

Shuyan Xiong

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EDUCATION

ETH Zurich Chair of Sustainable Construction Doctor Institute of Construction and Infrastructure Management The focus of her research lies in the material sourcing description for digitally-enabled circular economy, which aims to develop a systems approach for informing the design of sustainable housing with circular material flows in urban areas.	Jan 2022 - Jun 2025 Zurich
ETH Zurich Integrated Building Systems Master Architecture Awards: <i>Birkigt Scholarship Award (2019-2020)</i> Courses: <i>Structural Risk Analysis, Big Data, Building Systems, Technology and Innovation Management, Project Management, Advanced Computational Design, Energy and Climate Systems</i>	Sep 2018 - Feb 2021 Zurich
McGill University Honours Mechanical Engineering Bachelor Awards: Distinction (2018); The Rio Tinto Awards (2017) ; Prof. WM Scholarship, JHA Scholarship (2015) Courses: Advanced PDE, numerical methods in mechanical engineering, engineering economics, force/thermal/fluid mechanics, heat conduction, probability theory, control systems	Sep 2014 - Jul 2018 Montreal

LANGUAGES & SKILLS

- Skills:** Microsoft Office, Matlab, Python, Solidworks, Rhinoceros (Grasshopper), AutoCAD, CATIA, Photoshop/Illustrator, SQL, C, ANSYS, Abaqus, EnergyPlus, DAYSIM, MasterCAM, SketchUp, HTML, Sony Vegas, Unity
- Languages:** English (fluent), Chinese (native), French (intermediate), German (intermediate), Japanese (beginner)

PROFESSIONAL EXPERIENCE

Arctron Shanghai 华建数创 (上海) 科技有限公司 Solutions Engineer <ul style="list-style-type: none">Provide solutions and training at the level of smart buildings and smart citiesMain projects involved: Nanjing Smart Building, Shanghai Fengxian District, Shanghai Airport Authority, Chengdu Yuhua District, North Bund CIM platform construction	Apr 2021 - Dec 2021
Drees & Sommer Shanghai MEP Intern <ul style="list-style-type: none">Participated in the secondary mechanical and electrical project of Amazon Shanghai Office and designed HVAC systemsPerformed simulations with Grasshopper and improved the efficiency of green building evaluation	Jan 2021 - Apr 2021
ETH Zurich Lab Assistant Digital Building Technologies <ul style="list-style-type: none">Advised 30+ FDM printing projects both within and outside of ETHZDesigned and accomplished over 35 3D-printing projects on various scales with over 15 printing materialsManaged over 10 FDM printers' routine maintenance, parts' fixation	Oct 2018 - Jan 2021
Architects & Engineers Co. LTD of Southeast University Intern Structural Analysis <ul style="list-style-type: none">Performed structural analysis for Wenzhou Memorial Arch and designed geometrical dimension of building elementDesigned the beam and pile layout plan for Sci. & Tech. building, Yangzhou University according to building code	Jul 2018 - Aug 2018 Nanjing, China

PROJECTS

Optimizing Infill-Structures For High-Performance 3D Printed Building Facades Master Thesis at DBT & A/S Group, ETHZ <ul style="list-style-type: none">Researched on optimizing infill geometries regarding both structural and thermal performance for 3D printed building facadesDeveloped generic optimization loop for geometries developed by volumetric modelling in Grasshopper	Jul 2020 - Jan 2021
Vacuum Compatible 3D Printed Structures for Building Engineering Applications Master Project at A/S Group, ETHZ <ul style="list-style-type: none">Researched on vacuum compatibility study of FDM printing parametersDesigned and prepared 44 parametrized samples and experiment environmentEvaluated and discovered the optimal-value model from analysis using D-optimal method	Oct 2019 - Feb 2020
Customized 3D-Printed Insole Design with Nonhomogeneous Lattice Structure Bachelor Project at Fiona Zhao's Lab, McGill University <ul style="list-style-type: none">Designed and manufactured heterogeneous lattice-structured customized sole, including modelling in CATIA, simulation with ANSYS and topology optimization in Grasshopper, the result was successfully validated with a 3D printed prototype	Sep 2017 - Apr 2018

LEADERSHIP EXPERIENCE

ACSSZ (Association of Chinese Students and Scholars in Zurich) Vice President <ul style="list-style-type: none">Managed the social media account and increased the visibility of ACSSZ by increasing followers from 3000+ to 5000+ within 1 year and wrote 50+ promotional articlesIn charge of financial communication and administration work with clients, administered CHF 4000+ budget for 15+ events	Sep 2018 - Present Zurich, Switzerland
McGill Institute for Aerospace Engineering Student Executive Team VP Media <ul style="list-style-type: none">In charge of media work, including designing promotional materials, i.e. posters, brochures, newsletters for all MIAE events and received positive feedback from attendeeOrganized events including NRC Tour and ÉNA engine workshop as a team lead	Mar 2017 - Apr 2018 Montreal, Canada