Gene Ting-Chun Kao

PERSONAL DETAILS:

Address: Stefano-Franscini-Platz 1, HIB E 44, 8093 Zurich, Switzerland

Contacts: phone: +41 77 979 0661 | skype: kao.gene
emails: kao.gene@gmail.com | kao@arch.ethz.ch
linkedin: kaogene | github: GeneKao

Info: date of birth: 18.02.1990 | Nationality: Taiwan

Website: www.geneatcg.com | portfolio: www.geneatcg.com/portfolio

EDUCATION:

2018 - present: **Dr.sc. ETH, Architecture and Structural Design**
Institute of Technology in Architecture, ETH Zurich, Switzerland

Focusing on computational geometry, digital fabrication, numerical optimisation.

2019 - 2020: **CAS ETH in Computer Science**
ETH Zurich, Switzerland

Major in Visual Computing

2014 - 2016: **M.Sc. (Dipl.Ing.), Integrated Technologies and Architectural Design Research**
Stuttgart University, Germany

Multidisciplinary master studies and research of computational design, structural engineering, robotics, digital fabrication and construction.

2008 - 2013: **Bachelor of Architecture (B.Arch.), Distinction**
Tamkang University, Taiwan

Best thesis project award.

WORK EXPERIENCE

09/2018 - present: **PhD Researcher**
Block Rearch Group, ETH Zurich / NCCR Digital Fabrication, Switzerland

01/2019: **Teaching Assistant**
Massachusetts Institute of Technology, Shanghai

02/2017 - 07/2018: **Software Developer / Project Engineer**
Ed. Zublin AG / Strabag AG, Technical Head Office, Germany

Worked on full-stack software solutions at the company's R&D division (Digitalisation and Software Engineering, Zentrale Technik) to design, develop, test, deploy, and maintain both the client-side applications and the backend services to support various projects.

08/2016 - 01/2017: **Student Job (Software Developement)**
Ed. Zublin AG / Strabag AG, Technical Head Office, Germany

01/2017: **Workshop Lecturer**
Tamkang University, Taiwan C# programming, mesh processing, Leopard plugin development for Rhino/Grasshopper.

03/2016: **Workshop Teaching Assistant**
Stuttgart University, Germany

C# scripting and plugin development for Rhino/Grasshopper.

07/2013 - 08/2014: **Research and Teaching Assistant**
Tamkang University, Taiwan

Focused on digital fabrication & computational geometry research, worked as TA in Computer Programming in Architectural Design and TKU digital fabrication lab technical support. Designed, manufacture and build Butterfly Effect Pavilion for the I-Lan Green Expo 2014.

CETIFICATES:

07/2018: **Artificial Intelligence Nanodegree**, *Udacity*

05/2018: **Full Stack Web Developer Nanodegree**, *Udacity*

11/2017: **Deep Learning Nanodegree**, *Udacity*

05/2016: **Basic Robot Programming**, *KUKA Robotics*

SKILLS

Computer: **Programming Languages:**
Python, Java, C++, C#, JavaScript, HTML/CSS, MATLAB, Bash, Latex

Programs:
Adobe Create Suite, Rhinoceros3D, Blender

Operating Systems:
Unix/Linux, Emacs, Windows

Others skills:
Git, Org-mode, Databases, Full-stack web development, Mathemacial opitimisation, Machine learning, Algorithms and data structures, Software developement, Computer Graphics, Computer Vision Computational Design, Digital fabrication, Graphics design, 3D printing, Rendering, 3D modeling, and Problem solving.

Language: **English:** Full professional proficiency

Chinese: Native

German: Basic

PUBLICATIONS

Proceedings: Kao, G.T., Korner, A., Sonntag, D., Nguyen, L., Menges, A., Knippers, J., 2017. Assembly-aware design of masonry shell structures: a computational approach, in: Proceedings of IASS Annual Symposia, International Association for Shell and Spatial Structures (IASS). pp. 1–10.

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