed interactive robotic installation robotic fabrication, machine learning, bio-materials
2021	**Co-Corporeality + MAEID:** **Degrees of Life** Interactive Environment using eye-tracking device to controll biotech machines machine learning, human-computer interaction, bio-materials
2020	**Co-Corporeality + MAEID:** **E-Feeder** Interactive zoom installation using machine learning to detect emotions in visitors to instruct a machine to feed bacteria machine learning, human-computer interaction, bio-materials
2019	**ETH Zürich / Gramazio Kohler Research:** **Augmented Bricklaying**: Human–machine interaction for in situ assembly of complex brickwork using object-aware augmented reality augmented reality, human-computer interaction

2019 | **MAEID:**
The Eye of the Other II
Creation of artificial flowers using machine learning
machine learning, computational design

2019 | **MAEID:**
The Eye of the Other I: Echolocation - GAN
Using machine learning to generate bat echolocations to generate artificial flowers
machine learning, computational design

2018 | **MAEID and University of Innsbruck:**
Pahoehoe Beauty (artificial ecologies series)
robotic fabrication, bio-materials

2018 | **MAEID:**
HayHouse
Spatial representation of digital emotions and intangible cultural heritage
computational design, bio-materials

2018 |
MAEID and Technical University Vienna:
Nanoscale 3D-printed House
3D-printed nano-castle onto the tip of a pencil
computational design