Curriculum Vitae

Family name	Mitropoulou
Name	Ioanna
Date of birth	08/10/1993
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Education

September 2019-January 2024 — **Doctoral studies** — ETH, Zurich
'Nonplanar Layered Morphologies'. Research on computational methods for non-planar robotic 3D printing. Chair of Digital Building Technologies, supervied by Prof. Dr. Benjamin Dillenburger.

September 2017-October 2018 — **MAS in Architecture and Digital Fabrication** — ETH, Zurich
Computational design, programming and robotic fabrication.
Thesis on connecting elements using in place WAAM robotic additive manufacturing.

September 2011-July 2017 — **Masters in Architecture** — NTUA, Athens
Research thesis on emergent urbanism via studies of multi agent systems.
Diploma project on kinetic multi-purpose surfaces, design and fabrication. Grade 10/10.
GPA: 9.38/10 (excellent, top 5%)

January 2017-June 2017 — **Fab Academy** — IAAC, Barcelona
Digital conception and fabrication in the Fab Lab.

September 2015-July 2016 — **Studies in Architecture, Erasmus** — ENSAPLV, Paris
Erasmus studies. Focus on computational design techniques.

Work experience

April 2024-today — **Postdoctoral researcher, Circular Engineering for Architecture** — ETH, Zurich
Research on digitalization towards a circular built environment.

October 2018 - September 2019 — **Computational Designer at Esri R&D Center** — Zurich
Procedural urban environment generation, Virtual Reality visualization of urban projects.

October 2016 - January 2017 — **Internship in the Fab Lab of IAAC, Barcelona** — Barcelona
Use and maintainance of Fab Lab machines and space.

Publications

2024 — **Mitropoulou I.**, Bernhard M., Dillenburger B.: Investigating Curvature of Print Paths on Surfaces. In Symposium on Computational Fabrication 2024 (SCF). In review process.

2023 — **Mitropoulou I.**, Vaxman A., Diamanti O., Dillenburger B., 2023. Non-planar 3D Printing of Double Shells. In: RobArch 2024.

Mitropoulou I., Vaxman A., Diamanti O., Dillenburger B., 2023. Fabrication-Aware Strip-Decomposable Quadrilateral Meshes. In: Computer Aided Design journal, Elsevier.

Wang J., Liu W., Kao G., **Mitropoulou I.**, Ranaudo F., Block P., Dillenburger B. 2023. Multi-robotic Assembly of Discrete Shell Structures. In: Advances in Architectural Geometry 2023.

2022 — Giesecke R., Clemente R., **Mitropoulou I.**, Skevaki E., Peterhans T. C., Dillenburger B. 2022. Beyond Transparency: Architectural Application of Robotically Fabricated Polychromatic Float Glass. In: Robotics Construction Journal.

2021 — **Mitropoulou I.**, Bernhard M., Dillenburger B.: Nonplanar 3D Printing of Bifurcating Forms. In 3D Printing and Additive Manufacturing journal, Mary Ann Liebert, Inc.

2020	**Mitropoulou I.**, Bernhard M., Dillenburger B.: Print Paths Key-framing. Design for non-planar layered robotic FDM printing. In Symposium on Computational Fabrication 2019 (SCF) .
2019	**Mitropoulou I.**, Ariza I., Bernhard M., Dillenburger B., Gramazio F., Kohler M.: Numerical Sculpting - Volumetric Modelling Tools for In Place Spatial Additive Manufacturing. In DMSB 2019 - Impact: Design with all senses.

Teaching

University courses

2021 - ongoing	Computational Design 1 and 2, Bachelor in Architecture, ETH Zurich. Exercise sessions tutoring.
2021, 2022, 2023	Compas II: Introduction to Computational Methods for Digital Fabrication in Architecture, Doctorate in Arhitecture, ETH Zurich. Lectures and exercises.
2019 - ongoing	MAS in Architecture and Digital Fabrication, ETH Zurich. Tutorials, projects and thesis-supervision.

Workshops

November 2023	Coach at Innovation Booster IBAM event as Additive Manufacturing expert, InnoSuisse (Zurich).
February 2023	Non-planar 3D printing, from desing to fabrication. University of Michigan (remote).
October 2022	Non-planar 3D printing using interpolation. South east university Nanjing (remote).
October 2019	City Engine, procedural generation of urban environment. Foster and Partners (London).

Talks

June 2023	'Non-planar Layered Morphologies'. 18th MaP Graduate Symposium, ETH Zurich.
April 2022	'Non-planar Layered Morphologies'. DigitalFUTURES: Inside ETH Zurich.
September 2019	'Design through Computational Workflows'. VIScon Symposium, ETH Zurich.

Master thesis supervision

May-Sept 2023	'Clay acoustic patterns'. Students: Ana Ascic, Ramon Maldonado. Co-tutors: Maria Smigielska, Achilleas Xydis.
May-Sept 2022	'Mycelium Bio-composites'. Students: Chris Norcross, Vincent Wörndl. Co-tutor: Tiziano Derme.
May-Sept 2022	'Stable Asseblies'. Students: Jingwen Wang, Wenjun Liu. Co-tutors: Gene Kao, Francesco Ranaudo.
May-Sept 2019	'Non-Planar Boundaries'. Non-planar FDM printing. Student: Mahiro Goto.

Software

2019-2022	COMPAS_SLICER; an open-source slicing package for FDM robotic 3D Printing. Lead developper. https://compas.dev/compas_slicer

Awards

2022	Rosalind Franklin Society Special Award in Science. Best paper of the year in journal '3D Printing and Additive Manufacturing'.
2019	ITA Fellowship scholarship for doctoral research at ETH Zurich
2018	1st prize on competition 'Renzo Piano World Tour' for the best diploma project of 2017 with focus on architectural details. Participation in the 40 days architectural world tour.
2013	Christos Papakyriakopoulos Award-Bequest 2013, for excellence in mathematics in the school of Architectural Engineering (GPA 10/10).
2011	Multiple awards for excellence during the panhellenic university entrance exams. Entrance in the 1st position in the National Technical University of Athens.

Languages

English	**C2**, Certificate of Proficiency in English, University of Cambridge
French	**C2**, Diplôme Approfondi de Langue Française (DALF), Institut Français
German	**C1**, Ongoing studies
Greek	native language