

## ALEXANDROS HARIDIS

Office Address 150 Western Ave, Science & Engineering Complex  
Boston (Allston), MA 02134, USA  
Phone +1 (617) 495-3000  
Work Email haridis@seas.harvard.edu  
Website <https://haridis.me>

## EDUCATION

- 2022 Ph.D. in Architecture: Design and Computation, Department of Architecture  
Massachusetts Institute of Technology. *Presidential Fellow.*
- 2017 M.S. in Computer Science, Department of Electrical Engineering & Computer Science  
Massachusetts Institute of Technology.
- 2017 SMArchS in Design and Computation, Department of Architecture  
Massachusetts Institute of Technology.
- 2014 Diploma of Architect Engineer, School of Architecture  
Aristotle University of Thessaloniki.

## ACADEMIC EMPLOYMENT

### Faculty Positions

- 2023-Present Harvard University, Cambridge, MA, USA  
Lecturer on Design & Engineering (full-time), John A. Paulson School of Engineering &  
Applied Sciences with joint affiliation with the Graduate School of Design

### Teaching & Research

- 2017-2022 Massachusetts Institute of Technology, Cambridge, MA, USA  
PhD Researcher, MIT Department of Architecture, Computation Group  
Advisor: George Stiny, Professor of Design and Computation
- 2014-2021 Massachusetts Institute of Technology, Cambridge, MA, USA  
Graduate Teaching Assistant, MIT Department of Architecture and MIT Department of  
Electrical Engineering & Computer Science
- 2016-2018 Massachusetts Institute of Technology, Cambridge, MA, USA  
Research Assistant, Genesis Group, Computer Science & Artificial Intelligence Lab (CSAIL)  
Mentor: Patrick H. Winston, Ford Professor of Artificial Intelligence and Computer Science
- 05—12/2015 Massachusetts Institute of Technology, Cambridge, MA, USA  
Research Assistant, Digital Structures Group, Department of Architecture  
Mentor: Caitlin Mueller, Associate Professor of Architecture and Civil Engineering

## PUBLICATIONS

### Peer-Reviewed Journal Articles

#### Published

- 2022 "SHREC'21: Quantifying shape complexity," M. Arslan\*, A. Haridis\*, P. L. Rosin, S. Tari, et al. *Computers & Graphics* 102: 144—153.
- 2022 "Analysis of shape grammars: continuity of rules," A. Haridis and G. Stiny *Environment and Planning B: Urban Analytics and City Science* 49: 1929—1948.
- 2020 "Structure from appearance: topology with shapes, without points," *Journal of Mathematics and the Arts* 14: 199—238.
- 2019 "The topology of shapes made with points," *Environment and Planning B: Urban Analytics and City Science* 47: 1279—1288.

### Book Chapters

- 2024 "Arrangements containing shapes: mathematical features and their use in visual calculating." In: SD Kotsopoulos (Ed.) *Shape Computation: Fifty Years, 1972-2022 (Mathematics and the Built Environment, Vol 9)*. Springer Nature.

### Peer-Reviewed Conference Papers and Abstracts

#### Published

- 2025 "Description changes in architecture: identity rules in shape grammars and multiplicity in design datasets," N. Moustroufis and A. Haridis In: *Nexus 2025: Relationships Between Architecture and Mathematics*, June 3–6, Vicenza, Italy.
- 2025 "Evaluation of architectural synthesis using generative AI: A case study on Palladio's architecture," J. Huang and A. Haridis. In: *Proc. of 30<sup>th</sup> Conf. Computer-Aided Arch. Design Research in Asia (CAADRIA'25)*. Tokyo, Japan.
- 2024 "Formulating the generative: history, logic and status of computing designs in a latent space." In: *Proc. of 42<sup>nd</sup> Conf. on Education & Research in Computer-Aided Architectural Design in Europe (eCAADe'24)*. Nicosia, Cyprus.
- 2019 "Notes for an improvisational specification of design spaces." In: *Proc. of the Eighteenth International Conference on Design Computing and Cognition (DCC'18)*, Politecnico di Milano, Lecco, Italy.
- 2018 "Deep3D Research for Indoor Scene Reconstruction." R. Villalon and A. Haridis. In: Posters of the *New England Symposium on Graphics*, MIT CSAIL, April 14, 2019. Cambridge, MA.
- 2018 "Some issues concerning the use of design space formalisms in creative domains." In: *Proc. of the Fifth International Conf. on Design Creativity (ICDC'18)*, University of Bath, Bath, UK.
- 2016 "Specification of a spatial design space: shape descriptions and rule continuity." In: Design Descriptions Workshop, *Sixteenth International Conference on Design Computing and Cognition (DCC'16)*, July 26, 2016, Northwestern University, Chicago, IL, USA.
- 2016 "Talking about architectural compositions: pilot study on description styles and envisioning," A. Haridis and P. H. Winston. In: Posters of the *Sixteenth International Conference on Design Computing and Cognition (DCC'16)*, July 27, 2016, Northwestern University, Chicago, IL, USA.

#### Under Review

- 2025 "JONES-19: A cultural image dataset based on *The Grammar of Ornament*," L. Pham, C. Wang, D. Alvarez-Mellis and A. Haridis. In: *SIGGRAPH 2025 Art Papers*, Vancouver, Canada.
- 2025 "Formalizing physical connectedness: a topological approach to design," A. Dhalia and A. Haridis. In: *Nexus 2025: Relationships Between Architecture and Mathematics*, Vicenza, Italy.

**Textbook Project**

- 2018-2022 *Introduction to Artificial Intelligence at MIT: 6.034 Teaching Notes.*  
MIT Department of Electrical Engineering and Computer Science (internal use).

**Invited Talks and Presentations**

- 2025 metaLAB (at) Harvard, Berkman Klein Center, Harvard University. Cambridge, MA, USA.
- 2024 National Technical University of Athens, School of Architecture. Special Topics in the History and Theory of Architecture (8<sup>th</sup> sem.). Athens, Greece. *Online*.
- 2024 Oxford University, Digital Humanities at Oxford Summer School, Oxford, UK.
- 2024 New York Institute of Technology, School of Architecture & Design. New York City, NY, USA.
- 2023 Harvard John A. Paulson School of Engineering & Applied Sciences. Allston, MA, USA.
- 2020 National Technical University of Athens, School of Architecture. Special Topics in the History and Theory of Architecture (9<sup>th</sup> sem.). Athens, Greece. *Online*.
- 2018 Massachusetts Institute of Technology, Department of Architecture, Lecture. Intro to Shape Grammars II. Cambridge, MA, USA.
- 2016 Dartmouth College, Department of Music, *Third Annual Workshop in the Woods on Audio and Visual Synthesis*. New Hampshire, MA, USA.
- 2015 Massachusetts Institute of Technology, Department of Architecture, Digital Structures Research Group. Cambridge, MA, USA.
- 2013 Aristotle University of Thessaloniki, School of Architecture. Lecture Series in Design through a Play of Undoing Graduate Studio. Thessaloniki, Greece.
- 2013 Aristotle University of Thessaloniki, School of Architecture. Lecture Series: Paradigm Shift in Architecture: The Architect-Creator & The New Design Tools. Thessaloniki, Greece.

**Media**

- 2024 "From spatial rules to code: evaluating vision-language models in design," Public Video Talk produced by the Harvard Office of the Vice Provost for Advances in Learning. Upcoming.
- 2024 Harvard SEAS Newsletter. *Featured*: "The Language of Design: SEAS Class Combines Computation with Design Philosophies," by M. Goisman. August 23, 2024. [View Online](#)
- 2021 "The Geometries of Line Drawings." In [Imprint 01](#), Issue 1, MIT Architecture: pp: 78-79.

**Workshops**

- Fall/Spring 2024 "Artificial Intelligence and Architectural Work." Workshop for undergraduate architecture students at the School of Architecture. National Technical University of Athens. Athens, Greece
- Aug 2023 "Creative Use of Code and Data." Workshop for graduate students in design engineering at Harvard University. Science & Engineering Complex, Boston (Allston), MA.
- May 2021 "SHREC'21: Quantifying Shape Complexity." *Eurographics 2021 Workshop Track on 3D Object Retrieval* (3DOR'21, online), Eurographics'2021, Vienna, Austria.
- Jan 2018 "Design Without a Discipline," International Design Workshop. MIT Computation Group in collaboration with the UAI Design Lab in Santiago Chile. Sponsored by: MIT MISTI-Chile.

**FELLOWSHIPS, GRANTS AND HONORS**

- 2023 Harvard Data Science Initiative (HDSI) Research Grant
- 2022 MIT Hyzen Fellowship

- 2019-2022 Onassis Foundation Scholar
- 2020 Summer Work and Pedagogy Program Research Grant, MIT Department of Architecture
- 2018 Bill Mitchell++ Award, MIT School of Architecture & Planning
- 2017 MIT Presidential Fellowship
- 2018 MIT Graduate Student Council Travel Grant
- 2016-2018 Avalon Travelling Grant (multiple), MIT Department of Architecture
- 2015-2017 A.G. Leventis Foundation Scholar
- 2016 Floyd Naramore Architectural Fellowship, MIT Department of Architecture
- 2015 MIT Hyzen Fellowship
- 2015 Gerondelis Foundation Grant
- 2014-2016 MIT Department of Architecture Graduate Fellowship
- 2014 Highest Honors, Diploma Architect Engineer, Aristotle University, Greece
- 2013 Honorable Mention, National Architectural Ideas Competition, TEE-Greece
- 2011, 2013 15th and 16th Biennial of Young Artists

## TEACHING EXPERIENCE

### Current Roles

- Harvard University, Cambridge, MA
- 2024-Present Computing, Spatial Design, and Human Values (ES-138)  
Role: Course developer and Instructor  
Introduction to major traditions of design and computation research and scholarship, culminating to a student-initiated final research project.
- 2023-Present Collaborative Design Engineering Studio I (STU-1231)  
Role: Co-Instructor  
Graduate studio introducing ideas, methods and techniques essential for the design engineer. Joint offering between Harvard GSD and SEAS.

### Previous Roles

- Role: Course Developer and Instructor
- Northeastern University, College of Arts, Media, and Design, Boston, MA
- Spring 2023 Studios in Data-Driven Visualization Technologies, Levels I & II (ARTG5330/5430)
- Boston Architectural College, Department of Architecture, Boston, MA
- Spring 2017 Advanced Architectural Design Studio: Research in Design Computing (DME2100)  
Role: Graduate Teaching Assistant
- MIT Department of Architecture, Cambridge, MA
- 2017-2021 Proseminar/Research Seminar in Computation (4.581/4.582)
- Spring 2020 Architecture Design Studio, Level II (4.024)
- Spring 2020 Special Subject: Architectural Computation (4.s56)
- 2016, 2019 Introduction to Shape Grammars, Levels I & II (4.540/4.541)
- Spring 2015 Design Across Scales and Disciplines (4.110J/MAS.650J)
- Fall 2014 Architecture Design Option Studio (4.154)
- 2016, 2018 MIT Department of Electrical Engineering and Computer Science, Cambridge, MA  
Introduction to Artificial Intelligence (6.034/6.844)

## SERVICE

- External Reviewer **Journals:** *Environment and Planning B* (2019-Present); *AI EDAM - Artificial Intelligence for*

*Engineering Design, Analysis, & Manufacturing* (2019-Present); *Technology | Architecture + Design* (2018-Present); *Computer-Aided Design* (2019-Present); *The Journal of Architecture* (2023-Present); *Nexus Network Journal: Mathematics and Architecture* (2018-Present)

**Conferences:** *Design Computing & Cognition* (2020–2024); Design Research Society (2024)

- 2023-2024 Innovation Council Member, Harvard John A. Paulson School of Engineering & Applied Sciences  
 2023-2025 Graduate Admissions Committee Member, Master's in Design Engineering, Harvard GSD  
 2021-2022 Graduate Admissions Committee Member, MIT SMArchS & PhD in Design & Computation  
 2018-2020 Cabinet Representative for PhD students, MIT Architecture Student Council (ASC)  
 2016-2021 Extra-Departmental Subjects Listing, MIT Department of Architecture. [View Online](#)
- 2017–2019 Co-organizer: *Forum in Computation*. MIT Department of Architecture, Computation Group.  
 2020 Co-organizer: *Algorithmic & Mathematical Methods in Design*. Sponsored by: Summer Work and Pedagogy Program, MIT Department of Architecture.
- Invited Critic Massachusetts Institute of Technology, Harvard University, Georgia Institute of Technology, Wenworth Institute of Technology, Boston Architectural College, National Technical University of Athens, Aristotle University of Thessaloniki
- Academic Supervision & Advising Research supervision: 8 graduate and undergraduate students from Harvard University, MIT, and Architectural Association (names available upon request).  
 Master's Theses Supervised: 3 (in-progress)

## LANGUAGES AND TECHNICAL SKILLS

### Languages

Greek (native), English (fluent), Armenian (mother's language), German (beginner)

### Software and Technical Skills

Python, Processing, JavaScript (P5, D3), Rhino3D/Grasshopper, Adobe Suite, LaTeX, Digital Fabrication, Digital Sound Production and Computer Music Technology

## OTHER EXPERIENCE

- 2021-Present Architect Consultant: Egnatia Group S.A., Thessaloniki, Greece  
 05—09/2019 Research Intern: OPT Industries, Inc., Cambridge, MA, USA  
 06—08/2016 Design Intern: AW-ARCH (Anmahian Winton Architects), Cambridge, MA, USA  
 2013–2020 Architect/Designer: Horotechniki S.A., Thessaloniki, Greece  
 2009-2013 Architect/Designer: Egnatia Group S.A., Thessaloniki, Greece
- Editorial Contributions Design and illustration for the book *Shapes of Imagination: Calculating in Coleridge's Magical Realm* by George Stiny (The MIT Press, 2022). Production: 2019-2021
- Exhibitions (selection) "The Black City Astrolabe: A Constellation of African Diasporic Women." Physical three-dimensional installation in collaboration with the [MIT Black City Group](#) on view at the 18<sup>th</sup> Biennale of Architecture in Venice, Arsenale, Venice, Italy, May 20-November 26, 2023. Sponsored by: [MIT Center for Art, Science & Technology \(CAST\)](#) and [Graham Foundation](#).  
 "Histories of Negation | Black City: The Arkansas Edition." Exhibition in collaboration with the [MIT Black City Group](#), on view at the MIT's Department of Architecture Keller Gallery. Cambridge, MA, November 4-December 2, 2022. Sponsored by: [MIT Center for Art, Science & Technology](#) (CAST) and MIT SA+P.  
 "Elements of Spatial Configuration of a Settlement of Huts on the Delta of Evros River." Mapping and field work project on view at the Boston Architectural College Faculty Exhibit.

Boston, MA, February-May, 2018.

"Ouroboros." Physical model of shortlisted architectural design competition entry for the [NASA Centennial Challenge: 3D Printed Habitat](#) on view at Maker Faire by Maker Media, New York Hall of Science, New York, September 22-23, 2015. Press: [MIT News](#). Sponsored by: [MIT Digital Structures Group](#).

"Paperwave Pavilion." Physical three-dimensional installation on view at the Expo Pavillions of the 2015 International Association of Shell and Spatial Structures (IASS) Annual Symposium "Future Visions." Amsterdam, Netherlands, August 2015. Sponsored by: [MIT Digital Structures Group](#).

"MateReality: 25 under 25." Curation of exhibition with [archstudies.gr](#) in collaboration with [archisearch.gr](#) and [Design Lab](#), May-June, 2015. Technopolis area, Athens, Greece. [Press](#).

"National Ideas Competition for the Recreation of Public Spaces." Awarded competition entry in collaboration with [Horotechniki S.A.](#) on view at the Museum of Byzantine Culture as part of the exhibition series of [Imagine the City](#), June 20-29, 2014. Thessaloniki, Greece.

"National Ideas Competition for the Design of a Landmark (Toposimo) for the Faliro Bay in Athens." Competition entry and physical model on view at the [New Benaki Museum](#). February-March, 2013. Athens, Greece. Sponsored by: Ministry of Environment, Energy and Climate Change in collaboration with the Benaki Museum.

"Logic and Dissonance." Multimedia art installation on view at the 16th Young Artists Biennial ([BJCEM](#)), June 7-July 7, 2013. Mole Vanvitelliana, Ancona, Italy. Also on view at the [CAMP Contemporary Art Meeting Point](#), January 7-16, 2014. Athens, Greece. Sponsored by: Hellenic General Secretariat for Youth of Greece.

Pedagogical Training	2018 Kaufman Teaching Certificate Program, MIT Teaching+Learning Lab
Accreditation	2021 Architecture Registration, Technical Chamber of Greece (TEE-TCG)
Membership	Association for Computing Machinery (2014-Present) Association for Computer-Aided Design in Architecture (2014-Present) Onassis Scholar's Association (2022-Present) MIT Hellenic Students Association (2014-2022)
Art	Electronic music composition, production, and performance. Discography (2009–2015, 2024–): 1 album, 4 personal EPs, multiple remixes for other artists, appearances in 5 music compilations releases in record labels in Greece, Italy, Norway, Germany, and United States