

# Curriculum Vitae

## Dr. Sen Wang

Tel: (+1) 587-568-6538 | Email: [sen9@ualberta.ca](mailto:sen9@ualberta.ca)  
URL: <https://sites.google.com/site/senwang1312home/>

### Research Area

---

Computer Vision, Robotics, Computer Graphics, Deep Learning

### Education and Professional Experience

---

- Nov. 2019 – present: Postdoctoral Fellow, University of Alberta & University of Guelph (Advisor: Dr. [Li CHENG](#) and Dr. [Minglun GONG](#))
- Sep. 2011 – Nov. 2019: Ph.D in Mechatronic Engineering, Northwestern Polytechnical University, China (Advisor: Dr. Runxiao WANG)
  - General GPA: 89.26/100
- May 2017.5 - Aug. 2017.8: Research Intern, Smart Hardware Unit (SHU), Baidu. (Mentor & Manager: Dr. [Ruigang YANG](#))
- Mar. 2015 - Oct. 2016: Joint Ph.D student at Gravity Lab, University of Kentucky, USA. (Advisor: Dr. [Ruigang YANG](#))
- May 2013 - Oct. 2013: Visiting Student at LISSI Laboratory, UPEC, France (Advisor: Dr. [Kurosh MADANI](#))
- Sep. 2007 – Jul. 2011: Bachelor in Industrial Engineering, Northwestern Polytechnical University, China.  
General GPA: 87.25/100, Rank: 2/24

### Publications

---

1. Xinxin Zuo, **Sen Wang**, Jiangbin Zheng, Zhigeng Pan, Ruigang Yang. Detailed Surface Geometry and Albedo Recovery from RGB-D Video Under Natural Illumination. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2019. (Accepted) [10.1109/TPAMI.2019.2955459](https://doi.org/10.1109/TPAMI.2019.2955459)
2. Hao Zhu, Xinxin Zuo, **Sen Wang**, Xun Cao, Ruigang Yang. Detailed Human Shape Estimation from a Single Image by Hierarchical Mesh Deformation. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019:4491-4500. (Oral)
3. **Sen Wang**, Xinxin Zuo, Runxiao Wang, Ruigang Yang. A Generative Human-Robot Motion Retargeting Approach using a Single RGBD Sensor. *IEEE Access*, 2019: 51499-51512.

4. **Sen Wang**, Runxiao Wang, Xinxin Zuo, Weiwei Yu. Real-Time Artifact Compensation for Depth Images of Multi-frequency ToF. *Journal of Northwestern Polytechnical University*, 2019, 37(1):152-159. (In Chinese)
5. **Sen Wang\***, Xinxin Zuo\*, Chao Du, Runxiao Wang, Jiangbin Zheng, Ruigang Yang. Dynamic Non-Rigid Objects Reconstruction with a Single RGB-D Sensor. *Sensors*, 2018, 18(3): 886.
6. Xinxin Zuo\*, **Sen Wang\***, Jiangbin Zheng, Ruigang Yang. Detailed Surface Geometry and Albedo Recovery from RGB-D Video Under Natural Illumination. In *IEEE International Conference on Computer Vision (ICCV)*, 2017: 3133-3142.
7. **Sen Wang**, Xinxin Zuo, Runxiao Wang, Fuhua Cheng, Ruigang Yang. A Generative Human-Robot Motion Retargeting Approach using a Single Depth Sensor. In *IEEE International Conference on Robotics and Automation (ICRA)*, 2017: 5369-5376. (Spotlight)
8. Xinxin Zuo, **Sen Wang**, Jiangbin Zheng, Ruigang Yang. High-speed Depth Stream Generation from a Hybrid Camera. In *ACM international conference on Multimedia (ACM MM)*, 2016: 878-887. (Oral)
9. Xinxin Zuo, Chao Du, **Sen Wang**, Jiangbin Zheng, Ruigang Yang. Interactive Visual Hull Refinement for Specular and Transparent Object Surface Reconstruction. In *IEEE International Conference on Computer Vision (ICCV)*, 2015: 2237-2245.
10. Jiangbin Zheng, Xinxin Zuo, Jinchang Ren, **Sen Wang**. Multiple Depth Maps Integration for 3D Reconstruction using Geodesic Graph Cuts. *International Journal of Software Engineering and Knowledge Engineering (IJSEKE)*, 2015, 25(3):473-492.
11. Wentao Zhao, **Sen Wang**, Wei Luo. Locomotion control strategy based on robotic leg of SLIP model during swing phase. *Journal of Computational Information Systems*, 2015, 11(11): 4145-4153.
12. **Sen Wang**, Xinxin Zuo, Weiwei Yu, Runxiao Wang, Kurosh Madani. Towards robotic semantic segmentation of supporting surfaces. In *IEEE International Conference on Computational Intelligence & Communication Technology (CICIT)*, 2015: 775-779.
13. **Sen Wang**, Weiwei Yu, Kurosh Madani, Xinxin Zuo. Reinforcement transfer learning with feature information for robot motion planning. In *2014 International Conference on Advanced Control, Automation and Robotics (ACAR)*, 2014: 265-272.

## **Selected Honors & Awards**

---

- IEEE Student Travel Grant, For *ICRA*, 2017
- First Prize on Higher Education Science & Technology Award in Shaanxi Province, “The technology of intelligent equipment configuration and core components design”, 14E12, 2014
- Excellent Bachelor’s Degree Thesis, NPU, 2011
- Outstanding Graduate Student, NPU, 2011
- Undergraduate Mathematical Contest in Modeling, First Prize, NPU, 2010
- The National Scholarship, 2009
- Excellent Student Scholarship, First Prize, NPU, 2008-2010
- China Undergraduate Advanced Mathematics Contest, Second Prize, Shaanxi competition area, 2008.

## **Skills**

---

- Skillful in MATLAB/C/C++/Python Programming, experienced in several development projects. Handle some basic development function libraries, such as OpenCV, OpenGL and Pytorch.
- Experienced in Webots (a robot simulator) and Khepera III, NAO (two kinds of real robots). Using them in both virtual and real environments. Familiar with ROS Framework.
- Familiar with basic theories and algorithms in computer vision.
- Computer Skills such as GIMP, Adobe Premiere