

## Wenxian Guo

Research assistant in State Key Lab of CAD&CG, Zhejiang University, China  
email:wxguojlu@gmail.com, github:<https://github.com/WXGopher>

Objective	Applying to 2020 fall Ph.D. admission in physically-based animation.	
Education	<b>M.Sc. in Computer Science</b> , University of Saskatchewan, Canada, Nov. 2017 Concentrations in high-performance scientific computing Advisor: Dr. Raymond Spiteri	
	<b>B.Sc. in Computational Mathematics</b> , Jilin University, China, Jul. 2015 Major GPA: 85/100, ranking: 17%.	
Skillset	<u>Languages:</u> <u>Softwares:</u> <u>Experience and knowledge:</u>	Python, C++, MATLAB, L <sup>A</sup> T <sub>E</sub> X, Bash, Java OpenMP, MPICH, Eigen, Chaste numerical analysis (numerical ODEs, numerical PDEs, and numerical linear algebra), high-performance computing (programming on shared or distributed memory machines), physically-based animation (anatomical modelling and fluid mechanics), 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 <i>accepted by</i> Elsevier Applied Mathematics and Computation Copy available upon request	
	<i>W. Guo, Efficient Cardiac Simulations Using the Runge–Kutta–Chebyshev Method</i> Master thesis, <a href="https://harvest.usask.ca/handle/10388/8346">https://harvest.usask.ca/handle/10388/8346</a>	
	<i>D. Dinev, W. Guo, P. Kadlecěk, L. Kavan, Discovering Personalized Muscle Anatomy</i> Paper <i>in preparation</i> to ACM Transactions on Graphics	
	<i>F. Cooper, et al., Chaste: Cancer, Heart and Soft Tissue Environment</i> Paper <i>submitted to</i> Journal of Open Source Software	
Experience	<b>Research Assistant in State Key Lab of CAD&amp;CG</b> Zhejiang University, China <span style="float:right">Sep.2019—Present</span> <ul style="list-style-type: none"><li>• Currently working on physically-based cloth simulation;</li><li>• <b>Skills involved:</b> C++ programming, physically-based animation;</li><li>• <b>Advisor:</b> Dr. Youyi Zheng.</li></ul>	
	<b>Research Assistant in Computer Graphics Lab</b> University of Utah, U.S.A. <span style="float:right">Oct. 2018—Aug. 2019</span> <ul style="list-style-type: none"><li>• Involved in implementing algorithms to optimize and visualize personalized facial muscles from scanned data;</li><li>• Implemented an evaluator to quantify stereo camera calibration quality;</li><li>• <b>Skills involved:</b> C++ programming, physically-based anatomical modelling, stereo camera calibration, image processing;</li><li>• <b>Advisor:</b> Dr. Ladislav Kavan.</li></ul>	

### 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

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.

### Fundings

- Research assistantship, Zhejiang University Sep. 2019—Present
- Research assistantship, University of Utah Oct. 2018—Aug. 2019
- MITACS-accelerate internship, MITACS Aug. 2016—Jan. 2017
- Research assistantship, University of Saskatchewan Sep. 2015—Nov. 2017
- Teaching assistantship, University of Saskatchewan Sep. 2015—May. 2017

### Miscellaneous

- I'm a huge fan of computer-animated movies;
- I was one of the original organizers of GraphiCon, a discussion group for Chinese graphics researchers that lately turns into GAMES: Graphics And Mixed Environment Seminar;
- 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.