

Yanran Guan (管焱然)

<https://isaacguan.github.io/>

Email: yanran.guan@carleton.ca

Mobile: +1-647-987-8698

EDUCATION

- **Carleton University** Ottawa, ON, Canada
Ph.D. in Computer Science Sept. 2020 – Present
M.C.S. in Computer Science Sept. 2017 – Dec. 2019
- **Donghua University** Shanghai, China
B.E. in Computer Science and Technology Sept. 2013 – Jun. 2017
- **Shanghai International Studies University** Shanghai, China
B.A. (Minor) in French Language Sept. 2014 – Jun. 2017

EXPERIENCE

- **Carleton University** Ottawa, ON, Canada
Research Assistant Sept. 2017 – Present
 - Researched on functionality analysis for evaluating and modeling hybrid shapes.
 - Researched on shape synthesis and generation problems using [deep generative models](#).
 - Researched on the controllability problem of latent spaces learned by deep generative models via a semantics-guided exploration.Teaching Assistant Sept. 2018 – Present
 - Advise students in office hours and grade assignments, exams, and final projects.
- **Huawei Technologies Canada** Markham, ON, Canada
Associate Researcher Jan. 2021 – Present
 - Research on learning implicit neural representations for the surface parameterization of 3D objects.
 - Research on manipulating and rendering 3D surfaces defined by [signed distance functions](#).
- **Carleton Immersive Media Studio** Ottawa, ON, Canada
Research Assistant Jan. 2020 – Aug. 2020
 - Researched on [segmentation problems of point clouds](#), including semantic segmentation and instance segmentation.
 - Developed algorithms and tools to segment and classify objects valued as heritage assets, to assist the creation of the heritage building information model of the [Centre Block](#) in Ottawa.
- **Canadian Food Inspection Agency** Ottawa, ON, Canada
Junior Data Scientist May. 2018 – Dec. 2019
 - Developed algorithms and tools for risk analysis and compliance prediction to enhance the effectiveness of the agency's oversight activities.

SERVICE

- **Invited Reviewer**
 - KSI Transactions on Internet and Information Systems (TIIS) 2020
 - ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games (I3D) 2020
 - International Conference on Systems and Informatics (ICSAI) 2019

TEACHING

- **Teaching Assistant**

COMP4102A Computer Vision	Winter 2021
COMP3005B Database Management Systems	Fall 2020, Fall 2019
COMP4003A Transaction Processing Systems	Fall 2019
COMP4501A Advanced Facilities for Real-Time Games	Winter 2019
COMP2406A Fundamentals of Web Applications	Fall 2018

PUBLICATIONS

1. **Yanran Guan**, Han Liu, Kun Liu, Kangxue Yin, Ruizhen Hu, Oliver van Kaick, Yan Zhang, Ersin Yumer, Nathan Carr, Radomir Mech, and Hao Zhang. FAME: 3D Shape Generation via Functionality-Aware Model Evolution. *IEEE Transactions on Visualization and Computer Graphics*, early access.
arXiv preprint: [arXiv:2005.04464](https://arxiv.org/abs/2005.04464)
DOI: [10.1109/tvcg.2020.3029759](https://doi.org/10.1109/tvcg.2020.3029759)
2. Tansin Jahan*, **Yanran Guan***, and Oliver van Kaick. Semantics-Guided Latent Space Exploration for Shape Generation. *Computer Graphics Forum*, 40(2):115–126, 2021. (*co-first authors)
DOI: [10.1111/cgf.142619](https://doi.org/10.1111/cgf.142619)
3. **Yanran Guan**, Tansin Jahan, and Oliver van Kaick. Generalized Autoencoder for Volumetric Shape Generation. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops*, pages 1082–1088, 2020.
DOI: [10.1109/cvprw50498.2020.00142](https://doi.org/10.1109/cvprw50498.2020.00142)
4. **Yanran Guan**. 3D Functionality Analysis for Shape Modeling via Partial Matching. Master’s thesis, Carleton University, 2019.
DOI: [10.22215/etd/2020-14050](https://doi.org/10.22215/etd/2020-14050)
5. Youqing Guan, Ke Zhang, and **Yanran Guan**. STCP: Simple Transaction Commit Protocol for Wireless Sensor Networks. In *Proceedings of the International Conference on Systems and Informatics*, pages 1022–1028, 2019.
DOI: [10.1109/icsai48974.2019.9010100](https://doi.org/10.1109/icsai48974.2019.9010100)
6. **Yanran Guan**, Oliver van Kaick, and Youqing Guan. Research and Implementation of Triangle Mesh Parameterization Method Based on Barycentric Mapping (in Chinese). *Journal of Beijing University of Posts and Telecommunications*, 42(5):83–90, 2019.
DOI: [10.13190/j.jbupt.2018-266](https://doi.org/10.13190/j.jbupt.2018-266)
7. **Yanran Guan** and Youqing Guan. Research and Application of Affine Transformation Based on OpenCV (in Chinese). *Computer Technology and Development*, 26(12):58–63, 2016.
DOI: [10.3969/j.issn.1673-629x.2016.12.013](https://doi.org/10.3969/j.issn.1673-629x.2016.12.013)

OTHER INTERESTS

- **Literature:** I like reading and writing. I was the co-translator of the [Chinese edition of *The Detour*](#) (*De omweg* in Dutch and the English edition is known as *Ten White Geese*), novel by the Dutch novelist [Gerbrand Bakker](#) (translated from English to Chinese).
- **Chinese Calligraphy:** I am a member of the Jiangsu Association for Young Calligraphers and the Nanjing Association for Young Calligraphers.
- **Folk Music:** I play folk songs of Russia and Xinjiang, China.
- **Traveling:** I love traveling, especially long distance biking trips. I used to bike over 1000 kilometers from Shanghai to Xiamen in China and [here](#) is my blog post about this trip.