

Chengjiang Long

Meta Reality Labs
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EDUCATION **Ph.D.**, Computer Science Jan 2012 - Oct 2015
Stevens Institute of Technology, Hoboken, NJ, USA
Thesis: *Collaborative Gaussian Processes for Visual Recognition*
Advisor: Prof. Gang Hua

M.S., Computer Science Sep 2009 - Jun 2011
Wuhan University, Wuhan, Hubei, P.R.China
Thesis: *Transmission: A New Feature for Computer Vision Based Forest Smoke Detection*
Advisor: Prof. Jianhui Zhao

B.S., Computer Science Sep 2005 - Jun 2009
Wuhan University, Wuhan, Hubei, P.R.China
Thesis: *K-Neighborhood Search Based on 3D Scattered Point Cloud and Triangular Mesh Reconstruction*
Advisor: Prof. Jianhui Zhao

RESEARCH INTEREST **Computer Vision, Computer Graphics, Multimedia, Machine Learning, and Artificial Intelligence**

- ▷ *Integration of Human and Machine Intelligence*
- ▷ *Human Sensing from Unconstrained Images and Videos*
- ▷ *Object, Scene Recognition and Segmentation*
- ▷ *Shadow and Illumination Modeling*
- ▷ *Multimodal Fusion, Text-to-Image Generation, and Image/Video Caption*
- ▷ *Style Transfer and Controllable Person Image Synthesis*
- ▷ *Camera Pose Estimation and Relocalization*
- ▷ *Image and Video Recovery and Enhancement*
- ▷ *Explainable Artificial Intelligence*
- ▷ *Personalized Information Retrieval and Recommendation System*
- ▷ *Other Related Applications*

PROFESSIONAL EXPERIENCE **Meta Reality Labs, Burlingame, CA** Dec 2021 - Present
(formerly Facebook Reality Labs)
Research Scientist

JD Tech (JD.COM), Mountain View, CA Jun 2020 - Dec 2021
Principal Scientist/Tech Leader

University at Albany, SUNY, Albany, NY Aug 2018 - May 2020
Adjunct Professor

Kitware Inc., Clifton Park, NY Mar 2017 - Apr 2020
Computer Vision Researcher/Senior R&D Engineer

Rensselaer Polytechnic Institute (RPI), Troy, NY <i>Adjunct Professor</i>	Jan 2018 - May 2018
Kitware Inc., Clifton Park, NY <i>Computer Vision Researcher/R&D Engineer</i>	Feb 2016 - Mar 2017
GE Global Research, Niskayuna, NY <i>Research Intern</i>	Jun 2015 - Aug 2015
NEC Laboratories America, Cupertino, CA <i>Research Intern</i>	May 2013 - Aug 2013

BOOK & BOOK CHAPTERS

- [1] **Chengjiang Long**, Arslan Basharat, Anthony Hoogs. “Video Frame Deletion and Duplication”, in *Multimedia Forensics* (Chapter 13), edited by Husrev Taha Sencar, Luisa Verdoliva, and Nasir Memon, Springer, 2022.

PUBLICATIONS

The following are my **67** co-author journal and conference papers, highlighting **1 TOG, 1 T-PAMI, 1 IJCV, 1 T-IP, 1 T-MM, 1 SIGGRAPH Asia, 7 CVPR, 8 ICCV, 5 AAAI, 1 ACM MM, 1 T-CSVT, 1 PR, 1 CAGD, 3 CGF, 2 WACV, 2 ICME, 1 ACCV and 1 ICTAI** with **39 1st/2nd-author papers**, in which the 2nd authorship indicates the 1st author as my advisors I worked with or as my students/interns/colleagues I closely supervised.

- [1] Zhongyun Bao, **Chengjiang Long**, Gang Fu, Yuanzhen Li, Jiaming Wu, Daquan Liu, and Chunxia Xiao. Deep Image-based Illumination Harmonization. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, New Orleans, Louisiana, June 19-24, 2022. (Acceptance rate: 25%)
- [2] Tiezheng Ma, Yongwei Nie, **Chengjiang Long**, Qing Zhang, and Guiqing Li. Progressively Generating Better Initial Guesses Towards Next Stages for High-Quality Human Motion Prediction. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, New Orleans, Louisiana, June 19-24, 2022. (Acceptance rate: 25%)
- [3] Xiao Lu, Yihong Cao, Sheng Liu, **Chengjiang Long**, Zipei Chen, Xuanyu Zhou, Yimin Yang, and Chunxia Xiao. Video Shadow Detection via Spatio-Temporal Interpolation Consistency Training. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, New Orleans, Louisiana, June 19-24, 2022. (Acceptance rate: 25%)
- [4] Liushuai Shi, Le Wang, **Chengjiang Long**, Sanping Zhou, Fang Zheng, Nanning Zheng, and Gang Hua. Social Interpretable Tree for Pedestrian Trajectory Prediction. *AAAI Conference on Artificial Intelligence (AAAI)*, Vancouver, BC, Canada, Feb 22-Mar 1, 2022. (Acceptance rate: 15%)
- [5] Jinghai Duan, Le Wang, **Chengjiang Long**, Sanping Zhou, Fang Zheng, Liushuai Shi, and Gang Hua. Complementary Attention Gated Network for Pedestrian Trajectory Prediction. *AAAI Conference on Artificial Intelligence (AAAI)*, Vancouver, BC, Canada, Feb 22-Mar 1, 2022. (Acceptance rate: 15%)
- [6] Yu Qiao*, Jincheng Zhu*, **Chengjiang Long**, Zeyao Zhang, Yuxin Wang, Zhenjun Du, and Xin Yang. CPRAL: Collaborative Panoptic-Regional Active Learning for Semantic Segmentation. *AAAI Conference on Artificial Intelligence (AAAI)*, Vancouver, BC, Canada, Feb 22-Mar 1, 2022. (Acceptance rate: 15%)

- [7] Qifeng Lin, **Chengjiang Long**, Jianhui Zhao, Gang Fu, Zhiyong Yuan. DDBN: Dual Detection Branch Network for Semantic Diversity Predictions. *Pattern Recognition (PR)*, Volume 122, 2022. (Accepted. IF: 7.74)
- [8] Fei Fang, Ziqing Li, Fei Luo, **Chengjiang Long**, Shenghong Hu, and Chunxia Xiao. PhraseGAN: Phrase-boost Generative Adversarial Network for Text-to-Image Generation. *IEEE International Conference on Multimedia and Expo (ICME)*, Taipei, Taiwan, July 18-22, 2022. (Acceptance rate: 29%)
- [9] Jiaqi Yu, Yongwei Nie, **Chengjiang Long**, Wenju Xu, Qing Zhang, Guiqing Li. Monte Carlo Denoising via Auxiliary Feature Guided Self-Attention. *ACM Transactions on Graphics (TOG)*, In *Proc. of the ACM SIGGRAPH Conference and Exhibition in Asia (SIGGRAPH Asia)*, Tokyo, Japan, Dec 14-17, 2021. (Top 1 journal in Computer Graphics, IF: 6.495).
- [10] Wenju Xu, **Chengjiang Long**, Ruisheng Wang, Guanghui Wang. DRB-GAN: A Dynamic ResBlock Generative Adversarial Network for Artistic Style Transfer. In *Proc. International Conference on Computer Vision (ICCV)*, Montreal, Canada, Oct 11-17, 2021 (Acceptance rate: 3%) (Oral Paper!).
- [11] Zipei Chen, **Chengjiang Long**, Ling Zhang, Chunxia Xiao. CANet: A Context-Aware Network for Shadow Removal. In *Proc. International Conference on Computer Vision (ICCV)*, Montreal, Canada, Oct 11-17, 2021 (Acceptance rate: 25.9%).
- [12] Zhian Liu, Yongwei Nie, **Chengjiang Long**, Qing Zhang, Guiging Liu. A Hybrid Video Anomaly Detection Framework via Memory-Augmented Flow Reconstruction and Flow-Guided Frame Prediction. In *Proc. International Conference on Computer Vision (ICCV)*, Montreal, Canada, Oct 11-17, 2021 (Acceptance rate: 3%) (Oral Paper!).
- [13] Lingwei Dang, Yongwei Nie, **Chengjiang Long**, Qing Zhang, Guiqing Li. MSR-GCN: Multi-Scale Residual Graph Convolution Networks for Human Motion Prediction. In *Proc. International Conference on Computer Vision (ICCV)*, Montreal, Canada, Oct 11-17, 2021 (Acceptance rate: 25.9%).
- [14] Xinzhi Dong, **Chengjiang Long**, Wenju Xu, Chunxia Xiao. Dual Graph Convolutional Networks with Transformer and Curriculum Learning for Image Captioning. In *Proc. ACM International Conference on Multimedia (ACM MM)*, Chengdu, China, Oct 20-24, 2021 (Acceptance rate: 27.9%).
- [15] Liushuai Shi, Le Wang, **Chengjiang Long**, Sanping Zhou, Mo Zhou, Zhenxing Niu, Gang Hua. SGCN: Sparse Graph Convolution for Pedestrian Trajectory Prediction. In *Proc. IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, Nashville, TN, Jun 19-26, 2021 (Acceptance rate: 27%).
- [16] Tao Hu, **Chengjiang Long**, Chunxia Xiao. A Novel Visual Representation on Text Using Diverse Conditional GAN for Visual Recognition. *IEEE Transactions on Image Processing (T-IP)*, 2021. (Top 1 Journal in Image Processing, IF: 9.34)
- [17] Ashraful Islam, **Chengjiang Long**, Richard Radke. A Hybrid Attention Mechanism for Weakly-Supervised Temporal Action Localization. *AAAI Conference on Artificial Intelligence (AAAI)*, Vancouver, Canada, Feb 2-9, 2021. (Acceptance rate: 21%)
- [18] Jiqing Zhang, **Chengjiang Long**, Yuxin Wang, Haiyin Piao, Haiyang Mei, Xin Yang, Baocai Yin. A Two-Stage Attentive Network for Single Image Super Resolution. *IEEE Transactions on Circuits and Systems for Video Technology (T-CSVT)*, 2021. (Top Journal in Multimedia, IF: 4.13)

- [19] Hanning Yu*, Wentao Liu*, **Chengjiang Long**, Bo Dong, Qin Zou, Chunxia Xiao. Luminance Attentive Networks for HDR Image and Panorama Reconstruction. *Computer Graphics Forum (CGF)*, 38(7), 2021. (*Top Journal in Computer Graphics, IF: 2.116*)
- [20] Zhongyun Bao, **Chengjiang Long**, Gang Fu, Daquan Liu, Yuanzhen Li, Jiaming Wu, Chunxia Xiao. Scene Inference for Object Illumination Editing. *arXiv*, 2021 (*arXiv:2108.00150*).
- [21] Tao Hu, **Chengjiang Long**, Chunxia Xiao. CRD-CGAN: Category-Consistent and Relativistic Constraints for Diverse Text-to-Image Generation. *arXiv*, 2021 (*arXiv:2107.135165*).
- [22] Jun Xiao, Lin Li, Dejing Xu, **Chengjiang Long**, Jian Shao, Shifeng Zhang, Shiliang Pu, Yueting Zhuang. Explore Video Clip Order with Self-Supervised and Curriculum Learning for Video Applications. *Transaction on Multimedia (T-MM)*, 2020 (*Top 1 Journal in Multimedia, IF: 6.051*).
- [23] Ashraful Islam, **Chengjiang Long**, Arslan Basharat, Anthony Hoogs. DOA-GAN: Dual-Order Attentive Generative Adversarial Network for Image Copy-move Forgery Detection and Localization. In *Proc. IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, Seattle, WA, Jun 14-19, 2020 (*Acceptance rate: 22%*) (*The Full-Score Paper!*).
- [24] Daquan Liu, **Chengjiang Long**, Hongpan Zhang, Hanning Yu, Xinzhi Dong, Chunxia Xiao. ARShadowGAN: Shadow Generative Adversarial Network for Augmented Reality in Single Light Scenes. In *Proc. IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, Seattle, WA, Jun 14-19, 2020 (*Acceptance rate: 22%*).
- [25] Ling Zhang, **Chengjiang Long**, Xiaolong Zhang, Chunxia Xiao. RIS-GAN: Explore Residual and Illumination with Generative Adversarial Networks for Shadow Removal. *AAAI Conference on Artificial Intelligence (AAAI)*, New York, NY, Feb 7-12, 2020. (*Acceptance rate: 20.6%*)
- [26] Wenxiao Zhang, **Chengjiang Long**, Qingan Yan, Alix L.H. Chow, Chunxia Xiao. Multi-Stage Point Completion Network with Critical Set Supervision. *Computer-Aided Geometric Design (CAGD)*, 2020. (*Top Journal in Computer Graphics, IF: 1.23*)
- [27] Ling Zhang, **Chengjiang Long**, Qingan Yuan, Xiaolong Zhang, Chunxia Xiao. CLA-GAN: A Context and Lightness Aware Generative Adversarial Network for Shadow Removal. *Computer Graphics Forum (CGF)*, 39(7), 2020. (*Top Journal in Computer Graphics, IF: 2.116*)
- [28] Jiqing Zhang, **Chengjiang Long**, Yuxin Wang, Xing Yang, Haiyang Mei, Baocai Yin. Multi-Context and Enhanced Reconstruction Network for Single Image Super Resolution. In *Proc. IEEE International Conference on Multimedia & Expo (ICME)*, London, United Kingdom, Jun 6-10, 2020 (*Acceptance rate: 30%*).
- [29] Bhavan Vasu, **Chengjiang Long**. Iterative and Adaptive Sampling with Spatial Attention for Black-Box Model Explanations. *IEEE Winter Conference on Applications of Computer Vision (WACV)*, Snowmass Village, CO, Mar 2-5, 2020. (*Acceptance rate: 34.5%*)
- [30] Xinyun Fan, Wenjun Wu, Ling Zhang, Qingan Yan, Gang Fu, Zipei Chen, **Chengjiang Long**, Chunxia Xiao. Shading-Aware Shadow Detection and Removal from a Single Image. *The Visual Computer (TVC)*, 36, 2175-2188, 2020.
- [31] Bing Ding, **Chengjiang Long**, Ling Zhang, Chunxia Xiao. ARGAN: Attentive Recurrent Generative Adversarial Network for Shadow Detection and Removal.

- In *Proc. IEEE International Conference on Computer Vision (ICCV)*, Seoul, South Korea, Oct 27-Nov 2, 2019. (Acceptance rate: 25%).
- [32] Jinjiang Wei, **Chengjiang Long**, Hua Zhou, Chunxia Xiao. Shadow Inpainting and Removal Using Generative Adversarial Networks with Slice Convolutions. *Computer Graphics Forum (CGF)*, 38(7), 2019. (Top Journal in Computer Graphics, IF: 2.116)
- [33] Mengxiao Tian, Hao Guo, Hong Chen, Qing Wang, **Chengjiang Long**, Yuhao Ma. Automated Pig Counting Using Deep Learning. *Computers and Electronics in Agriculture*, 2019 (Top Journal in Agriculture, IF: 3.858).
- [34] **Chengjiang Long**, Roddy Collins, Eran Swears, Anthony Hoogs. Deep Neural Networks In Fully Connected CRF For Image Labeling With Social Network Metadata. In *Proc. IEEE Winter Conference on Applications of Computer Vision (WACV)*, Waikoloa Village, HI, Jan 7-11, 2019. (Acceptance rate: 36.0%)
- [35] **Chengjiang Long**, Arslan Basharat, Anthony Hoogs. A Coarse-to-fine Deep Convolutional Neural Network Framework for Frame Duplication Detection and Localization in Forged Videos. In *Proc. IEEE Conference on Computer Vision and Pattern Recognition Workshop on Media Forensics (CVPRW)*, Long Beach, CA, June 17, 2019.
- [36] Matthew Leotta, **Chengjiang Long**, et. al. Urban Semantic 3D Reconstruction from Multiview Satellite Imagery. In *Proc. IEEE Conference on Computer Vision and Pattern Recognition Workshop on EARTHVISION (CVPRW)*, Long Beach, CA, June 17, 2019 (*The Best Paper Award!*).
- [37] Mathew Leotta, Jie Shan, Xu Zhang, **Chengjiang Long**, Bastien Jacquet, Matthieu Zins, Dan Lipsa, et. al. Danesfield: Integrating Deep Learning and Classical Methods for Multiview Semantic 3D Modeling. In *Proc. the 2019 MSS National Symposium on Sensor and Data Fusion (NSSDF)*, San Diego, CA, Oct 21-24, 2019.
- [38] Tao Hu, **Chengjiang Long**, Leheng Zhang, Chunxia Xiao. VITAL: A Visual Interpretation on Text with Adversarial Learning for Image Labeling. In *arXiv*, 2019 ([arXiv:1907.11811](https://arxiv.org/abs/1907.11811)).
- [39] Gang Hua, **Chengjiang Long**, Ming Yang, Yan Gao. Collaborative Active Visual Recognition from Crowds: A Distributed Ensemble Approach. *IEEE Transaction on Pattern Analysis and Machine Intelligence (T-PAMI)*, 40(3): 582-594, 2018 (Top 1 Journal in Artificial Intelligence, IF: 17.861).
- [40] Yuhao Ma, Hao Guo, Hong Cheng, Mengxiao Tian, Xin Huo, **Chengjiang Long**, et. al. A Method to Build Multi-Scene Datasets for CNN for Camera Pose Regression. In *Proc. IEEE International Conference on Artificial Intelligence and Virtual Reality (AIVR)*, Taichuang, Taiwan, Dec 10-12, 2018.
- [41] **Chengjiang Long**, Gang Hua. Correlational Gaussian Processes for Cross-domain Visual Recognition. In *Proc. IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, Honolulu, Hawaii, July 21-26, 2017 (Acceptance rate: 29.2%).
- [42] **Chengjiang Long**, Eric Smith, Arslan Basharat, Anthony Hoogs. A C3D-based Convolutional Neural Network for Frame Dropping Detection in a Single Shot Video. In *Proc. IEEE Conference on Computer Vision and Pattern Recognition Workshop on Media Forensics (CVPRW)*, Honolulu, Hawaii, July 26, 2017.
- [43] Chuang Xing, **Chengjiang Long**, Hao Guo, Yongwei Nie, Yuan Zhang, Dehai Zhu, Qing Ma, Mengxiao Tian. How Does A Camera Look at One 3D CAD Object? In *Proc. IEEE International Conference on Tools with Artificial Intelligence (ICTAI)*, Boston, MA, USA, Nov 6-8, 2017. (Acceptance rate: 36.7%).

- [44] Yongwei Nie, Xu Cao, **Chengjiang Long**, Ping Li, Guiqing Li. L2GSCI: Local to Global Seam Cutting and Integrating for Pixel-Level Face Contour Extraction. *arXiv*, 2017 (*arXiv:1703.01605*).
- [45] **Chengjiang Long**, Gang Hua, Ashish Kapoor. A Joint Gaussian Process Model for Active Visual Recognition with Expertise Estimation in Crowdsourcing. *International Journal of Computer Vision (IJCV)*, 116(2): 136-160, 2016 (*Top 1 Journal in Computer Vision, IF: 5.698*).
- [46] **Chengjiang Long**, Gang Hua. Multi-class Multi-annotator Active Learning with Robust Gaussian Process for Visual Recognition. In *Proc. IEEE International Conference on Computer Vision (ICCV)*, Santiago, Chile, Dec 13-16, 2015 (*Acceptance rate: 30.92%*).
- [47] **Chengjiang Long**, Xiaoyu Wang, Gang Hua, Ming Yang, Yuanqing Lin. Accurate Objection Detection with Location Relaxation and Regionlets Re-localization. In *Proc. Asian Conference on Computer Vision ACCV*, Singapore, Nov 1-5, 2014. (*Acceptance rate: 27.0%*)
- [48] Jianhui Zhao, **Chengjiang Long**, Shuping Xiong, Cheng Liu, Zhiyong Yuan. A New K Nearest Neighbors Search Algorithm Using Cell Grids for 3D Scattered Point Cloud. *ELEKTRONIKA IR ELEKTROTECHNIKA*, 20(1): 81-87, 2014.
- [49] **Chengjiang Long**, Gang Hua, Ashish Kapoor. Active Visual Recognition with Expertise Estimation in Crowdsourcing. In *Proc. IEEE International Conference on Computer Vision (ICCV)*, Sydney, Australia, Dec 3-6, 2013. (*Acceptance rate: 27.8%*)
- [50] Gang Hua, **Chengjiang Long**, Ming Yang, Yan Gao. Collaborative Active Learning of a Kernel Machine Ensemble for Recognition. In *Proc. IEEE International Conference on Computer Vision (ICCV)*, Sydney, Australia, Dec 3-6, 2013. (*Acceptance rate: 27.8%*)
- [51] Jianhui Zhao, Yihua Ding, RS Goonetillek, Shuping Xiong, Yuanyuan Zhang, **Chengjiang Long**, et al. Interactive Deformation Simulation of Manual Girth Measurement for Limbs. *Information*, 15: 339, 2012.
- [52] Jianhui Zhao, Yuanyuan Zhang, Yihua Ding, **Chengjiang Long**, et al. Accelerated Gaussian Mixture Model and Its Application on Image Segmentation. In *Proc. International Conference on Graphic and Image Processing (ICGIP)*, Singapore, October, 2012.
- [53] **Chengjiang Long**, Jianhui Zhao, et al. A New Region Growing Algorithm for Triangular Mesh Recovery from Scattered 3D Points. *Transactions on Edutainment VI, LNCS*, 6758: 237-246, 2011.
- [54] Yang Zhao, Jianhui Zhao, Jing Huang, Shizhong Han, **Chengjiang Long**, et al. Contourlet Transform Based Texture Analysis for Smoke and Fog Classification. *Applied Mechanics and Materials* 88(89): 537-542, 2011.
- [55] Yihua Ding, Jianhui Zhao, Zhiyong Yuan, Yuanyuan Zhang, **Chengjiang Long**, et al. Constrained Surface recovery using RBF and its efficiency improvements. *Journal of Multimedia*, 5(1): 55-62, 2011.
- [56] **Chengjiang Long**, Jianhui Zhao, Shizhong Han, Lu Xiong, Zhiyong Yuan, Jing Huang, Weiwei Gao. Transmission: A New Feature for Computer Vision Based Smoke Detection, *AICI 2010, Part I, Lecture Notes in Artificial Intelligence*, 6319: 389-396, 2010.
- [57] Zhiyong Yuan, Yuanyuan Zhang, Jianhui Zhao, Yihua Ding, **Chengjiang Long**, et al. Real-time Simulation for 3D Tissue Deformation with Cuda Based GPU Computing. *Journal of Convergence Information Technology* 5(4): 209-119, 2010.

- [58] Yihua Ding, Jianhui Zhao, RS Goonetilleke, Shuping Xiong, Zhiyong Yuan, Yuanyuan Zhang, **Chengjiang Long**. An Automatic Method of Measuring Foot Girths for Custom Footwear Using Local RBF Implicit Surfaces. *International Journal of Computer Integrated Manufacturing* 23(6): 574-583, 2010.
- [59] Yuanyuan Zhang, Jianhui Zhao, Zhiyong Yuan, Yihua Ding, **Chengjiang Long**, et al. Cuda Based GPU Programming to Simulate 3D Tissue Deformation. In *Proc. International Conference on Biomedical Engineering and Computer Science (ICBECS)*, 2010.
- [60] Jing Huang, Jianhui Zhao, Weiwei Gao, **Chengjiang Long**, et al. Local Binary Pattern Based Texture Analysis for Visual Fire Recognition, In *Proc. International Congress on Image and Signal Processing (CISP)*, 1887-1891, 2010.
- [61] **Chengjiang Long**, Jianhui Zhao, Zhiyong Yuan, Lu Xiong, Guozhong Liang, Xuanming Jiang. Improvements on IPD Algorithm for Triangular Mesh Reconstruction from 3D Point Cloud, In *Proc. International Conference on Multimedia Information Networking and Security*, Pages 305-308, 2009.
- [62] Jianhui Zhao, **Chengjiang Long**, Yihua Ding, Zhiyong Yuan. A New K-Nearest Neighbors Search Algorithm Based on 3D Cell Grids. *Geomatics and Information Science of Wuhan University*, 34(5):615-618, 2009.
- [63] Li Rao, Jianhui Zhao, Zhiyong Yuan, **Chengjiang Long**, et al. A Ray-based Method for 3D Model's Comparison by Genetic Algorithm, *Journal of Advances in Systems Science and Applications*, 9(3): 580-586, 2009.
- [64] Yihua Ding, Jianhui Zhao, **Chengjiang Long**, et al. Measurement Simulation on RBF Surface Reconstruction from 3D Point Cloud. *Geomatics and Information Science of Wuhan University*, 33: 90-92, 2008.
- [65] Yihua Ding, Jianhui Zhao, Yuanyuan Zhang, **Chengjiang Long**, et al. Efficiency Improvements for RBF Based Surface Measurement from 3D Point Cloud. In *Proc. Workshop on Intelligent Information Technology Application (IITA)*, 733-736, 2008.
- [66] Yihua Ding, Jianhui Zhao, Zixu Li, Ansong Yao, Li Rao, **Chengjiang Long**. Improvements on Electric Field Based Curve Reconstruction form Unorganized Points. In *Proc. Intelligent Information Technology Application Workshop*, 218-221, 2007.
- [67] Yihua Ding, Jianhui Zhao, RS Goonetilleke, Li Rao, Ansong Yao, **Chengjiang Long**. Partial Surface Reconstruction and Applications from Point Cloud Using RBF. *Journal of Computational Information Systems*, 3(6):2479-2485, 2007.

PATENTS

- [P1] Jianhui Zhao, **Chengjiang Long**, Dengyi Zhang, Zhiyong Yuan. Smoke and fire object segmentation method aiming at smog covering scene in fire disaster image video. Application No.: CN201210040236, Publication No.: CN102609710B, Filed on Feb 22, 2012.

TEACHING COURSES

- [T1] Pattern Recognition, Rensselaer Polytechnic Institute (RPI), Troy, NY.
- [T2] Discrete Structures, University at Albany, SUNY, Albany, NY.
- [T3] Discrete Math with Applications, University at Albany, SUNY, Albany, NY.

HONORS

- ★ Outstanding Project Award (top-2) on Community Recommendation Project for JD Finance APP, JD Digits, 2020.
- ★ Best Paper Award, IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Workshop on EarthVision, 2019.
- ★ Certificate of Outstanding Contribution in Reviewing, Journal of Visual Communication and Image Representation (VCIR), 2017.
- ★ Marquis Who's Who in America (top 3% of the professionals in America), 2016.
- ★ Certificate of Reviewing Award, Computer Vision and Image Understanding (CVIU), 2016.
- ★ Publishing Pro Merit Badge, Kitware Inc., 2016.
- ★ Scholarship from Hmong Economic Promotion Association of China, 2011.
- ★ Citibank's Scholarship from Citi Group, 2008.
- ★ National Scholarship from Ministry of Education of China, 2006.

ACADEMIC ACTIVITIES

Program Committee for the following conferences:

- ◇ Senior Program Committee (SPC) Member. AAAI Conference on Artificial Intelligence (AAAI), 2022.
- ◇ Program Committee (PC) member. AAAI Conference on Artificial Intelligence (AAAI), 2020-2021.

Reviewer for the following journals and conferences:

- ◇ International Journal of Computer Vision (IJCV)
- ◇ IEEE Transaction on Image Processing (T-IP)
- ◇ IEEE Transaction on Multimedia (T-MM)
- ◇ IEEE Transactions on Circuits and Systems for Video Technology (T-CSVT)
- ◇ Knowledge-Based Systems (KNOSYS)
- ◇ Pattern Recognition Letters
- ◇ Computer Vision and Image Understanding (CVIU)
- ◇ International Journal of Machine Vision and Applications (MVAP)
- ◇ Journal of Visual Communication and Image Representation (VCIR)
- ◇ Applied Intelligence
- ◇ The Visual Computer (TVCJ)
- ◇ Frontiers of Information Technology & Electronic Engineering (ZUSC)
- ◇ IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)
- ◇ IEEE International Conference on Computer Vision (ICCV)
- ◇ European Conference on Computer Vision (ECCV)
- ◇ AAAI Conference on Artificial Intelligence (AAAI)
- ◇ ACM Multimedia Conference (ACM MM)
- ◇ IEEE Winter Conference on Applications of Computer Vision (WACV)
- ◇ The British Machine Vision Conference (BMVC)
- ◇ IEEE International Conference on Multimedia & Expo (ICME)
- ◇ IEEE International Conference on Image Processing (ICIP)

- ◇ IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)
- ◇ Asian Conference on Computer Vision (ACCV)

PROJECTS

- Design and implement various algorithms and softwares for intelligence video creation, 2021.
- Led a team in designing and implementing a large-scale video recommendation system, 2020-2021.
- Designed and implemented a deep learning based video caption software for video surveillance, 2019-2020.
- Designed and implemented deep learning based media forensic algorithms & softwares for frame drop, frame duplication, and copy-move forgery detection in manipulated videos, 2016-2020.
- Designed and implemented a deep learning based small object (*e.g.*, buildings and roads) semantic segmentation algorithm & software for remote sensing images, 2017-2019.
- Designed and implemented a multi-label visual recognition system based on multimedia information, 2016.

LANGUAGES Mandarin Chinese & English.

SKILLS C++/C, Python, Matlab, R, PyTorch, TensorFlow, Caffe, *et.al.*

CITIZENSHIP China, Permanent Resident in USA.

MEMBERSHIP Member of IEEE and AAAI. Mar 2012 - present