

Wenxian Guo

Game Engine Engineer in Tencent Games
email:wxguojlu@hotmail.com, github:<https://github.com/WXGopher>

Education	M.Sc. in Computer Science , University of Saskatchewan, Canada, Jul. 2018 Concentrations in high-performance scientific computing Advisor: Dr. Raymond Spiteri	
	B.Sc. in Computational Mathematics , Jilin University, China, Jul. 2015 Major GPA: 85/100, ranking: 17%.	
Skillset	<u>Languages:</u>	C++, Python
	<u>Experience and knowledge:</u>	game engine development Unreal Engine 4; physically-based animation anatomical modelling and continuum mechanics; numerical analysis numerical ODEs, numerical PDEs, and numerical linear algebra; high-performance computing programming on shared or distributed memory machines; computer vision image processing, camera calibration, and 3D reconstruction.
Publications	<i>R. Spiteri, W. Guo, Efficient Partitioned Numerical Integrators for Myocardial Cell Models</i> Paper in Elsevier Applied Mathematics and Computation DOI: https://doi.org/10.1016/j.amc.2019.124738	
	<i>W. Guo, Efficient Cardiac Simulations Using the Runge–Kutta–Chebyshev Method</i> Master thesis, https://harvest.usask.ca/handle/10388/8346	
	<i>F. Cooper, et al., Chaste: Cancer, Heart and Soft Tissue Environment</i> Paper in Journal of Open Source Software DOI: https://doi.org/10.21105/joss.01848	
	<i>D. Dinev, W. Guo, P. Kadlec, L. Kavan, Discovering Personalized Muscle Anatomy</i> Paper submitted to Elsevier Computers & Graphics	
Experience	Game Engine Engineer in Technology Center, Morefun Studio Group Tencent Games, China Apr.2020—Present <ul style="list-style-type: none">Focus on research and implementation of advanced game engine technologies (primarily in Unreal Engine 4).	
	Research Assistant in State Key Lab of CAD&CG Zhejiang University, China Sep.2019—Mar.2020 <ul style="list-style-type: none">Worked on physically-based hair simulation (collaborating with Dr. Raymond (Yun) Fei from <i>Tencent America</i>);Skills involved: C++ programming, physically-based animation;Advisor: Dr. Youyi Zheng	

Research Assistant in Computer Graphics Lab

University of Utah, U.S.A.

Oct. 2018—Aug. 2019

- Involved in implementing algorithms to optimize and visualize personalized facial muscles from scanned data;
- Implemented an evaluator to quantify stereo camera calibration quality;
- **Skills involved:** C++ programming, physically-based anatomical modelling, stereo camera calibration, image processing;
- **Advisor:** Dr. Ladislav Kavan.

Research Assistant in Core Computing Group

National Hydrology Research Centre Canada

Apr. 2018—Sep. 2018

- Benchmarked high-performance simulation toolkit using *Intel VTune* and offered improvement suggestions;
- **Skills involved** high-performance computing, C++, performance test;
- **Advisor:** Dr. Raymond Spiteri.

Python Software Developer in PLM Software Group

Siemens Canada

Sep. 2017—Mar. 2018

- Improved and implemented new UI experience;
- Optimized regression test suite by implementing a monitor to guard the test;
- **Skills involved:** Python, regression test.

Java Software Developer, (MITACS Internship)

Western Heritage Services, Inc. Canada

Aug. 2016—Jan. 2017

- Core developer of a commercial scheduling software;
- **Skills involved:** Java development;
- **Advisor:** Dr. Zhangbao (Michael) Ma.

Research Assistant in Numerical Simulation Research Lab

University of Saskatchewan, Canada

Sep. 2015—Nov. 2017

- Discovered, implemented, and proved algorithms for more efficient time-integration of myocardial cell models;
- **Skills involved:** C++, numerical analysis, high-performance computing;
- **Advisor:** Dr. Raymond Spiteri.

Teaching Assistant in Department of Computer Science

University of Saskatchewan, Canada

Sep. 2015—May. 2017

- Tutored several computer science courses: data structure and algorithms, mathematical logic, and artificial intelligence.

Miscellaneous

- I'm a huge fan of computer-animated movies;
- I was one of the original organizers of GAMES: Graphics And Mixed Environment Seminar, the *largest* non-profit academic seminar in China that gathers graphics researchers to exchange ideas and foster research collaborations;
- I conducted writing the *2015 Jilin University Apply Book*, a book aiming at helping students to apply to graduate schools and study abroad;
- For over four years, I served as a BBS moderator for gter.net, the Chinese *largest* BBS helping students to prepare for English test and to apply to foreign graduate schools.
- For over three years, I served as an organizer and a presenter for the *interdisciplinary salon at the Jilin University*, a discussion group for students to exchange their knowledge and thoughts.