

Curriculum Vitae

Biography Pirouz Nourian, Born on 19, July, 1981, Tehran, Iran

Position Assistant Professor of Design Informatics (Dec 2016-present)

@ Delft University of Technology (TU Delft)
Faculty of Architecture and Built Environment (Faculteit Bouwkunde)
Department of Architectural Engineering + Technology (AET)
Section of Digital Technologies
Chair of Design Informatics

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Contact         

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Academic Degrees

2010-2016 thesis	Ph.D. in Design Informatics Graph Theoretical Methods for Design and Analysis of Spatial Configurations	Delft University of Technology	NL
2005-2009 thesis	M.Arch., Cum Laude Dynamics of Design Processes in conjunction with Construction Processes	Tehran University of Art	IR
1999-2004 track thesis	B.Sc. in Electrical Engineering, Major in Control Systems Engineering Design and Implementation of a Digital Stability Control System in MATLAB, full mark (20/20)	K.N. Toosi University of Technology	IR
1998-1999	College Diploma in Mathematics and Physics, Cum Laude	Dr. Hesabi College	IR

Employment History

2016-now	Assistant Professor of Design Informatics @ TU Delft (Dec 2016-present)
2015-2016	Researcher of Urban Design @ TU Delft (Nov 2015- May 2016)
2014-2015	Researcher of GIS Technology and 3D Geo-information @ TU Delft (Aug 2014- Oct 2014- Apr 2015)
2014-2018	Instructor of Geomatics @TU Delft (Feb 2014-Feb-2018)
2011-2015	Instructor of Design Informatics @ TU Delft (May 2011-Nov 2015)
2008-2009	Teaching Assistant (BSc Design Studio, Form Studies, Computer Aided Design), @ Tehran University of Art
2006-2010	Architect & Design Technical Manager, @ Gashtaar/Tracture (Transformative Architecture Office), Tehran, Iran, co-designed various residential, commercial, mixed-use projects.
2005-2007	Architect & Interior Designer [freelance] three projects of interior design-build for residential and commercial places in Tehran
2004-2009	Carpenter and Modeller (freelance)
2004-2005	Trainee Engineer, Industrial Control Systems, @ STEP Engineering Consultants Ltd., Cement Factory Design
2003-2004	Teaching Assistant (Control Theory, Industrial Control), @ K.N. Toosi University of Technology

Professional Skills

Methodical	Architectural Design, Urban Design, Design Methodology, Research Methodology, Space Planning, CAD-CAM, Mathematical Modelling, Scientific Computing, Numerical Computing, 3D Geometric Modelling & Simulation, Spatial Analysis, Open Science, Open-Source Software Development
Technical	Vectorized Programming (specified below), Grasshopper3D®(advanced), Rhinoceros3D®(advanced), AutoCAD, Depth Map, Microsoft Office, Git (basic), Markdown (advanced), LaTeX (basic), Vector Drawing, Carpentry, Research Software Engineering, Physical Modelling, Fabrication, Construction
Maths	Linear Algebra, Graph Theory, Spectral/Algebraic Graph Theory, Markov Chains, Computational Topology, Computational Geometry, Fuzzy Logics, Calculus, Control Theory, Differential Equations, Numerical Methods

Soft Skills	<p>Research & Development, Project Management (Gantt, PERT, UML, Budgeting), Science Communication, Problem-Solving, Scientific Coaching, STEM Tutoring, Teamwork, Career Motivation, Organisation, and Communication,</p> <ul style="list-style-type: none"> ▪ Entrepreneurship & Valorisation (certificate 2009), ▪ Design Didactics (certificate 2015), ▪ University Teaching Qualification: <ul style="list-style-type: none"> > DEVLEOP: Trainer Drs. Jonna Vis, Finished with Certificate and Compliments (Apr 28 till Jul 13, 2021) > ASSESS: Trainer MA. Inge Rozendal, Finished Certificate and Compliments (Jun 21 till Aug 16, 2021) > SUPERVISE: Trainer Ir. Alexia Luisig, Finished with Certificate and Compliments (Jun 7 till Sep 21, 2021) > TEACH: Trainer Ir. Alexia Luisig, (WIP, started on Sep 27, 2021) ▪ Personal Development Program (May 27, 2021 till Jan 12, 2022, 4 out of 7 sessions completed)
Natural Languages	English (C2 Certificate from ELT unit @ TU Delft dated 24/09/2021+ TOEFL IBT 2010), Dutch (A2 certificate), Persian (native), French (basic reading), Arabic (basic reading)
Artificial Languages	Python (advanced, NumPy/SciPy family of libraries), C# (advanced, Math.NET, Meta.Numerics, Accord.NET frameworks), MATLAB (basic, Simulink), Mathematica (basic), RhinoScript/RhinoCommon (advanced), COMPAS (intermediate), Visual Studio (IDE, pro-user), Visual Studio Code (IDE, pro-user)

Selected Academic Committee Membership

2021-present	<ul style="list-style-type: none"> ▪ Evaluator at the Cyprus Research & Innovation Foundation ▪ Member of the Scientific Committee of the 5th City Street Symposium, ▪ Member of digital twinning and digital design committee for Spatial Decision Support Systems and Building Industry 4.0 within the Dutch Network "Urban Development Initiative" ▪ Member of the AI@ABE Working Group: Tenure-Track Selection Committee of Delft AI Labs, and representative of ABE the in the TU Delft's AI initiative for Technological Industry (Feb-2020- Present) ▪ Member of the Open Building Academy ▪ Member of the Open Science Community Delft ▪ PhD Defence Committee member of Dr. Martin Bielik (@Bauhaus-Universität Weimar, Defence in Feb 2021) ▪ PhD Coordinator of the department of Architectural Engineering and Technology ▪ Strategic Personnel Planning Ambassador of the section Digital Technologies
2019-2020	<ul style="list-style-type: none"> ▪ PhD Examiner Mr. Nan Bai (Heritage & Values + Design Informatics @TUDelft, 22 Oct, 2020) ▪ PhD Examiner Ms. Maria Valese (Heritage & Values + 3D Geoinformation @TUDelft, 17 Dec, 2020)
2017-2018	<ul style="list-style-type: none"> ▪ Member of the Digital Skills Education community of TU Delft ▪ PhD Examiner Ms. Cemre Çubukçuoğlu (Design Informatics @TUDelft, 07, Sep, 2018) ▪ PhD Examiner Mr. Stelios Vitalis (3DGeoinformation @TUDelft, 13, Feb, 2018) ▪ Member of Geomatics Staff Instruction Committee (2015-2018) ▪ Reviewed for: <ul style="list-style-type: none"> ○ Computer Aided Design, ○ Environment and Planning B, ○ Experimental & Theoretical Artificial Intelligence, ○ Transport and Geography Planning Practice Research, ○ ISPRS International Journal of Geo Information, ○ Sustainability
2015-2017	<ul style="list-style-type: none"> ▪ <i>Member of Faculty Advisory Team, Solar Decathlon competition team MOR at TU Delft</i> ▪ Jury Member of The 11th European and Regional Planning Awards of ECTP-CEU (European Council of Spatial Planners - Conseil Européen des Urbanistes) Bruxelles, Jan-July 2016 ▪ Member of Review Committee: <ul style="list-style-type: none"> ○ 11th Space Syntax Symposium @Instituto Superior Technico, University of Lisbon, July 2017 ○ CAADence in Architecture, @ Budapest U of Tech. and Economics, Review Committee, June 2016 ○ 7th SimAUD Symposium @ UCL, Review Committee, May 2016 ○ 33rd eCAADe Conference, @TU Wien, Review Committee, September 2015 ○ 10th Space Syntax Symposium, Review Committee, @UCL, July 2015

Publications (more on [Pure & ResearchGate](#))

Design & Planning Tools

- Since 2020
 - [topoGenesis](#): an open-source python package that provides topological structures and functions for Generative Systems and Sciences
 - [VectoRelax](#): a Vectorized Dynamic Relaxation algorithm for Shape Optimization and Graph Embedding
- Since 2014
 - [Solaris](#): a tool suite for solar analysis and solar form finding (Work-in-Progress)
- Since 2013
 - [SYNTACTIC](#): A computational tool suite for analysing/designing architectural configurations
- Since 2012
 - [CONFIGURBANIST](#): A computational tool suite for analysing/designing urban configurations

3D Modelling Tools

- Since 2014
 - [RASTERWORKS](#) a computational library of methods for voxel and 3D raster model
- 2014-2015
 - [TOIDAR](#): Educational Toys for 3D reconstruction using LiDAR point clouds

Journal Articles

- 2021
 - Azadi, S., [Nourian, P.](#), Kasraian, D, Dane, G, van Oosterom, P, **Digital Twins as Virtual Playscapes & Playful Participation Mechanisms**, Urban Planning, Vol. 7, Issue 2, Special Issue on Gaming, Simulations and Planning: Physical and Digital Technologies for Public Participation in Urban Planning, WIP, abstract accepted, in preparation.
 - [Nourian, P.](#), Azadi, S. **EquiCity: a digital serious game for balancing sustainable development goals in participatory design of urban building complexes**, in preparation.
 - Azadi, S., Florou, A., [Nourian, P.](#), **vistaNetworks: Intervisibility Graphs for Solar Form Finding**, in preparation
 - [Nourian, P.](#), Azadi, S., Rezvani, S. **topoGenesis: voxel topological models for generative systems and sciences**, in preparation.
 - Bai, N., [Nourian, P.](#), Lou, R., Pereira Roders, A., **“What Is OUV” Revisited: A Computational Interpretation on the Statements of Outstanding Universal Value**, ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, [\[URL\]](#)
 - Cubukcuoglu, C., [Nourian, P.](#), Sariyildiz, S., Tasgetiran, M.F., **Optimal Design of New Hospitals: A Computational Workflow for Stacking, Zoning, and Routing**, submitted to Automation in Construction, accepted, [in press](#)
 - Bai, N., [Nourian, P.](#), Pereira Roders, A., Bunschoten, R., Huang, W., Wang, L., **MORPHOLOGY, COGNITION, AND BEHAVIOUR, Identifying the Rural Heritage in a Chinese Historic Village Cluster**, submitted to Environment and Planning B, accepted, [in press](#)
- 2020
 - Cubukcuoglu, C., [Nourian, P.](#), Azadi, S, Sariyildiz, S., Tasgetiran, M.F., **Formulating a Hospital Layout Design Problem as a Quadratic Assignment Problem**, Building Engineering [\[URL\]](#)
 - Cubukcuoglu, C., [Nourian, P.](#), Sariyildiz, S., Tasgetiran, M.F., **A discrete event simulation procedure for validating programs of requirements: The case of hospital space planning** [\[URL\]](#)
- 2019
 - [Nourian, P.](#), Rezvani, S., **Functional Logic of Space: A Differential-Probabilistic View on Socio-Spatial Organization Networks and Computational Space Planning**, in preparation.
- 2018
 - [Nourian, P.](#), Rezvani, S., Valeckaite, K., Sariyildiz, S., **Modelling walking and cycling accessibility and mobility: The effect of network configuration and occupancy on spatial dynamics of active mobility**, Smart and Sustainable Built Environment 7 (1), 101-116 [\[URL\]](#)
 - [Nourian, P.](#), Martinez-Ortiz, C., Otori, K.A., **Essential Means for Urban Computing: Specification of Web-Based Computing Platforms for Urban Planning, a Hitchhiker's Guide**, Urban Planning 3 (1), 47-57 [\[URL\]](#)
- 2016
 - [Nourian, P.](#), Gonçalves, R., Zlatanova, S., Otori, K. A., & Vo, A. V. (2016). **Voxelization algorithms for geospatial applications: Computational methods for voxelating spatial datasets of 3D city models**. *MethodsX*, 3, 69-86. [\[URL\]](#)

Books/Textbooks/Book Chapters

- 2021
 - [Nourian, P.](#), Azadi, S., Bai, N. (2021) **Spatial Complexity in Urban Ergonomics: A Methodological Framework for Simulation Modelling**, Special Issue of Chinese Science Bulletin on Urban Ergonomics, Eds. Dr. Zhang Li, invited chapter, in preparation.
 - [Nourian, P.](#), Azadi, S., (2021) **Participatory Generative Design Education: On Cultivating Collective Intelligence in Design and Planning**, A&BE Research on Education Innovation, BK Books, Eds. Rooij, R. Carvalho, R., van der Hoeven F., accepted, [in press](#).
 - [Nourian, P.](#), Bai, N. (2021) **Reuse: Configurational Assessment of Functionality**, in **CRASH: A method to reveal the impact of architectural redesigns**, pp. 23-73, Eds. A. Pereira Roders, [\[URL\]](#).

- 2020
 - [Nourian, P.](#), (2020) **Rudiments of Geometry and Topology for Computational Design**, Chapter 1, Fundamentals of Spatial Computing and Computational Design [[Preprint](#)][[Live](#)]
 - [Nourian, P.](#), (2020) **Rudiments of Linear Algebra and Computer Graphics for Computational Design**, Chapter 0, Fundamentals of Spatial Computing and Computational Design [[Preprint](#)][[Live](#)]
- 2016
 - [Nourian, P.](#), (2020) **How to write a thesis: A Generative Design Graduate Studio Guidebook**, [[URL](#)]
 - [Nourian, P.](#) (2016). **CONFIGRAPHICS: Graph Theoretical Methods for Design and Analysis of Spatial Configurations, A+ BE | Architecture and the Built Environment**, 6(14), 1-348 [[URL](#)]
 - Sileryte, R, [Nourian, P.](#) van der Spek, S (2016) **Modelling Spatial Patterns of Outdoor Physical Activities using Mobile Sports Tracking Application Data**, Springer Lecture Notes on Geoinformation and Cartography [[URL](#)]
- 2014
 - Chen, J.C., Sileryte, R, Zhou, K. [Nourian, P.](#) Zlatanova, S. **Automated 3D Reconstruction of Buildings out of Point Clouds obtained from Panoramic Images**, Technical Report, TU Delft, commissioned by Cyclomedia BV [[URL](#)]

Conference Papers

- 2021
 - [Brembilla, E.](#), [Azadi, S.](#), [Nourian, P.](#), **A Computational Approach for Checking Compliance with European View and Sunlight Exposure Criteria**, *Building Simulation 2021 Conference, Bruges, Belgium, accepted*, in press [[Paper ID 30353](#)][[arXiv:2109.11037](#)][[URL](#)]
 - [Soman, A.P.](#), [Azadi, S.](#), [Nourian, P.](#), **DeciGenArch: A Generative Design Methodology for Architectural Configuration via Multi-Criteria Decision Analysis**, *CAADRIA 2022, Realignments towards critical computation*, submitted, under review.
 - [Bai, N.](#), [Nourian, P.](#), [Pereira Roders, A.](#), **GLOBAL CITIZENS AND WORLD HERITAGE: SOCIAL INCLUSION OF ONLINE COMMUNITIES IN HERITAGE PLANNING**, *Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci.*, XLVI-M-1-2021, 23–30, [[URL](#)]
 - [Bai, N.](#), [Lou, R.](#), [Nourian, P.](#), [Pereira Roders, A.](#), **WHOSE Heritage: Classification of UNESCO World Heritage "Outstanding Universal Value" Documents with Smoothed Labels**, Association for Computational Linguistics and the 11th International Joint Conference on Natural Language Processing (ACL-IJCNLP 2021), *accepted* [[arXiv:2104.05547](#)][[URL](#)]
 - [Azadi, S.](#), [Nourian, P.](#), **GoDesign - A modular generative design framework for mass-customization and optimization in architectural design**, 39th eCAADe Conference 2021, Towards a new, configurable architecture, [[URL](#)].
 - [Bitting, S.](#), [Azadi, S.](#), [Nourian, P.](#), **Reconfigurable Domes - Computational design of dry-fit blocks for modular vaulting**, 39th eCAADe Conference 2021, Towards a new, configurable architecture, 39, [[URL](#)].
- 2020
 - [Bai, N.](#), [Azadi, S.](#), [Nourian, P.](#) [Pereira Roders, A.](#) **Decision-Making as a Social Choice Game: Gamifying an urban redevelopment process in search for consensus**, *eCAADe2020 – Anthropologic*, 38, Vol. 2 [[URL](#)]
 - [Bai, N.](#), [Nourian, P.](#), [Xie, A.](#) [Pereira Roders, A.](#) **TOWARDS A FINER HERITAGE MANAGEMENT Evaluating the Tourism Carrying Capacity using an Agent-Based Model**, Proceedings of the 25th International Conference of the Association for Computer-Aided Architectural Design Research in Asia (CAADRIA) 2020 [[URL](#)][[Video](#)]
- 2019
 - [Bot, F.J.](#), [Nourian, P.](#), [Verbree, E.](#) **A Graph-Matching Approach to Indoor Localization Using a Mobile Device and A Reference Bim**, *Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci.* 42 (2), 761-767, [[URL](#)]
- 2018
 - [Sulzer R.](#), [Nourian P.](#), [Palmieri, M.](#), [van Gemert, J.](#) **Shape-Based Classification of Seismic Structural Building Types**, 3d geoinfo conference 2018, Delft [[URL](#)]
 - [Daw, K.](#), [Azadi, S.](#), [Nourian P.](#), [Hoogenboom, H.](#) **Earthy Honeycombs: Construction Design of Adobe Shell Structures by Topological Polyhedralization**, IASS Conference 2018, MIT [[URL](#)]
- 2016
 - [Goncalves, R.](#), [Zlatanova S.](#), [Kyzirakos, K.](#), [Nourian, P.](#), [Alvanaki, F.](#), [van Hage, W.](#) **A columnar architecture for modern risk management systems**, IEEE 12th International Conference on eScience, 23-27 October 2016, Baltimore, USA [[URL](#)]
 - [Nourian, P.](#), [Rezvani, S.](#), [Sariyildiz, I. S.](#), & [van der Hoeven, F. D.](#) (2017). **Spectral Modelling for Spatial Network Analysis**, In *Proceedings of the Symposium on Simulation for Architecture and Urban Design (simAUD 2016)* [[URL](#)]
- 2015
 - [Nourian, P.](#), [Rezvani, S.](#), [Sariyildiz, S.](#), [van der Hoeven, F.](#) (2015). **CONFIGURBANIST - Urban Configuration Analysis for Walking and Cycling via Easiest Paths**, proceedings of the 33rd eCAADe Conference, TU Wien, Vienna [[URL](#)]
 - [Nourian, P.](#), [van der Hoeven, F.](#), [Rezvani, S.](#), [Sariyildiz, S.](#) (2015). **Easiest paths for walking and cycling: Combining syntactic and geographic analyses in studying walking and cycling mobility**, proceedings of the 10th Space Syntax Symposium, UCL, London [[URL](#)]
- 2014
 - [Goncalves, R.](#), [Ivanova, M.](#), [Kersten, M.](#), [Scholten, H.](#), [Zlatanova, S.](#), [Alvanaki, F.](#), [Nourian, P.](#) & [Dias, E.](#) (2014, November 3), **Big Data analytics in the Geo-Spatial Domain**, Groningen, Big Data Across Disciplines: In Search of Symbiosis, conference 3-5 November 2014 [[URL](#)]
- 2013
 - [Nourian, P.](#) [Rezvani, S.](#), [Sariyildiz, S.](#) (2013), **Designing with Space Syntax**. Proceedings of eCAADe 2013, (pp. 357-366), Delft [[URL](#)]

- 2012
 - [Nourian, P.](#), Rezvani, S., Sariyildiz, S. (2013), **A Syntactic Design Methodology**, Proceedings of 9th Space Syntax Symposium. Seoul [[URL](#)]
 - [Nourian, P.](#), Sariyildiz, S., Rezvani, S. (2012), **An Interactive Computational Methodology for Urban Mixed-Use Allocation** according to density distributions, network analysis and geographic attractions, Proceedings of Changing Cities Conference, Skiathos [[URL](#)]
 - [Nourian, P.](#), Sariyildiz, S., **A Configurative Approach to Neighbourhood Planning and Design**, promoting pedestrian mobility: An interactive design method for polycentric distribution of built space according to walkability, attractions and topographic features. Proceedings of New Configurations ISUF International Conference on Urban Morphology [[URL](#)]
- 2011
 - Beirão, J, [Nourian, P.](#), Van Walderveen, B, 2010, **An Integrated Process of Urban Pattern Generation and Route Structure Analysis**, in IASDR 2011 proceedings, presented in October 2011, Delft, the Netherlands [[URL](#)].
 - Beirão, J, [Nourian, P.](#), Mashhoodi, B, 2010, **A Parametric Urban Design System**, in eCAADe Slovenia Conference Proceedings, presented in September 2011, Ljubljana, Slovenia [[URL](#)]

Papers in Professional Magazines

- 2021
 - Azadi, S. [Nourian, P.](#), (2021) **Collective Intelligence in Generative Design: A Human-Centric Approach Towards Scientific Design**, *RUMOER, issue 76*, pp. 7-16, [[Preprint](#)]
- 2020
 - [Nourian, P.](#), Azadi, S. Hoogenboom, H, Sariyildiz, S (2020) **EARTHY: Computational Generative Design for Earth and Masonry Architecture**, *RUMOER, issue 74*, pp.47-53, [[Preprint](#)]
- 2019
 - Bot, F., Verbree, E., [Nourian, P.](#) (2019) **Locatiebepaling binnen gebouwen op basis van spectrale graafanalyse**, *Geo-Info*, 16(3), 32-34 [[URL](#)]

Invited Talks

- 2021
 - Nourian, P., **Open Source Participatory Design and Construction of Open Buildings: Affordable 'Haute Couture' for the Masses by means of Design-Build Games**, Open Building Now 2.0, [[Event](#)] [[URL](#)] [[video](#)]
 - Nourian, P, Bai, Nan, **The appeal of small world landscapes: complexity or simplicity?** Future Landscapes Symposium Vrije Universiteit Amsterdam, [[Event](#)] [[URL](#)] [[short video](#)] [[long video](#)]
- 2019
 - Nourian, P, 2019, **Configurative Generative Design**: Digitization, Digitalization, and Digital Transformation in Architecture and Urban Design, Conference: lezingreeks-parametrisch-ontwerpen @Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, @ Rijksvastgoedbedrijf, The Hague [[Event](#)][[URL](#)] [[video](#)]
 - Nourian, P, 2019, **Mathematical and Computational Modelling of Doubly Complex Systems**: in Architecture and Urban Design, Conference: Democratization of Heritage Management, Heriland European Project [[URL](#)]
 - Nourian, P, 2019, **Configurative Design**: Computational Space Planning, Layout, and Form-Finding in Architecture, lecture @ MVRDV Rotterdam, MVRDV Next, March 7, 2019 [[Event](#)][[URL](#)]
- 2018
 - Nourian, P, 2018, **Navigating Indoor Cities**: Graphs/Networks and Indoor Navigation, invited lecture for Positioning and Location Awareness, [[URL](#)]
 - Nourian, P, 2018, **Indoor Cities**: on seamless indoor-outdoor navigation and why/how it matters in designing complex buildings, invited lecture for BK-Health, October 2018, [[URL](#)]
- 2012
 - [Nourian, P \(2012\)](#), **On Computational Design Methodology**, CIAUD: Research Centre for Architecture, Urban Planning and Design, Measuring Urbanity Seminar & Workshop, Lisbon, May 7th-12th, 2012, FAUTL - Faculty of Architecture, Technical University of Lisbon [[URL](#)]
 - [Nourian, P.](#) Sariyildiz, S (2012), **A Computational Walkability Assessment Model**, CIB Webinars on measuring Urban Sustainability [[URL](#)]

Teaching Experiences

Master of Science in Architecture, Urbanism, and Building Sciences/Building Technology

- | | |
|-----------|--|
| 2020-2021 | ▪ Lecturer and Instructor in Research and Innovations AR1B031 [Lecture] |
| 2019-2020 | ▪ Studio Director of EARTHY 3.0 [GIT] : Generative Design for Earth and Masonry Architecture AR3B011 [video] |
| 2018-2019 | ▪ Studio Director of EARTHY 2.0 [GIT] : Generative Design for Earth and Masonry Architecture A13B011 [video] |
| 2016-2017 | ▪ Studio Director of EARTHY 1.0 [GIT] : Generative Design for Earth and Masonry Architecture AR3B011 |
| 2015-2016 | ▪ Instructor of Parametric Design in (MSc 1, Q1, Q3) Bucky Lab Design CAD (AR1AE015) |
| 2014-2015 | ▪ Instructor of Computational Design in (MSc 2, Q4) MEGA High-Rise Design (AR0026) |
| 2013-2014 | ▪ Instructor of Parametric Design in (MSc 1, Q1, Q3) Bucky Lab Design CAD (AR1AE015) |
| 2012-2013 | ▪ Responsible Instructor of Computational Design in (MSc 2, Q2& Q4) BIG and TALL Workshop (AR0026) |
| 2011-2012 | ▪ Instructor of Parametric Design in (MSc 1, Q1, Q3) Bucky Lab Design CAD (AR1AE015) |
| 2010-2011 | ▪ Responsible Instructor of Computational Design in (MSc 2, Q3) XXL Design Studio (AR0025) |
| | ▪ Instructor of Computational Design in (MSc 2, Q3) XXL Design Studio (AR0025) ^[2] |
| | ▪ Instructor of Computational Design in (MSc 3, Q3) Computational Architecture (AR4AC010) |
| | ▪ Instructor of Parametric Design in (MSc 1, Q1, Q3) Bucky Lab Design CAD (AR1AE015) |
| | ▪ Instructor of Computational Design in (MSc 2, Q3) XXL Design Studio (AR0025) ^[1] |
| | ▪ Instructor of Parametric Design in (MSc 1, Q1, Q3) Bucky Lab Design CAD (AR1AE015) |

Master of Science in Architecture, Urbanism, and Building Sciences/Architecture

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|-----------|---|
| 2020-2021 | ▪ Responsible Instructor for Reuse (Configurational Assessment) in Mastermind CRASH AR0108, Chapter |
| 2019-2020 | ▪ Responsible instructor for Reuse (Configurational Assessment) in Mastermind CRASH AR0108, Website |
| 2018-2019 | ▪ Responsible Instructor of Future Models Seminar I, The Why Factory , AR1TWF030 , Q2, Studio Sky City |
| 2017-2018 | ▪ Responsible Instructor of Future Models Seminar II, The Why Factory , AR0078 , Q4, Studio Planet Maker |
| 2011-2012 | ▪ Responsible Instructor of Future Models Seminar I, The Why Factory , AR1TWF030 , Q2, Studio On The Go |
| 2009-2010 | ▪ Instructor of HYPERBODY Workshops & Lectures: The Digital Paradigm (AR3AUE14), MSc3 & MSc1, Q1 |
| | ▪ Lecturer in (M.Arch. 3) Design Methods and Techniques , @ Tehran University of Art, fall 2009 |
| | ▪ Lecturer in (M.Arch. 1) Computer Aided Architectural Design @ Tehran University of Art, fall 2009 |

Master of Science in Geomatics

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| 2017-2018 | ▪ Responsible Instructor of [Procedural] 3D Modelling of Built Environment in (MSc 2, Q3) GEO1004 |
| 2016-2017 | ▪ Responsible Instructor of [Procedural] 3D Modelling of Built Environment in (MSc 2, Q3) GEO1004 |
| 2015-2016 | ▪ Responsible Instructor of [Procedural] 3D Modelling of Built Environment in (MSc 2, Q3) GEO1004 |
| 2014-2015 | ▪ Instructor of [Procedural] 3D Modelling of Built Environment in (MSc 2, Q3) (GEO1004) |
| 2013-2014 | ▪ Instructor of [Procedural] 3D Modelling of Built Environment in (MSc 2, Q3) (GEO1004) |

Minor Spatial Computing in Architectural Design

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| 2020-2021 | ▪ Studio Director of Minor Spatial Computing Design Studio 3.0 [GIT] BK-MI-197-18/ BK7083 [video] |
| 2019-2020 | ▪ Studio Director of Minor Spatial Computing Design Studio 2.0 [GIT] BK-MI-197-18/ BK7083 [video] |
| 2018-2019 | ▪ Studio Director of Minor Spatial Computing Design Studio 1.0 [GIT] BK-MI-197-18/ BK7083 |

Bachelor of Science in Architecture, Urbanism, and Building Sciences

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| 2020-2021 | ▪ Lecturer in Overdracht en Vorm 3 Parametrisch Ontwerpen en -Optimalisatie BK3OV3 [Lecture] |
| 2019-2020 | ▪ Lecturer in Overdracht en Vorm 3 Parametrisch Ontwerpen en -Optimalisatie BK3OV3 |
| 2018-2019 | ▪ Lecturer in Representation, Visualization and Form 3 Performative Design Computation BK3OV3 |
| 2016-2017 | ▪ Instructor of Representation, Visualization and Form 3 Performative Design Computation BK3OV3 |
| 2008-2009 | ▪ Instructor of BSc Architectural Design Studio (1, 2, 3) @ Tehran University of Art, fall & spring 2008, spring 2009 |

Bachelor of Science in Electrical Engineering, Major in Control Systems Engineering

- 2004-2005 | Teaching Assistant in **Industrial Control** (B.Sc. 4), spring 2004 at KNTU
- 2003-2004 | Teaching Assistant in **Control Theory & Linear Control Systems** (B.Sc. 4), fall 2003 at KNTU

Thesis Supervision

PhD in Architectural Engineering & Technology

- 2021-2024 | PhD Candidate of Design Decision Support Systems, *Ir. Shervin Azadi* (starting in Oct 2021), **Spatial Decision Support Systems in Digital Twins**, @TU/e, Urbanism and Urban Architecture
- 2021-2024 | PhD Candidate of Health in Architecture and Built Environment, *Zhou Jia*, **Spatial Quality Assessment of Hospitals**, started in 2020
- 2019-2022 | PhD Candidate of Heritage & Values, *Ir. Nan Bai* (started in 2019), **Heritage Planning and Inclusiveness, a Social Network Analysis Perspective**, Go-No Go examination passed, WIP
- 2017-2022 | PhD Candidate of Design Informatics *Ir. Cemre Çubukçuoğlu* (started in 2017), **Computational Methods for Topological Design and Optimization of Hospital Layout**, Go-No Go examination passed, WIP
- 2020-2022 | Visiting PhD Student, *Ms. Federica Romagnoli*, Sapienza University of Rome, **Computational Design Approaches for Home Retrofitting for Home Healthcare**, research residence 01/03/2021-01/09/2021
- 2020-2021 | Visiting PhD Student, *Ms. Deniz Erdem Okumuş*, Istanbul Technical University, **Computational Design Approaches for Mitigating the Urban Heat Island Effects**, 16/09/2020-16/09/2021s

Master of Science in Architecture, Urbanism, and Building Sciences/Building Technology

- 2020-2021 | *Anastasia Florou*, [Generative Solar Climatic Design](#), 1st mentor, **Cum Laude**
- 2020-2021 | *Aditya P. Soman*, [A Digital Game for Multi-Actor Housing Design](#), 1st mentor, **Cum Laude**
- 2020-2021 | *Selina Bitting*, [Automated Modular Shell Design using Discrete Blocks](#), 1st mentor, **Cum Laude**
- 2020-2021 | *Beza Z. Bekele*, [Gamification of Participatory Design of Housing Complexes](#), 1st mentor
- 2020-2021 | *Timmo de Haas*, Mass Customization of Housing Infill Designs, 2nd mentor
- 2020-2021 | *Max Ketelaar*, Generative Design of Buildings using Operations Research, 1st mentor, WIP, due in November 2021
- 2019-2020 | *Rick van Dijk*, [Topology optimization as architectural form finding](#), 1st mentor, **Cum Laude**
- 2019-2020 | *David den Ouden*, [Generating a Facility Layout Using the Gradient Descent Approach](#), 1st mentor **Cum Laude**
- 2019-2020 | *Konstantina Chouliara*, [Cochleas: a methodology to convert an existing layout into a residential one](#)
- 2019-2020 | *Lincheng Jiang*, [A Computational Method for Generating Floor Plans for Nursing Homes](#)
- 2018-2019 | *Okan Turkcan*, [Early-Stage Design Optimization of Naturally Ventilated Terminals](#), 1st mentor, **Cum Laude**
- 2018-2019 | *Ivan Avdic*, [Bio-Inspired 3D Topology Optimization for Architectural Design](#), 1st mentor, **Cum Laude**
- 2018-2019 | *Idil Gumruk*, [A computational approach for renewable architecture](#), 1st mentor
- 2018-2019 | *Thomas van Loon*, [Subdivision and approximation of free-form steel structures](#), 1st mentor
- 2017-2018 | *Michael Cobb*, [Investigating Principal Stress Lines: Optimization of Grid-shell Structures](#), 2nd mentor
- 2016-2017 | *Duc Ngo*, [Towards A New Tensegrity System](#), 2nd mentor

Master of Science in Architecture, Urbanism, and Building Sciences/Architecture

- 2021-2022 | *Leticija Petrova*, A generative design system for mass-customization of wooden prefab housing, **WIP**
- 2019-2020 | *Jacob Wysocki*, [A Modular Design Method for Housing Configuration](#), research mentor
- 2018-2019 | *Yannick Macken*, Automated Architectural Layout using dynamic relaxation, research mentor, **Cum Laude**
- 2012-2013 | *Samaneh Rezvani*, @Politecnico di Milano, [An Interactive Computational Methodology for Space Layout using Space Syntax](#), 2nd mentor

Master of Science in Sustainable Energy Technology/Solar Energy

- 2020-2021 | *Karthick Ganapathi Subramanian*, [Opto-Geometric Modelling of Complex Urban Landscapes](#), 2nd mentor
- 2019-2020 | *Dennis Wilmink*, [Invisible PV on Monumental Buildings](#), Examiner
- 2019-2020 | *Ruben Cardose*, [Irradiance simulation of PV system in urban environments](#), Examiner

Master of Science in Geomatics

- 2021-2022 | *Max van Schendel*, SLAM and Operational Intelligence for Special Ops Teams in Law Enforcement, **WIP**, 1st mentor

- 2020-2021 | ■ *MSc GIMA, Yuan Chen, [Modelling wastewater quantity and quality in Mexico -- using an agent-based model](#), Examiner.*
- 2018-2019 | ■ *Ioanna Tsakalakidou, [Assignment of walking trips to pedestrian network in the context of the 4-steps travel demand model](#), 1st mentor*
- 2017-2018 | ■ *Ioanna Micha, [Design and Evaluate the OGC Web Services Architecture of a Geohazard analysis tool](#), 3rd mentor*
- 2017-2018 | ■ *Kotryna Valeckaitė, sponsored by ARUP, [Design and Implementation Spatial Decision Support System](#), graduated **Cum Laude**, 1st mentor.*
- 2016-2017 | ■ *Raphael Sulzer, sponsored by ARUP, [A Machine-Learning process based on topological shape recognition](#), graduated **Cum Laude**, 1st mentor.*
- 2016-2017 | ■ *Fanny Bot, [Indoor Localization using Spectral Graph Theory](#), 2nd mentor*
- 2016-2017 | ■ *Oscar Willems, [Exploring a pure landmark-based approach for indoor localisation](#), 3rd mentor*
- 2015-2016 | ■ *Matthijs Bon, [An advanced prospecting method for assessing the value of urban cable mines](#), 3rd mentor*
- 2015-2016 | ■ *Rusne Sileryte, [Analysis of Urban Space Networks for Recreational Purposes based on Mobile Sports Tracking Application Data](#), **Cum Laude**, 2nd mentor*
- 2014-2015 | ■ *Marco Lam, [Creating the Medial Axis Transform for billions of LiDAR points](#), 3rd mentor*
- 2014-2015 | ■ *Damien Mulders, [Automatic repair of geometrically invalid 3D City Building models using voxes](#), 3rd mentor*
- 2014-2015 | ■ *Kaixuan Zhou, [Exploring Regularities for Facade Reconstruction from Point Clouds](#), 3rd mentor*
- 2014-2015 | ■ *Eva van der Laan, [An indoor positioning method using Bluetooth Low Energy Beacons](#), 3rd mentor*
- 2014-2015 | ■ *Xu Weilin, [An indoor positioning method using WiFi routers](#), 3rd mentor*

Honours Programme Master Architecture and the Built Environment

- 2021-2022 | ■ *Maartje Damen, Honours, Building Technology, Solar Energy Potential Analysis at Scale, [WIP](#)*
- 2017-2018 | ■ *Karim Daw, Honours, Architecture, Paper: [Computational Design & Optimization of Adobe Shell Structures](#)*
- 2017-2018 | ■ *Shervin Azadi, Honours, Architecture, Lecture: [Computational Design & Optimization of Adobe Shell Structures](#) **Cum Laude***

International Workshop Instruction

- 2015 | ■ *[Cityscape Configuration](#) in eCAADe 2015, @ **TU Wien**, together with Philip Belesky (RMIT, AU)*
- 2014 | ■ *[Generative Syntax in Architecture and Urban Design](#) in AAG 2014 @ **UCL** in together with Richard Schaffranek (TU Wien, AT)*
- 2013 | ■ *[URBAN DATASCOPE](#), with Dr. Jose Nuno Beirao (TU Lisbon, PT) and Dr. Ahu Sokmenoglu (Istanbul Technical University, TK) in eCAADe 2013, @TU Delft Sep 2013*
- 2013 | ■ *[Tarlabasi DATASCOPE](#) with Dr. Jose Nuno Beirao (TU Lisbon, PT) and Dr. Ahu Sokmenoglu (Istanbul Technical University, TK) @ Istanbul Technical University, May 2013*
- 2012 | ■ *Tutor of computational urban design in [Measuring Urbanity](#) Seminar & Workshops @ **TU Lisbon**, May 2012*

Research Funding

- 2020-2021 | ■ ***OSDB M³**, [Open-Source Digital Building Mass-Customization, a Makers' Marketplace](#) Nederlandse Organisatie voor Wetenschappelijk Onderzoek (The Hague, Zuid Holland), [NWO/NWA ORC](#), two-stage submission, accepted in the first stage, 2nd stage submission due by Oct 7, 2021. Work-Package Leader Digitalization and Industrialization of Housing ~10M€*
- 2020-2021 | ■ ***Solaris**: a mathematical topology optimization method for solar form finding, [NWO Open Competition Domain Science – XS 2021](#), submitted, under review, 50K€*
- 2020-2021 | ■ ***[Open] D⁴ ABE**, [\[Open-Source\] Digital Design Didactics in Architecture and Built Environment](#), Rijksoverheid (The Hague, Zuid Holland), [Studievoorschotmiddelen](#), (2020/10/01-2022/01/01), 50K€*
- 2020-2021 | ■ ***EquiCity**, [Digital Serious Gaming for Participatory City Planning](#), Nederlandse Organisatie voor Wetenschappelijk Onderzoek (The Hague, Zuid Holland), [NWA Idea Gen](#), [ABV06G](#), (2020/10/01-2022/01/01), 50K€*
- 2019-2020 | ■ ***GoDesign**, [A Participatory Generative Design Game for Spatial Design](#), Ministerie van Onderwijs, Cultuur en Wetenschap (The Hague, Zuid Holland), [Ontwerpkracht](#), [AUT03G](#), (2019/05-2021/05), 30K€*
- 2018-2019 | ■ ***DynaBox**, [Digital Design](#), KVWS (Rijssen), Contract (2019/04-2019/10), 11K€*
- 2017-2018 | ■ ***SpectraLearning**, [Shape Recognition](#), Arup BV (Amsterdam), Contract (2017/10-2018/10), 7K€*
- 2014-2015 | ■ ***PanoramaMesh**, [Procedural 3D Modelling](#), Cylomeida BV (Zaltbommel), Contract (14/07-14/09), 3K€*