

RAMTIN HAGHNAZAR (KOUCHAKSARAEI)

Ramtin@vt.edu | (+1) 571 591 4561

Visiting Scholar and Adjunct Faculty at Virginia Tech

EDUCATION

- 2016 – 2022** **Ph.D., Architectural Technology** (Computational Design), University of Tehran, Iran.
Integrated Design and Construction Digital Workflow.
Developing a fabrication-aware design tool lets architects design free-form lattice spatial structures while rationalizing them simultaneously. Designing with these tools will result in a buildable surface, and the designer can see the effects of changes in the early design phase.
- 2010 – 2013** **Master of Science in Architectural Technology**, University of Tehran, Iran.
Specialization: Computational design and digital fabrication of non-standard buildings.
- 2005 – 2010** **Bachelor of Science in Architectural Engineering**, University of Tehran, Iran.

PROFESSIONAL EXPERIENCE

- 2019 - 2022** **Co-Director and Co-Founder**, Digital Craft House, Karaj, Iran.
DCH is the fablab of the University of Art, founded by Dahi Studio.
- 2016 - 2019** **Co-Director**, Dahi Studio, Tehran, Iran.
Co-founder and Member of the Board from 2014 to 2022.
Dahi Studio was founded in 2014 as the R&D section of the Arxe Co-Op. After a while, Dahi started to work separately as an independent office dedicated to Computational Design projects and modeling and constructing complex geometries in architecture.
Selected Projects: Mot Tower, Baku: Façade BIM Modeling | Vakif Bank Headquarter, Istanbul: Façade BIM Modeling | Education City Stadium, Doha: Surface BIM Modeling | Cloaked in Brick, Tehran: Parametric Modeling and fabrication Data.
- 2013 - 2016** **Lead Designer**, Arxe Design Studio, Arxe Co-Op.
Partner and Member of the Board from 2013 to 2019.
Selected Projects: Alemadi Villa, Doha: 2000sqm | Lavasan Villa, Lavasan: 1000sqm | Fan Ava Office Interior, Tehran: 2100sqm | Darband Residential Complex, Tehran: 10000sqm | Artman Kids Renovation, Zanjan: 35sqm | Nosa Residential Competition, Kish Island: 140000sqm.
- 2011 - 2013** **Designer**, Arxe Design Studio, Arxe Co-Op (part-time).
Computational Designer and Parametric Modeler.
Architectural Designer.
- 2010 - 2012** **Researcher**, Archi-Vision, Research, and Development sector (part-time).
Research on Tensegrity structure.
Developing design workflow for Mero spatial structure.

ACADEMIC EXPERIENCE

- 2021 - Present** **Reviewer**, International Journal of Space Structure.
- 2022 - Present** **Visiting Scholar**, Researcher at BioDesign Research Group Virginia Tech.
- 2013 - 2016** **Member of the Central Core and Organizer**, Computational Design Committee, University of Tehran, Faculty of Fine Arts, Center of Excellence in Architectural Technology.
- Planning Courses and Workshops.
 - Instructor.

UNIVERSITY COURSES

- 2023 - Present** **Adjunct Instructor**, School of Architecture, Virginia Tech, USA.
- Computational Design (for graduate students).
 - Structure I & II.
- 2017 - 2022** **Lecturer**, School of Architecture, Faculty of Fine Arts, University of Tehran, Iran.
- 2017 - 2022 - Computer-Aided Design and Fabrication (for undergraduate students).
- 2019 – 2020 - Design Studio I (for master of architectural technology students).
- 2015 - 2022** **Lecturer**, Architecture Department, Pars University, Iran.
- 2017 - 2022 - Computer Application in Architectural Technology (for graduate students).
- 2015 - 2017 - Computer Application in Architecture (for undergraduate students).
- 2018 - Design Studio 2 (for undergraduate students).

WORKSHOPS

- 2021** **Co-Manager and Tutor**, Freeform Space Structure #5 Bending-Active Shells | Digital Craft House, University of Art, Tehran.
- Co-Manager and Tutor**, Freeform Space Structure #4 Bamboo-Bam | Digital Craft House, University of Art, Tehran, and BioDesign Research Group, Virginia Tech.
- 2020** **Manager and Tutor**, Freeform Space Structure #3 | Composite Structure, Digital Craft House and Iranian Architect House, Yazd, Iran.
- 2019** **Tutor**, Robotism | Robot Fabricated Structure, Digital Craft House and the University of Tehran, Iran.
- Co-Manager and Tutor**, Freeform Space Structure #2 | Surface Active Structure, Digital Craft House, University of Art, Iran.
- Co-Manager and Tutor**, Freeform Space Structure #1 | Nexorade, Digital Craft House, University of Art, Iran.
- 2018** **Co-Manager and Tutor**, Adaptive Building Envelope Workshop, Center of Excellence in Architectural Technology, University of Tehran, AND Bu-Ali Sina University, Hamedan, Iran.
- 2017** **Tutor**, Grid Shell Workshop | School of Architecture, University of Tehran.
- Co-Manager and Tutor**, Ply-House | Center of Excellence in Architectural Technology, University of Tehran.
- 2016** **Manager and Tutor**, Nexorade Workshop | Computational Design Committee, Center of Excellence in Architectural Technology, University of Tehran.
- 2015** **Manager and Tutor**, Hinge Paneling Workshop | Computational Design Committee, Center of Excellence in Architectural Technology, University of Tehran.

PUBLICATION

CONFERENCE

- 2022**
Conference Paper Hauptman, J., Haghazar, R., Saghafi Moghadam, S. (2022). Developing a digital design workflow for Nexorade Bamboo Structure, ACADIA 2022, Philadelphia.
- 2021**
Conference Paper Motamed Rastegar, R., Saghafi Moghaddam, S., Haghazar, R., Zimring, C. (2021). "TAL-CAT" a Computer-Aided Prototype Tool to Quantify User Experience in Design Workflow: A Case Study of Teamwork Assessment in Primary Care Clinics". In Proceedings of International Conference of Design Possibilities, 2021. SIGRADI.
- 2021**
Presentation Ramtin Haghazar, et al., (2021). "Post Covid Hands-On Workshops" Bamboo-Bam Hybrid Workshop Experience, 7th International Conference on Spatial Structures.
- 2021**
Presentation Motamed Rastegar, R., Saghafi Moghaddam, S., Haghazar, R. (2021). Computational Assistive Tools to Evaluate Qualitative Goals in Healthcare Design Workflows: A Case Study of Teamwork Assessment in Primary Care Clinics, Environmental Design Research Association 52 (Presentation only).
- 2012**
Conference Paper Haghazar Kouchaksaraei, R., Asefi, M. (2012). A Proposal for a New Type of Transformable Structure Based on Cable-Strut System, *IASS-APCS2012 Seoul*.

JOURNAL PAPERS AND BOOK CHAPTERS

- 2023**
Book chapter Hauptman, J., Haghazar, R., Marggraf, G., Ashjazadeh, Y. (accepted publish in 2023) Lightly Modifying Thick-Walled Timber Bamboo: An Overview. Springer.
- 2022**
Journal Paper Motamed Rastegar, R., Saghafi Moghaddam, S., Haghazar, R., Zimring, C. (2022). From evidence to assessment: Developing a scenario-based computational design algorithm to support informed decision-making in primary care clinic design workflow. *International Journal of Architectural Computing*. doi:10.1177/14780771221121031
- 2022**
Journal Paper Derazgisou, S.A., Haghazar, R. (2022). On Digital Manufacturing Laboratory Introducing the Comprehensive Laboratory of Applied Sciences of the University of Art. *Andišnāme-ye Me'māri*, 1 (2), 144-157. (in Farsi)
- 2021**
Journal Paper Haghair, S., Haghazar, R. Saghafi Moghaddam, S., Keramat, D., Matini, M.R. (2021). BIM Based Decision-Support Tool for Automating Design to Fabrication Process of Freeform Lattice Space Structure, *International Journal of Space Structures*.
- 2018**
Journal Paper Matini, M.R., Haghazar, R., (2018). Design of curved-line bending mechanism inspired by skin wrinkles for elastic-kinetic structures in architecture, *International Journal of Space Structures*, 33(3-4), 124-137.
- 2015**
Journal Paper Haghazar Kouchaksaraei, R., Hashemkhani Zolfani, S., Golabchi, M. (2015). Glasshouse Locating based on SWARA-COPRAS approach, *International Journal of Strategic Property Management*, 19(1).
- 2014**
Journal Paper Haghazar, R., Nooshin, H., Golabchi, M. (2014). Improvement of Regularity based on Stepping Projection in Geodesic Domes, *International Journal of Space Structures*, 29(2), 81-96.

HONOR AND AWARDS

- 2021** **Honorable Mention**, The Gate of Knowledge Competition, Isfahan, Iran.
Contribution: Structural and Computational Consultant, Arxe Design Studio.
- 2016** **Tuition Waiver**, National merit-based, from “Ministry of Science, Research and Technology” for Ph.D. study, one of the two available yearly positions at the University of Tehran.
- 2016** **First prize** by “CLOAKED IN BRICK” project, two gold medals in the Architizer award.
Contribution: Member of design team, Admun Studio.
<https://architizer.com/collections/amaterials/>
- 2016** **Second prize** by “ARTMAN KIDS” project, in “Memar Awards”, in “renovation” category, Tehran, Iran.
Contribution: member of the design team, Arxe design studio.
- 2016** **Third prize** by the “CHOOJI RESTAURANT” project, in “Memar awards”, in “renovation” category, Tehran, Iran.
Contribution: member of the design team, Admun design studio.
- 2016** **First prize** by “CHOOJI RESTAURANT” project, winner of 9th “Iranian interior architecture award”, “commercial buildings” category.
Contribution: member of the design team, Admun design studio.
- 2015** **First prize** by “ARTMAN KIDS” project, winner of 8th “Iranian interior architecture award”, “commercial buildings” category.
Contribution: Member of design team, Arxe Design Studio.
<http://iranian-architect.ir/competition-0059> (in Persian)
- 2015** **Shortlisted** by “CLOAKED IN BRICK” project, 9 projects were shortlisted, in 39th “The Annual Brick Awards” in the UK, in “Best international and worldwide project” category.
Contribution: Member of design team, Admun Studio.
<http://www.brick.org.uk/best-international-worldwide-project/>
- 2015** **Honorable Mention** by “CLOAKED IN BRICK” project, in “Memar Awards”, in “Residential Apartment” category, Tehran, Iran.
Contribution: Member of design team, Admun Studio.
<http://www.caoi.ir/index.php/en/links/itemlist/tag/Memar%20Magazine%20Awards>
- 2013** **First Rank** in class of 2010, Architectural Technology.
- 2010** **Tuition Waiver** National merit-based, from “Ministry of Science, Research and Technology” for Master study.
- 2010** **Second Rank** in National University Entrance Exam, Architectural Technology, Among three Thousand Participants.
- 2005** **Tuition Waiver** National merit-based, “from Ministry of Science, Research and Technology” for Bachelor study.
- 2005** **Top 2%** in the National Undergraduate University Entrance Exam of Iran.

SKILLS AND ABILITIES

Mother Tongue	Persian
Other languages	English (C1) Arabic (Familiar)
Computer Skills	Rhino / Grasshopper and its plugins (Expert, Teaching at university and professional experience for 10 years). Auto Cad (Advance, 10 years professional experience). 3D studio max (Intermediate, 5 years professional experience) Revit (Familiar). Photoshop (Intermediate). InDesign (Intermediate). Programming Languages: C# (Pre-Intermediate). Python (Pre-Intermediate). Formian (Intermediate). Architectural Design Architectural Research Computational Design Teaching Lead Design Geometrical Analysis (Advance Geometrical Analysis on Spatial Structure). Familiar with Building Physics Analysis Familiar with Optimization Algorithm
Other skills	

VOLUNTEER WORK

2008	Design , design vernacular houses in Ziarat village, member of the design team.
2011	Design , design a shrine in a small Village in Qazvin province.
2012 - 2013	Teach , teach software to students who cannot.
2019 - 2022	Digital Craft House covers the cost of the students' fabrication project and lets students use digital fabrication freely.