Curriculum Vitae – Xin Li

Texas A&M University, College Station, TX 77843
Email: xinli@tamu.edu Web: https://people.tamu.edu/~xinli/

1. Education

- Ph.D. Computer Science, Stony Brook University (SUNY), August 2008
- M.S. Computer Science, Stony Brook University (SUNY), August 2005
- B.E. Computer Science, University of Science and Technology of China, China July 2003

2. Employment

Aug. 2022 – Present	Full Professor, Section of Visual Computing and Computational Media (VCCM), School of Performance, Visualization, and Fine Arts (PVFA), Texas A&M University (TAMU).
Aug. 2020 – Aug. 2022	Full Professor, School of Electrical Engineering and Computer Science (EECS), and Center for Computation and Technology (CCT), Louisiana State University (LSU)
Aug. 2014 – Aug. 2020	Associate Professor, School EECS, and CCT, LSU
Aug. 2008 – Aug. 2014	Assistant Professor, School of EECS, and CCT, LSU
Apr. 2013 – Present	Adjunct Faculty, Pennington Biomedical Research Center, Baton Rouge, LA 70803

3. Awards

- Solid Modeling Association (SMA) Young Investigator Award, 2020
- IEEE-ICCSE Organization Contribution Award, 2020
- LSU Distinguished Dissertation Award (as Supervisor of Dr. Kang Zhang), LSU, 2016
- LSU Oscar R. Menton Professor of Electrical Engineering, 2013
- LSU C. W. Armstrong Jr. Professor of Engineering, 2012
- IBM Faculty Award, 2011

4. Research Publications

A. Books and Monographs (2)

1) W. Yu and **X. Li**, "Large-scale Geometric Data Processing and Structured Mesh Generation," 131 pages, LAP LAMBERT Academic Publishing, Germany, 2017. ISBN: 978-3-330-07516-0.
2) **X. Li**, "Shape Mapping for Graphics and Visual Computing," 144 Pages, VDM Verlag, Saarbrücken, Germany, 2009.

B. Peer-Reviewed Journal Papers (89)

1) X. Shen, C. Wang, **X. Li**, Q. Hu, and J. Zhang, "A Detector-oblivious Multi-arm Network for Keypoint Matching," *IEEE Transactions on Image Processing (TIP)*, vol. 32, pp. 2776-2785, 2023, doi: 10.1109/TIP.2023.3274482, 2023. (Impact factor: 11.04)

2) M. Korban, **X. Li**, "Semantics-enhanced Early Action Detection using Dynamic Dilated Convolution," *Pattern Recognition (PR)*, Article No. 109595, 2023. (Impact Factor: 8.52)
3) H. Tan, B. Yin, K. Wei, X. Liu, and **X. Li**, "ALR-GAN: Adaptive Layout Refinement for Text-to-Image Synthesis", *IEEE Transactions on Multimedia (TMM)*, DOI: 10.1109/TMM.2023.3238554, 2023. (Impact Factor: 6.51)
4) Q. Li, C. Wang, C. Wen, and **X. Li**, "DeepSIR: Deep Semantic Iterative Registration for LiDAR Point Clouds," *Pattern Recognition*, Vol. 137, Article No. 109306, 2023. (Impact Factor: 8.52)
5) Y. Liang, **X. Li**, B. Tsai, Q. Chen, and N. Jafari, "V-FloodNet: A Video Segmentation System for Urban Flood Detection and Quantification," *Environmental Modeling and Software*, vol. 160, DOI: https://doi.org/10.1016/j.envsoft.2022.105586, 2023. (Impact Factor: 4.81)
6) Y. Cao, R. Liang, W. Zhu, B. Zhao, H. Chen, L. Shen, J. Yang, Y. Cao, J. Chen, and **X. Li,** "Dynamic-excitation-based steady-state non-line-of-sight imaging via multi-branch convolutional neural network," *Optics and Lasers in Engineering*, Vol. 161, Article 107369, 2023. (Impact Factor: 5.666)
7) S. Nemati, H. Ghadimi, **X. Li**, L. Butler, H. Wen, and S. Guo, "Automated Defect Analysis of Additively Fabricated Metallic Parts Using Deep Convolutional Neural Networks," *Journal of Manufacturing and Materials Processing*, Vol. 6, Issue 6., DOI: https://doi.org/10.3390/jmmp6060141, 2022. (Impact Factor 3.61)
8) H. Tan, X. Liu, B. Yin, and **X. Li**, "DR-GAN: Distribution Regularization for Text-to-Image Generation," *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, DOI: 10.1109/TNNLS.2022.3165573, 2022. (Impact Factor: 10.451)
9) S. Yu, C. Wang, C. Wen, M. Cheng, M. Liu, Z. Zhang, and **X. Li**, "LiDAR-based Localization using Universal Encoding and Memory-aware Regression," *Pattern Recognition (PR)*, Vol. 128, Article 108685, 2022. (Impact Factor: 7.740)
10) H. Tan, X. Liu, B. Yin, and **X. Li**, "MHSA-Net: Multi-Head Self-Attention Network for Occluded Person Re-Identification," *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, DOI: https://ieeexplore.ieee.org/document/9738731, 2022. (Impact Factor: 8.793)
11) Z. He, D. Chen, Y. Cao, J. Yang, Y. Cao, **X. Li**, S. Tang, Y. Zhuang, Z. Lu, "Single Image Super-Resolution Based on Progressive Fusion of Orientation-aware Features," *Pattern Recognition (PR)*, vol. 133, DOI: https://doi.org/10.1016/j.patcog.2022.109038, 2022. (Impact Factor: 7.20)
12) H. Wu, J. Deng, C. Wen, **X. Li**, C. Wang, J. Li, "CasA: A Cascade Attention Network for 3D Object Detection from LiDAR point clouds," *IEEE Transactions on Geoscience and Remote Sensing*, 60(5704511):1-11, 2022. (Impact Factor: 5.6)
13) X. Li, C. Xia, **X. Li**, S. Wei, S. Zhou, X. Yu, J. Gao, Y. Cao, and H. Zhang, "Identifying diabetes from conjunctival images using a novel hierarchical multi-task network," *Scientific Reports*, 12:264, 2022. (Impact Factor: 4.38)
14) Y. Cao, R. Liang, J. Yang, Y. Cao, Z. He, J. Chen, and **X. Li**, "Computational framework for steady-state NLOS localization under changing ambient illumination conditions," *Optics Express (OE)*, 30(2):2438-2452, 2022. (Impact Factor: 3.89)

15) Y. Dong, C. Xia, J. Yang, Y. Cao, Y. Cao, **X. Li**, "Spatio-temporal 3D Residual Networks for Simultaneous Detection and Depth Estimation of CFRP Subsurface Defects in Lock-in Thermography," *IEEE Transactions on Industrial Informatic*, 18(4):2571-2581, 2022. (Impact Factor: 10.22)
16) H. Tan, X. Liu, B. Yin, and **X. Li**, " Cross-modal Semantic Matching Generative Adversarial Networks for Text-to-Image Synthesis," *IEEE Trans. on Multimedia (TMM)*, 24:832-845, 2022. (Impact Factor: 6.05)
17) Z. Li, Z. Li, L. Yao, Q. Chen, J. Zhang, X. Li, J. Feng, Y. Li, J. Xu, "Multiple-inputs convolutional neural network: A novel design for classification and screening the critical regions of COVID-19 chest X-ray radiography," *JMIR Bioinformatics and Biotechnology*, 2022 (Impact Factor: 5.18).
18) Z. Li, Z. Li, Q. Chen, A. Ramos, J. Zhang, J. Boudreaux, R. Thiagarajan, Y. Bren-Mattison, M. Dunham, A. McWhorter, **X. Li**, J-M. Feng, Y. Li, S. Yao, J. Xu, "Detection of pancreatic cancer by convolutional-neural-network-assisted spontaneous Raman spectroscopy with critical feature visualization," *Neural Networks*, 144:455-464, 2021. (Impact Factor: 8.05)
19) X. Shen, C. Wang, **X. Li**, Y. Peng, Z. He, C. Wen, M. Cheng, "Learning Scale Awareness in Keypoint Extraction and Description," *Pattern Recognition (PR)*, https://doi.org/10.1016/j.patcog.2021.108221, 2021. (Impact Factor: 7.19)
20) Y. Cao, Y. Dong, F. Wang, Y. Cao, J. Yang, **X. Li**, "Multi-sensor Spatial Augmented Reality for visualizing the invisible thermal information of 3D objects," *Optics and Lasers in Engineering*, vol. 145, https://doi.org/10.1016/j.optlaseng.2021.106634, 2021. (Impact Factor 4.27)
21) Y. Cao, B. Zhao, X. Tong, J. Chen, J. Yang, Y. Cao, and **X. Li**, "Data-driven framework for high-accuracy color-restoration of RGBN multispectral filter array sensors under extremely low-light conditions," *Optics Express*, 29(15):23654-23670, 2021. (Impact Factor 3.89)
22) H. Wu, W. Han, C. Wen, **X. Li**, and C. Wang, "3D Multi-Object Tracking in Point Clouds Based on Prediction Confidence-Guided Data Association," *IEEE Transactions on Intelligent Transportation Systems (TITS)*, 23(6): 5668-5677, 2022. (Impact Factor: 6.32)
23) Z. Yao, X. Gong, and **X. Li**, Y. Fan, B. Luo, J. Fan, B. Lao, "LAG-Net: Multi-granularity Network for Person Re-identification via Local Attention System," *IEEE Transactions on Multimedia (TMM)*, vol. 24, pp. 217-229, 2022. (Impact Factor: 6.05)
24) W. Han, C. Wen, C. Wang, and **X. Li**, "BLNet: Bidirectional Learning Network for Point Clouds," *Journal of Computational Visual Media (Proc. CVM2021)*, 8:585-596, 2022. (Impact Factor: 4.13)
25) Y. Kong, M. Feng, **X. Li**, H. Lu, X. Liu, B. Yin, "Spatial Context-Aware Network for Salient Object Detection," Pattern Recognition (PR), vol. 144, article 107867, 2021. (Impact Factor: 7.19)
26) H. Tan, X. Liu, M. Liu, B. Yin, and **X. Li**, "KT-GAN: Knowledge-Transfer Generative Adversarial Network for Text-to-Image Synthesis," *IEEE Trans. on Image Processing (TIP)*, Vol. 30, pp. 1275-1290, 2021. (Impact Factor: 9.34)
27) S. Yu, C. Wang, Z. Yu, **X. Li**, M. Cheng, Y. Zang, "Deep Regression for LiDAR-based Localization in Dense Urban Areas," *ISPRS Journal of Photogrammetry and Remote Sensing*, 172:240-252, 2021. (Impact Factor: 7.32)

28) Q. Li, C. Wang, **X. Li**, and C. Wen, "FeatFlow: Learning Geometric Features for 3D Motion Estimation," *Pattern Recognition (PR*), https://doi.org/10.1016/j.patcog.2020.107574,Vol. 111, Article 107574, 2021. (Impact Factor: 7.19)
29) S. Zheng, Y. Wang, B. Li, and **X. Li**, "A Hardware-adaptive Deep Feature Matching Pipeline for Real-time 3D reconstruction," *Computer-aided Design (CAD*), https://doi.org/10.1016/j.cad.2020.102984, Vol. 132, Article 102984, 2021. (Impact Factor: 3.16)
30) N. Jafari, **X. Li**, Q. Chen, C. Le, L. Betzer, Y. Liang, "Real-Time Water Level Monitoring using Live Cameras and Computer Vision Techniques," *Computers & Geosciences*, Vol. 147, Article 104642, https://doi.org/10.1016/j.cageo.2020.104642, 2021. (Impact Factor: 2.99)
31) Z. Li, A. Ramos, Z. Li, M. Osborn, **X. Li**, Y. Li, S. Yao, and J. Xu, "An optimized JPEG-XT-based algorithm for the lossy and lossless compression of 16-bit depth medical image," Biomedical Signal Processing and Control, Vol. 64, Article 102306, https://doi.org/10.1016/j.bspc.2020.102306, 2021. (Impact Factor: 3.14)
32) X. Gong, **X. Li**, T. Li, Y. Liang, "A Discriminative Multi-Channel Facial Shape (MCFS) Representation and Feature Extraction for 3D Human Faces," *Computer Graphics Forum (CGF)*, 39(6):66-81, 2020. (Impact Factor: 2.12)
33) Y. Liang, X. Luo, N. Jafari, Q. Chen, Y. Cao, **X. Li**, "WaterNet: A Video Segmentation Pipeline based on Adaptive Matching for Water with Volatile Appearance," *Journal of Computational Visual Media (Proc. CVM2020)*, 6:65-78, 2020. (Impact Factor: 4.13)
34) H. Liu, B. Li, L. Zhang, and **X. Li**, "Optimizing heat-absorption efficiency of phase change materials by mimicking leaf vein morphology," Applied Energy, Vol. 269, Article 114982, to appear, 2020. (Impact Factor: 8.56)
35) W. Donahue, W. Newhauser, **X. Li**, F. Chen, J. Dey, "Computational Feasibility of Simulating Changes in Blood Flow through Whole-Organ Vascular Networks from Radiation Injury", Biomedical Physics & Engineering Express, Vol. 6, No. 5, Article 055027, 2020. (Impact Factor: 1.10)
36) X. Gong, P. Chen, Z. Zhang, K. Chen, Y. Xiang, and **X. Li**, "A Cross-Dimension Annotations Method for 3D Structural Facial Landmark Extraction," *Computer Graphics Forum (CGF)*, 39(1):623--626, 2020. (Impact Factor: 2.12)
37) S. Zhang, C. Wang, Z. He, Q. Li, X. Lin, **X. Li**, J. Zhang, C. Yang, J. Li, "Vehicle Global 6-DoF Pose Estimation under Traffic Surveillance Camera," *ISPRS Journal of Photogrammetry and Remote Sensing (P&RS)*, 159:114-128, 2020. (Impact Factor: 7.32)
38) Y. Liang, **X. Li**, "Reassembling Shredded Document Stripes Using Word-path Metric and Greedy Composition Optimal Matching Solver," *IEEE Transactions on Multimedia (TMM)*, 22(5):1168-1181, 2019. (Impact Factor: 5.45)
39) C. Le, **X. Li**, "JigsawNet: Shredded Image Reassembly Using Convolutional Neural Network and Loop-based Composition," *IEEE Transactions on Image Processing (TIP)*, 28(8):4000-4015, 2019. (Impact Factor: 9.34)
40) **X. Li**, K. Xie, W. Hong, C. Liu, "Hierarchical Fragmented Image Reassembly using a Bundle-of-Superpixel Representation," *Computer-aided Geometric Design (CAGD)*, 71:220-230, 2019. (Impact Factor: 1.23)
41) B. Li, C. Huang, **X. Li**, S. Zheng and J. Hong, "Non-iterative Topology Optimization for Heat Conduction Structures using Deep Learning," *Computer-aided Design (CAD)*, 115:172-180, 2019. (Impact Factor: 3.16)

42) J. Zhao, R. Huang, F. Duan, **X. Li**, C. Liu, X. Deng, Z. Pan, Z. Wu, M. Zhou, "Automatic Craniofacial Registration Based on Radial Curves," *Computers and Graphics (C&G)*, 82:264-274, 2019. (Impact Factor: 1.35)
43) B. Xu, Z. Ye, F. Wang, J. Yang, Y. Cao, C-L. Tisse, **X. Li**, and Y. Cao, "On-the-fly Extrinsic Calibration of Multimodal Sensing System for Fast 3D Thermographic Scanning," *Applied Optics*, 58(12):3238 – 3246, 2019. (Impact Factor: 1.97)
44) Y. Cao, Z. He, Z. Ye, **X. Li**, Y. Cao, J. Yang, "Fast and accurate single image super-resolution via an energy-aware improved deep residual network," Signal Processing, 162: 115-125, 2019. (Impact Factor: 1.97)
45) M. Lifkooee, C. Liu, Y. Liang, Y. Zhu, and **X. Li**, "Real-time Avatar Pose Transfer and Motion Generation Using Locally Encoded Laplacian Offsets," *Journal of Computer Science and Technology (JCST)*, 34(2): 1 - 16, 2019. (Impact Factor: 1.51)
46) Z. Zhang, J. Li, Y. Guo, **X. Li**, Y. Lin, G. Xiao, C. Wang, "Robust procedural model fitting with a new geometric similarity estimator," *Pattern Recognition (PR)*, 85:120-131, 2019. (Impact Factor: 7.19)
47) P. Huang, **X. Li**, and J. Zhang, "Multi-destination Map Layout Generation based on Rigid Deformation," *Journal of Computer-aided Design and Computer Graphics*, 31(3):622-628, 2019.
48) C. Le, and **X. Li**, "Sparse3D: A New Global Model for Matching Sparse RGB-D Dataset with Small Inter-frame Overlap," *Computer-aided Design (CAD), 102:33-43*, 2018. (Impact Factor: 3.16)
49) S. Heymsfield, B. Bourgeois, B. Ng, M. Sommer, **X. Li**, J. Shepherd, "Digital Anthropometry: A Critical Review," *European Journal of Clinical Nutrition (EJCN)*, 72:680—687, 2018. (Impact Factor: 3.06)
50) Y. Cao, B. Xu, Z. Ye, J. Yang, Y. Cao, C. Tisse, and **X. Li**, "Depth and Thermal Sensor Fusion to Enhance 3D Thermographic Reconstruction," *Optics Express*, 26(7), pp. 8179-8193, 2018 (**2018 Top Downloaded Articles on Imaging Systems and Displays in Optics Express**). (Impact Factor: 3.67)
51) C. Liu, W. Yu, Z. Chen, and **X. Li**, "Distributed Poly-square Mapping for Large-scale Semi-Structured Quad Mesh Generation," *Computer-aided Design (CAD)*, Vol. 90, pp. 5-17, 2017. (Impact Factor: 3.16)
52) **X. Li**, W. Yu, and C. Liu, "Geometry-aware Partitioning of Complex Domains for Parallel Quad Meshing," *Computer-aided Design (CAD)*, Vol. 85, pp. 20—33, 2017. (Impact Factor: 3.16)
53) B. Bourgeois, B. Ng, D. Latimer, C. Stannard, L. Romeo, **X. Li**, J. Shepherd, S. Heymsfield, "Clinically-Applicable Optical Imaging Technology for Body Size and Shape Analysis: Comparison of Systems Differing in Design," *European Journal of Clinical Nutrition (EJCN)*, 71(11):1329-1335, 2017. (Impact Factor: 3.06)
54) M. Hajij, T. Dey, and **X. Li**, "Segmenting a surface mesh into pants using Morse theory," *Graphical Models*, Vol. 88, pp. 12-21, 2016. (Impact Factor: 1.22)
55) S. Zheng, J. Hong, K. Zhang, B. Li, and **X. Li**, "A Multi-frame Graph Matching Algorithm for Low-bandwidth RGB-D SLAM," *Computer-aided Design*, vol. 78, pp. 107-117, 2016.
56) Y. Zhang, J. Cao, Z. Chen, **X. Li**, and X. Zeng, "B-spline Surface Fitting with Knot Position Optimization," *Computers & Graphics*, vol. 58, pp. 73-83, 2016. (Impact Factor: 1.35)
57) L. Soileau, D. Bautista, C. Johnson, C. Gao, K. Zhang, **X. Li**, S. Heymsfield, D. Thomas, and J. Zheng, "Automated Anthropometric Phenotyping with Novel Kinect-based Three-

Dimensional Imaging Method: Comparison to a Reference Laser Imaging System," *European Journal of Clinical Nutrition (EJCN)*, 70(4):475-481, 2016. (Impact Factor: 3.06)

58) **X. Li** and S. Iyengar, "On Computing Mapping of 3D Objects: A Survey," *ACM Computing Surveys (CSUR)*, volume 47, number 2, pp. 34:1 – 34:45, 2015. (Impact Factor: 6.13)
59) P. Chen and **X. Li**, "Revised spectral matching algorithm for scenes with mutually inconsistent local transformations," *IET Image Processing*, 9(10):916-922, 2015. (Impact Factor: 2.00)
60) C. Maier, K. Zhang, M. Manhein, and **X. Li**, "Palate Shape and Depth: A Shape-Matching and Machine Learning Method for Estimating Ancestry from Human Skeletal Remains," *Journal of Forensic Sciences*, 60(5):1129-1134, 2015. (Impact Factor: 1.16)
61) K. Zhang and **X. Li**, "Searching Geometry-aware Pants Decomposition in Different Isotopy Classes," *Geometry, Imaging, and Computing*, Vol. 1, No. 3, pp. 367– 393, 2014.
62) P. Chen and **X. Li**, "Effective Volumetric Feature Modeling and Coarse Correspondence via Improved 3DSIFT and Spectral Matching," *Mathematical Problems in Engineering*, Vol. 2014, Article 378159, pp. 1– 10, 2014. (Impact Factor: 1.10)
63) K. Zhang and **X. Li**, "A Graph-based Optimization Algorithm for Fragmented Image Reassembly," *Graphical Models*, Vol. 76, Issue 5, pp. 484-498, 2014. (Impact Factor: 1.22)
64) W. Yu, M. Li, **X. Li**, "Optimizing Pyramid Visibility Coverage for Autonomous Robots in 3D Environment," *Control and Intelligent Systems*, Vol. 42, No. 1, pp. 9-16, 2014. (Impact Factor: 0.60)
65) W. Yu, K. Zhang, S. Wan, and **X. Li**, "Optimizing Polycube Domain Construction for Hexahedral Remeshing," *Computer-Aided Design (CAD), (Proceedings SIAM/ACM Conference on Geometric Design and Modeling 2013),* Vol. 46, pp. 56-68, 2014. (Impact Factor: 3.16)
66) K. Zhang, J. Zheng, C. Gao, D. Thomas, **X. Li**, and S. Heymsfield, "Rapid-Accurate Anthropometric Body Shape Assessment with Low-Cost Novel 3D Imaging System," *The Journal of the Federation of American Societies for Experimental Biology (FASEB)*, 28(1):391-392, 2014. (Impact Factor: 4.97)
67) S. Wan, T. Ye, M. Li, H. Zhang, and **X. Li**, "An Efficient Spherical Mapping Algorithm and its Application on Spherical Harmonics," *Science China – Information Sciences,* Vol. 56, pp. 1-10, 2013. (Impact Factor: 3.30)
68) B. Li, **X. Li**, K. Wang, and H. Qin, "Surface Mesh to Volumetric Spline Conversion with Generalized Polycubes," *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, Vol. 19, No. 9, pp. 1539– 1551, 2013. (Impact Factor: 3.78)
69) H. Xu, W. Yu, S. Gu, and **X. Li**, "Biharmonic Volumetric Mapping using Fundamental Solutions," *IEEE Transactions on Visualization and Computer Graphics (TVCG),* Vol. 19, No. 5, pp. 787– 798, 2013. (Impact Factor: 3.78)
70) J. Cao, **X. Li**, Z. Chen, and H. Qin, "Spherical DCB-Spline Surfaces with Hierarchical and Adaptive Knot Insertion," *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, Vol. 18, No. 8, pp. 1290– 1303, 2012. (Impact Factor: 3.78)
71) W. Yu, M. Li, and **X. Li**, "Fragmented Skull Modeling using Heat Kernels," *Graphical Models*, Vol. 74, No. 4, pp. 140– 151, 2012. (Impact Factor: 1.22)
72) K. Wang, **X. Li**, B. Li, H. Xu, and H. Qin, "Restricted Trivariate Polycube Splines for Volumetric Data Modeling," *IEEE Transactions on Visualization and Computer Graphics*, Vol. 18, No. 5, pp. 703– 716, 2012. (Impact Factor: 3.78)

73) **X. Li**, W. Yu, X. Lin, and S. S. Iyengar, "On Optimizing Autonomous Pipeline Inspection," *IEEE Transactions on Robotics*, Vol.28, No. 1, pp. 223– 233, 2012. (Impact Factor: 6.12)
74) S. S. Iyengar, **X. Li**, A. Sawant, H. Xu, S. Mukhopadhyay, N. Balakrishnan, and P. Iyengar, "Toward More Precise Radiotherapy Treatment of Lung Tumors," *IEEE Computer*, Vol. 45, No. 1, pp. 59– 65, 2012. (Impact Factor: 3.56)
75) W. Yu, and **X. Li**, "Computing 3D Shape Guarding and Star Decomposition," *Computer Graphics Forum (CGF)*, Vol. 30, No. 7, pp. 2087– 2096, 2011. (Impact Factor: 2.12)
76) **X. Li**, Z. Yin, L. Wei, S. Wan, W. Yu,and M. Li, "Symmetry and Template Guided Skull Completion," *Computers & Graphics*, Vol. 35, No. 4, pp. 885– 893, 2011. (Impact Factor: 1.35)
77) S. Wan, Z. Yin, K. Zhang, H. Zhang, and **X. Li**, "A Topology-Preserving Optimization Algorithm for Polycube Mapping," *Computers & Graphics*, Vol. 35, No. 3, pp. 639– 649, 2011. (Impact Factor: 1.35)
78) S. S. Iyengar, S. Mukhopadhyay, C. Steinmuller, and **X. Li**, "Preventing Future Oil Spills with Software-Based Event Detection," *IEEE Computer*, Vol. 43, No. 8, pp. 95– 97, 2010. (Impact Factor: 3.56)
79) **X. Li**, H. Xu, S. Wan, Z. Yin, and W. Yu, "Feature-aligned Harmonic Volumetric Mapping using MFS," *Computers & Graphics*, Vol. 34, No. 3, pp. 242– 251, 2010. (Impact Factor: 1.35)
80) **X. Li**, X. Gu, and H. Qin, "Surface Mapping using Consistent Pants Decomposition," *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, Vol. 15, No. 4, pp. 558– 571, 2009. (Impact Factor: 3.78)
81) **X. Li**, X. Guo, H. Wang, Y. He, X. Gu, and H. Qin, "Meshless Harmonic Volumetric Mapping using Fundamental Solution Methods," *IEEE Transactions on Automation, Science and Engineering*, Vol. 6, No. 3, pp. 409– 422, 2009. (Impact Factor: 4.94)
82) H. Wang, Y. He, **X. Li**, X. Gu, and H. Qin, "Geometry-Aware Domain Decomposition for T-Spline-based Manifold Modeling," *Computers & Graphics*, Vol. 33, No. 3, pp. 359– 368, 2009. (Impact Factor: 1.35)
83) J. Cao, **X. Li**, G. Wang, and H. Qin, "Surface Reconstruction using Bivariate Simplex Splines on Delaunay Configurations," *Computers & Graphics*, Vol. 33, No. 3, pp. 341– 350, 2009. (Impact Factor: 1.35)
84) **X. Li**, Y. Bao, X. Guo, M. Jin, X. Gu, and H. Qin, "Globally Optimal Surface Mapping for Surfaces with Arbitrary Topology," *IEEE Transactions on Visualization and Computer Graphics*, Vol. 14, No. 4, pp. 805– 819, 2008. (Impact Factor: 3.78)
85) H. Wang, Y. He, **X. Li**, X. Gu, and H. Qin, "Polycube Spline," *Computer Aided Design (CAD)*, Vol. 40, No. 6, pp. 721– 733, 2008. (Impact Factor: 3.16)
86) **X. Li**, X. Gu, and H. Qin, "Curve Space: Classifying Curves on Surfaces," *Communications in Information and Systems*, Vol. 7, No. 3, pp. 207–226, 2007. (Impact Factor: 0.57)
87) W. Zeng, **X. Li**, S-T Yau, and X. Gu, "Conformal Spherical Parameterization for High Genus Surfaces," *Communications in Information and Systems*, Vol. 7, No. 3, pp. 273– 286, 2007. (Impact Factor: 0.57)
88) X. Guo, **X. Li**, Y. Bao, X. Gu, and H. Qin, "Meshless Thin-shell Simulation Based on Global Conformal Parameterization," *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, Vol. 12, No. 3, pp. 375– 385, 2006. (Impact Factor: 3.78)

89) A. Mehler, Y. Bao, **X. Li**, Y. Wang, and S. Skiena, "Spatial Analysis of News Sources," *IEEE Transactions on Visualization and Computer Graphics (TVCG),* Vol. 12, No. 5, pp. 765– 772, 2006. (Impact Factor: 3.78)

C. Peer-Reviewed Conference Proceeding Papers (56)

1) C. Zhang, G. Lin, L. Yang, **X. Li**, T. Komura, S. Schaefer, J. Keyser, and W. Wang, "Surface Extraction from Neural Unsigned Distance Fields", *Proc. International Conference on Computer Vision (ICCV), 2023.*
2) Q. Xia, J. Deng, C. Wen, H. Wu, S. Shi, **X. Li**, and C. Wang, "CoIn: Contrastive Instance Feature Mining for 3D Object Detection with Very Limited Annotations," *Proc. International Conference on Computer Vision (ICCV), 2023.*
3) J. Wang, C. Zhang, P. Wang, **X. Li**, P. Cobb, C. Theobalt, W. Wang, "Batch-based Model Registration for Fast 3D Sherd Reconstruction," *Proc. International Conference on Computer Vision (ICCV), 2023.*
4) H. Wu, C. Wen, S. Shi, **X. Li**, C. Wang, "Virtual Sparse Convolution for Multimodal 3D Object Detection," *Proc. IEEE Conference on Computer Vision and Pattern Recognition (CVPR),* (acceptance rate: 2360/9155 = 25.8%), 2023.
5) H. Wu, C. Wen, W. Li, **X. Li**, R. Yang, and C. Wang, "Transformation-Equivariant 3D Object Detection for Autonomous Driving," *AAAI Conference on Artificial Intelligence (AAAI), (acceptance rate: 1721/8777=19.6%), 2023.*
6) X. Jiao, J. Zhao, C. Lv, F. Duan, Z. Pan, **X. Li**, "Robust 3D Craniofacial Landmarks Localization by An End-to-End Regression Network," *IEEE International Conference on Multimedia and Expo (ICME),* 2023.
7) O. Alaofin, Y. Zhang, J. Sharma, and **X. Li**, "Cross-modality Super-resolution of Satellite Gravity Data for Geophysical Exploration," *IEEE International Geoscience and Remote Sensing Symposium (IGRASS)*, pp. 7539-7542, doi: 10.1109/IGARSS46834.2022.9883035, 2022.
8) H. Wu, Q. Li, C. Wen, **X. Li**, X. Fan, C. Wang, "Tracklet proposal Network for Multi-Object Tracking on Point Clouds," *International Joint Conference on Artificial Intelligence (IJCAI), (acceptance rate: 587/4204=13.9%), 2021.*
9) C. Yan, **X. Li**, and G. Li, "A New Action Recognition Framework for Video Highlights Summarization in Sporting Events," *Proc. IEEE International Conference on Computer Science & Education (ICCSE),* pp. 653-666, doi: 10.1109/ICCSE51940.2021.9569708, 2021.
10) Y. Liang, **X. Li**, N. Jafari, and Q. Chen, "Video Object Segmentation with Adaptive Feature Bank and Uncertain-Region Refinement," *Neural Information Processing Systems (NeurIPS), (acceptance rate: 1900/9454=20.1%),* pp. 3430-3441, 2020.
11) M. Korban, and **X. Li**, "DDGCN: A Dynamic Directed Graph Convolutional Network for Action Recognition," *European Conference on Computer Vision (ECCV), (acceptance rate: 1361/5025=27.1%),* pp. 761-776, 2020.
12) W. Han, C. Wen, C. Wang, Q. Li, and **X. Li**, "Point2Node: Correlation Learning of Dynamic-Node for Point Cloud Feature Modeling," *AAAI Conference on Artificial Intelligence (AAAI),* Oral, *(acceptance rate: 1591/7737=20.6%, oral paper rate: 4.5%),* pp. 10925-10932, 2020.
13) H. Tan, X. Liu, **X. Li**, Y. Zhang, and B. Yin, "Semantics-enhanced Adversarial Nets for Text-to-Image Synthesis," *International Conference on Computer Vision (ICCV), (acceptance rate: 1077/4303=25.0%),* pp. 10501-10510, 2019.

14) X. Shen, C. Wang, **X. Li**, M. Cheng, Z. Yu, J. Li, C. Wen, M. Cheng, Z. He, "RF-Net: An End-to-End Image Matching Network based on Receptive Field," Proc. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR),* (acceptance rate: 1300/5165 = 25.2%), pp. 8132 – 8140, 2019.
15) Q. Li, S. Chen, C. Wang, **X. Li**, C. Wen, M. Cheng, J. Li, "LO-Net: Deep Real-time Lidar Odometry," Proc. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR),* (acceptance rate: 1300/5165 = 25.2%), pp. 8473 – 8482, 2019.
16) C. Liu, Q. Chen, and **X. Li**, "Feature-aligned Poly-square Mapping of Large-scale 2D Geometries for Semi-structured Quad Mesh Generation", *Proc. International Meshing Roundtable (IMR),* pp. 192-208, 2019.
17) K. Sekeroglu, O. Soysal, **X. Li**, "Hierarchical Deep-Fusion Learning Framework for Lung Nodule Classification," *International Conference on Machine Learning and Data Mining (MLDM),* pp. 792-804, 2019.
18) M. Korban, **X. Li**, K. Miao, Y. Zhu, "3D Human Body Inpainting using Intrinsic Statistical Shape Models," Proc. *International Conference on Computer Science and Education (ICCSE),* pp. 1105-1110, 2019.
19) Q. Li, C. Wang, S. Chen, **X. Li**, C. Wen, M. Cheng, J. Li, "Deep Lidar Odometry," *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, pp. 1682—1750,* 2019.
20) S. Saeidi, Y. Zhu, M. Lifkooee[+], M. Mallazadeh, **X. Li**, "Co-Presence in a Shared Virtual Environment (SVE): A Case Study of Highway Work Zone Construction," Proc. International Conference on Innovative Construction Project Management and Construction Industrialization (ICCREM), pp. 490 – 497, 2019.
21) H. Kamran, K. Zhang, M. Li, and X. Li, "An LCS-based 2D Fragmented Image Reassembly Algorithm," Proc. IEEE 13th International Conference on Computer Science and Education, pp. 1-6. 2018.
22) M. Zadghorban, M. Li, and X. Li, "Image-based Human Character Modeling and Reconstruction for Virtual Reality Exposure Therapy," Proc. IEEE 13th International Conference on Computer Science and Education, pp. 1-5, 2018.
23) C. Zhang and X. Li, "Automatic Quad Meshing by Simulating NaCl Crystallization," *Proc. 26th International Meshing Roundtable (IMR) Conference,* in Procedia Engineering, pp. 284-296, 2017.
24) N. Urella, J. Hughes, E. Conrad, J. Zhang, and X. Li, "A VR Scene Modelling Platform for PTSD Treatment," Proc. IEEE 12th International Conference on Computer Science and Education, Houston, TX, USA, pp. 257-262, 2017.
25) C. Liu, Z. Chen, and X. Li, "2D Quad Mesh Generation using Divide-and-Conquer Poly-square Maps," Proc. IEEE 12th International Conference on Computer Science and Education, Houston, TX, USA, pp. 263-268, 2017.
26) Z. Zhang, J. Li, **X. Li**, Y. Lin, S. Zhang, C. Wang, "A Fast Method for Measuring the Similarity between 3D Model and 3D Point Cloud," The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XLI-B1, 2016 XXIII ISPRS Congress, Prague, Czech Republic, pp. 725 – 728, 2016.
27) K. Zhang, M. Manhein, W. Waggenspack, and X. Li, "3D Fragment Reassembly using Integrated Template Guidance and Fracture-Region Matching," *Proc. International Conference on Computer Vision (ICCV),* Santiago, Chile, pp. 2138-2146, 2015.

28) W. Yu and X. Li, "A Geometry-aware Data Partitioning Algorithm for Parallel Quad Mesh Generation on Large-scale 2D Regions," 24th International Meshing Roundtable (IMR) Conference, Austin, TX, USA, in Procedia Engineering, 124:44-56, 2015.
29) W. Yu, K. Zhang, and X. Li, "Recent algorithms on automatic hexahedral mesh generation," *Proc. IEEE 10th International Conference on Computer Science and Education*, Cambridge, United Kingdom, pp. 697—702, 2015.
30) P. Ravi, M. Li, X. Li, "Efficient dense 3D reconstruction using image pairs," Proc. *IEEE 10th International Conference on Computer Science and Education*, Cambridge, United Kingdom, pp. 714—719, 2015.
31) G. Patane, X. Li, and X. Gu, "An introduction to Ricci flow and volumetric approximation with applications to shape modeling," Proc. ACM SIGGRAPH Asia Courses, Article No. 4, Shenzhen, China, 2014.
32) X. Li, F. Yang, C. Cao, X. Chen, X. Li, and M. Huang, "On Developing Data Integration and Mining Platform for Classical Chinese Literature Study," Proc. IEEE 9th International Conference on Computer Science and Education, Vancouver, Canada, pp. 403-406, 2014.
33) H. Xu and X. Li, "A Symmetric 4D Registration Algorithm for Respiratory Motion Modeling," International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), Nagoya, Japan, pp. 149-156, 2013.
34) H. Xu and X. Li, "Consistent feature-aligned 4D image registration for respiratory motion modeling," in Proc. International Symposium on Biomedical Imaging (ISBI), (oral, acceptance rate: 19%, received NSF Scholar award), pp. 584– 587, San Francisco, USA, 2013.
35) W. Yu, M. Li and X. Li, "Optimizing Pyramid Visibility Coverage for Autonomous Robots in 3D Environment," 8th International Conference on Computer Science & Education, pp. 1023-1028, Colombo, Sri Lanka, 2013.
36) S. Wan, T. Ye, M. Li, H. Zhang, and X. Li, "Efficient Spherical Parameterization Using Progressive Optimization," in Lecture Notes on Computer Science (LNCS), Proc. Computational Visual Media Conference (oral, acceptance rate: 29.5%),Vol. 7633, pp. 170– 177, Beijing, China, 2012.
37) K. Zhang and X. Li, "Optimizing Geometry-aware Pants Decomposition," in Proc. Pacific Conference on Computer Graphics and Applications (Pacific Graphics) (acceptance rate: 20%), pp. 11– 16, Hong Kong, China, 2012.
38) H. Xu, P. Chen, W. Yu, A. Sawant, S. Iyengar, and X. Li, "Feature-aligned 4D Spatiotemporal Image Registration," in Proc. International Conference on Pattern Recognition (ICPR), (oral, acceptance rate 15%), pp. 2639– 2642, Tsukuba Science City, Japan, 2012.
39) Z. Yin, L. Wei, M. Manhein, and X. Li, "An Automatic Assembly and Completion Framework for Fragmented Skulls," in Proc. International Conference on Computer Vision (ICCV) (acceptance rate: 339/1433=23.7%), pp. 2532– 2539, Barcelona, Spain, 2011.
40) W. Yu, S.S. Iyengar, and X. Li, "Efficient 3D Region Guarding for Multimedia Data Processing," in Proc. IEEE International Conference on Multimedia and Expo (ICME) (oral, acceptance rate: 15%), pp. 1– 6, Barcelona, Spain, 2011.
41) H. Xu and X. Li, "Dynamic Harmonic Texture Mapping using Methods of Fundamental Solutions," in Proc. IEEE 6th International Conference on Computer Science and Education, pp. 871– 875, Singapore, 2011.

42) Q. Huang, S.S. Iyengar, and X. Li, “3D Surface Stagnography using Geometry Images,” in Proc. IEEE 6th International Conference on Computer Science and Education, pp. 866– 870, Singapore, 2011.
43) N. Zhang, T. Ye, W. Yu, M. Li, and X. Li, “A Survey of Topology Denoise Technologies,” in Proc. IEEE 6th International Conference on Computer Science and Education, pp. 1390– 1395, Singapore, 2011.
44) L. Wei, W. Yu, M. Li, and X. Li, “Skull Assembly and Completion using Template-based Surface Matching,” in Proc. International Joint 3DIM/3DPVT Conference: 3D Imaging, Modeling, Processing, Visualization, Transmission (3DIMPVT), pp. 413– 420, Hangzhou, China, 2011.
45) W. Yu, T. Ye, M. Li, and X. Li, “Spherical Harmonic Decomposition for Surfaces of Arbitrary Topology,” in Proc. IEEE 5th International Conference on Computer Science and Education, Hefei, China, pp. 215– 220, 2010.
46) Z. Yin, W. Yu, M. Li, and X. Li, “Hole Filling using Dynamic Programming for Archaeological Data Completion,” in Proc. IEEE 5th International Conference on Computer Science and Education, Hefei, China, pp. 1750– 1754, 2010.
47) L. Wei, W. Yu, M. Li, and X. Li, “A Non-Rigid Registration Algorithm for Compatible Skeletonization,” in Proc. IEEE 5th International Conference on Computer Science and Education, Hefei, China, pp. 209– 214, 2010.
48) B. Li, X. Li, K. Wang, and H. Qin, “Generalized PolyCube Trivariate Splines,” in Proc. IEEE International Conference of Shape Modeling and Applications, Aix-en-Provence, France, pp. 261– 265, 2010.
49) H. Xu, W. Yu, N. Zhang, and X. Li, “An Interactive System for Heterogeneous 3D Volumetric Data Visualization” in Proc. International Conference on Computer Science and Education, pp. 1745– 1749, Hefei, China, 2010.
50) F. Zhao, W. Yu, and X. Li, “Volumetric Texture Synthesis using Fundamental Solution Methods,” in Proc. International Conference on Computer Science and Education, Nanning, China, pp. 771– 776, 2009.
51) Z. Yin, X. Lin, L. Wei, W. Yu, J. Cai, M. Li, and X. Li, “Gait Planning in 3D Robot Simulation using ZMP theory,” in Proc. International Conference on Computer Science and Education, Nanning, China, pp. 203– 207, 2009.
52) X. Li, X. Gu, and H. Qin, “Surface Matching using Consistent Pants Decomposition,” in Proc. ACM Solid Physical Modeling Symposium, Stony Brook, USA, (invited as one of two best papers to TVCG), pp. 125– 136, 2008.
53) X. Li, X. Guo, H. Wang, Y. He, X. Gu, and H. Qin, “Harmonic Volumetric Mapping for Solid Modeling Applications,” in Proc. ACM Solid Physical Modeling Symposium, Beijing, China, pp. 109– 120, 2007.
54) H. Wang, Y. He, X. Li, X. Gu, and H. Qin, “Polycube Splines,” in Proc. ACM Solid Physical Modeling Symposium, Beijing, China, pp. 241–251, 2007.
55) X. Li, Y. He, X. Gu, and H. Qin, “Curves-on-Surfaces: A General Shape Comparison Framework,” in Proc. IEEE International Conference on Shape Modeling and Applications, Matsushima, Japan, pp. 352– 357, 2006.
56) Y. He, X. Li, X. Gu, and H. Qin, “Brain Image Analysis using Spherical Splines,” in Proc. the 5th International Workshop on Energy Minimization Methods in Computer Vision and Pattern Recognition (EMMCVPR) '05, Lecture Notes in Computer Science, St. Augustine, FL, USA, Vol. 3757, pp. 633– 644, 2005.

D. Peer-Reviewed Conference Posters, Extended Abstract, and Presentations[1] (41)

1) **X. Li**, L. Xu, and Y. Ding, "Skull Restoration, Facial Reconstruction and Expression," *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, Tutorial, Vancouver, Canada, June 2023.
2) **X. Li** and C. Liu, "From Digital Skull to Realistic Face Model: AI-assisted Superimposition and Face Approximation," *International Association of Craniofacial Identification Conference (IACI)*, (Podium Presentation), July 2019.
3) **X. Li**, "Training Computers to Help Automate the Restoration of Fragmented or Incomplete Skull," *International Association of Craniofacial Identification Conference (IACI)*, (Poster Presentation), July 2019.
4) **X. Li**, K. Xie, W. Hong, C. Liu, "Hierarchical Fragmented Image Reassembly using a Bundle-of-Superpixel Representation," *International Geometric Modeling and Processing Conference (GMP'19),* (Oral Presentation), Vancouver, Canada, June, 2019.
5) B. Li, C. Huang, **X. Li**, S. Zheng and J. Hong, "Non-iterative Topology Optimization for Heat Conduction Structures using Deep Learning," *ACM Symposium on Solid and Physical Modeling (SPM'19)*, (Oral Presentation), Vancouver, Canada, June, 2019.
6) J. Zhao, R. Huang, F. Duan, **X. Li**, X. Deng, Z. Pan, Z. Wu, M. Zhou, Automatic Craniofacial Registration Based on Radial Curves, *IEEE International Conference on Shape Modeling and Applications (SMI'19),* (Oral Presentation), Vancouver, Canada, June, 2019.
7) Q. Li, S. Chen, C. Wang, **X. Li**, C. Wen, M. Cheng, J. Li, "LO-Net: Deep Real-time Lidar Odometry," *The 9th Vision and Learning Seminar (VALSE),* Invited Poster, Hefei, China, April 11, 2019.
8) X. Shen, C. Wang, **X. Li**, Z. Yu, J. Li, C. Wen, M. Cheng, Z. He, "RF-Net: An End-to-End Image Matching Network based on Receptive Field," *The 9th Vision and Learning Seminar (VALSE),* Invited Poster, Hefei, China, April 11, 2019.
9) C. Le, and **X. Li**, "Sparse3D: A New Global Model for Matching Sparse RGB-D Dataset with Small Inter-frame Overlap," *ACM Symposium on Solid and Physical Modeling (SPM)*, Full Paper Presentation, Bilbao, Spain, June 2018.
10) **X. Li**, "Toward a Digital City: 3D Reconstruction and Restoration Techniques for Spatiotemporal Visual Data Digitization, Analysis, and Visualization," *International Workshop on Smart Cities, Human Behavior and Sustainable Development: Opportunities and Challenges for infrastructure Development*, Extended Abstract Presentation, Beijing, China, September 2017.
11) C. Liu, W. Yu, Z. Chen, and **X. Li**, "Distributed Poly-square Mapping for Large-scale Semi-Structured Quad Mesh Generation," *ACM Symposium of Solid and Physical Modeling (SPM)*, Full Paper Presentation, Berkeley, CA, USA, June 2017.
12) **X. Li**, "A new Framework of Semi-structured Quadrilateral Mesh Generation for Large-scale 2D Geometries," Conference Presentation, *Scientific Computing Around Louisiana (SCALA Conference 2017),* Abstract Presentation, New Orleans, March 2017.
13) S. Zheng, J. Hong, K. Zhang, B. Li, and **X. Li**, "A Multi-frame Graph Matching Algorithm for Low-bandwidth RGB-D SLAM," *ACM Symposium of Solid and Physical Modeling (SPM)*, Full Paper Presentation, Berlin, Germany, June 2016.

[1] Conference proceeding presentations listed in Section **C** were also presented but excluded from this section. Presenter's names are underlined.

14) Y. Zhang, J. Cao, Z. Chen, **X. Li**, and X. Zeng, "B-spline Surface Fitting with Knot Position Optimization," *IEEE International Conference on Shape Modeling and Applications (SMI)*, Full Paper Presentation, Berlin, Germany, June 2016.
15) W. Yu, J. Tao, Q. Chen, **X. Li**, "Geometric-aware Partitioning on Large-scale Data for Parallel Quad Meshing," *SuperComputing (SC)*, Technical Poster, Austin, TX, USA, October 2015.
16) C. Liu, W. Benger, J. Tao, M. Folk, **X. Li**, "Enabling Remote SSH Access to HDF5 with a Virtual File Driver and Its Application," *SuperComputing (SC)*, Booth Poster and Demo, Austin, USA, October 2015.
17) K. Zhang, W. Yu, M. Manhein, W. Waggenspack, and **X. Li**, "Reassembling 3D Thin Shells using Integrated Template Guidance and Fracture Region Matching," *ACM SIGGRAPH*, Technical Poster, Los Angeles, USA, August 2015.
18) W. Yu and **X. Li**, "A New Polycube Shape Optimization Algorithm for Hex Mesh Generation," *Proc. Workshop of Structured-Meshing: Theory, Applications, and Evaluation, International Conference on Computer Animation and Social Agents (CASA)*, Houston, USA, May 2014.
19) W. Yu and **X. Li**, Regular Mesh Generation for Large-scale Geometric Data in Coastal Modeling, Poster, Super Computing (SC), New Orleans, LA, USA, November 2014.
20) K. Zhang and **X. Li**, A Graph-based Optimization Algorithm for Fragmented Image Reassembly, *Geometric Modeling and Processing*, Singapore, July 2014.
21) K. Zhang, J. Zheng, C. Gao, D. Thomas, **X. Li**, S. Heymsfield, Rapid-Accurate Anthropometric Body Shape Assessment with Low-Cost Novel 3D Imaging System, Experimental Biology, San Diego, CA, USA, April 2014.
22) W. Yu and **X. Li**, "Regular Mesh Generation for Large-Scale Geometric Data in Coastal Modeling," LSU Economic Development Assistantship Symposium, Baton Rouge, LA, USA, April 2014.
23) C. Maier, K. Zhang, M. Manhein, **X. Li**, Palate Shape and Depth: A Shape-Matching and Machine-Learning Method for Estimating Ancestry from Skeleton Remains, American Academy of Forensic Sciences, Poster Presentation, American Academy of Forensic Sciences (AAFS) Annual Scientific Meeting, Seattle, WA, USA, February 2014.
24) W. Yu, K. Zhang, S. Wan, **X. Li**, "Optimizing Polycube Parameterization for Regular Mesh Generation," Conference Presentation, *Scientific Computing Around Louisiana (SCALA Conference 2014)*, Poster Presentation, Baton Rouge, LA, USA, February 2014.
25) G. Patane, **X. Li**, and X. Gu, "Surface- and Volume-Based Techniques for Shape Modeling and Analysis," *ACM SIGGraph Asia Conference*, Peer-reviewed Course, Hong Kong, China, November 2013.
26) W. Yu, K. Zhang, S. Wan, and **X. Li**, Optimizing Polycube Domain Construction for Hexahedral Remeshing, SIAM Conference on Geometric and Physical Modeling (GD/SPM), Denver, CO, USA, November 2013.
27) H. Xu and **X. Li**, "Computing 4D Image Registration for Medical Motion Modeling", Conference Presentation, *Scientific Computing Around Louisiana (SCALA Conference 2013)*, Abstract Presentation, New Orleans, LA, USA, February 2013.
28) W. Yu, M. Li, and **X. Li**, "Fragmented Skull Modeling using Heat Kernel," *Geometric Modeling and Processing (GMP)*, Full Paper Presentation, Huangshan, China, June 2012.

29) S. Wan, T. Ye, H. Zhang, and **X. Li**, "Efficient Spherical Parameterization using Hierarchical Optimization," *Geometric Modeling and Processing (GMP)*, Short Paper Presentation and Technical Poster, Huangshan, China, June 2012.
30) G. Patane, X. Gu, **X. Li**, and M. Spagnuolo, "Surface-, Flow-, and Volume-Based Techniques for Shape Modeling," *International Conference on Shape Modeling*, Tutorial Course, College Station, TX, USA, May 2012.
31) W. Yu and **X. Li,** "Computing Optimal Guarding and Star Decomposition of 3D Models," *ACM International Conference on Computer Graphics and Interactive Techniques, (SIGGRAPH 2011)*, Technical Poster Presentation, Student Research Competition Semifinalist, Vancouver, Canada, August 2011.
32) H. Xu and **X. Li**, "Biharmonic Volumetric Mapping using Fundamental Solutions", *ACM/SIAM Conference on Geometric and Physical Modeling*, Contributed Technical Presentation, Orlando, FL, October 2011.
33) W. Yu and **X. Li**, "Computing 3D Shape Guarding and Star Decomposition", *19th Pacific Conference on Computer Graphics and Applications (PG 2011)*, Full Paper Presentation, Kaoshiung, Taiwan, September 2011.
34) S. Wan, Z. Yin, K. Zhang, H. Zhang, and **X. Li**, "A Topology-preserving Optimization Algorithm for Polycube Mapping," *International Conference on Shape Modeling and Applications (SMI)*, Full Paper Presentation, Herzliya, Israel, June, 2011.
35) **X. Li**, "Computing 3D region Guarding and Star Decomposition," Conference Presentation, *Scientific Computing Around Louisiana (SCALA Conference 2011)*, Abstract Presentation, New Orleans, LA, USA, January 2011.
36) **X. Li**, H. Xu, S. Wan, Z. Yin, and Y. Wu, "Feature-aligned Harmonic Volumetric Mapping using MFS," Conference Presentation, *IEEE International Conference on Shape Modeling and Applications*, Full Paper Presentation, Aix-en-Provence, France, June 2010.
37) H. Wang, Y. He, **X. Li**, X. Gu, and H. Qin, "Geometry-aware Domain Decomposition for T-Spline-based Manifold Modeling," Conference Presentation, *IEEE International Conference on Shape Modeling and Applications*, Full Paper Presentation, Beijing, China, June 2009.
38) J. Cao, **X. Li**, G. Wang, and H. Qin, "Surface Reconstruction using Bivariate Simplex Splines on Delaunay Configurations," Conference Presentation, *IEEE International Conference on Shape Modeling and Applications*, Full Paper Presentation, Beijing, China, June 2009.
39) **X. Li**, "Shape Mapping for Graphics and Visual Computing," Colloquium Presentation, Center for Computation and Technology, LSU, Baton Rouge, LA, USA, February 2009.
40) **X. Li,** "Geometric Modeling for High Performance Simulations," *International Conference for High Performance Computing, Networking, Storage and Analysis (SC08)*, Booth Poster and Presentation, Austin, TX, USA, November 2008.
41) A. Mehler, Y. Bao, **X. Li**, Y. Wang, and S. Skiena, "Spatial Analysis of News Sources," Conference Presentation, *IEEE InfoVis Conference*, Full Paper Presentation, Baltimore, MD, USA, October 2006.

D. Invited Talks (23)

1) Towards More Reliable Fusion of Sparse Visual Data for Real-time Visual Computing, Zhejiang University, (online), August 2021.
2) Towards More Reliable Fusion of Sparse Visual Data, Department of Visualization, Texas A&M University, (online), April 2021.

3) Geometric and Visual Computing for Computer-aided Medicine and Forensics, Harbin Medical University, Harbin, Heilongjiang, China, June 2019.
4) Reassembly of Fragmented Geometric and Visual Data: Teaching Computers to Solve Jigsaw Puzzles, Symposium on AI-driven Computational Math and Vision, Dalian, Liaoning, China, May 2019.
5) Geometric and Visual Computing and its Applications on CAD, Robotics, and Forensics, Mechanical Engineering Department, Zhejiang University, Hangzhou, Zhejiang, China, May 2019.
6) Computational Forensics: Digital Facial Reconstruction for Skull Identification, School of Mathematical Sciences, Dalian University of Technology, Dalian, Liaoning, China, December 2018.
7) Large-scale Geometric Data Processing for Scientific Computing and Computational Forensics, HPRC Computational and Data Sciences Seminar/Lecture Series, Texas A&M University, College Station, TX, USA, April 2018.
8) Geometric Data Matching and its Engineering and Graphics Applications, School of Computer Science, Xidian University, Xi'an, Shanxi, China, June 2017.
9) Reliable Geometric Data Mapping and its Engineering and Graphics Applications, School of Mechanical Engineering, Zhejiang University, Hangzhou, Zhejiang, China, April 2017.
10) Reliable Groupwise Geometric Matching for Computer-aided Engineering, Medicine, Forensics, and Robotics, State Key Laboratory for Manufacturing System Engineering, Xi'an Jiaotong University, Xi'an, Shanxi, China, July 2016.
11) *Groupwise Geometric Matching for Medical, Forensic, and Robotic Image Analysis*, Physics Department, Xiamen University, Xiamen, Fujian, China, June 2016.
12) *Geometric and Visual Computing and its Scientific Applications*, Louisiana NSF EPSCoR Symposium, Baton Rouge, LA, USA, August 2014.
13) *Computational and Quantitative Imaging and Geometric Analysis for Medical Motion Tracking and Modeling*, Pennington Biomedical Research Center, Baton Rouge, LA, USA, February 2013.
14) *Digital Forensic Facial Reconstruction using Geometric Modeling Techniques*, invited keynote talk, Louisiana Junior Science and Humanities Symposium, Baton Rouge, LA, USA, January 2012.
15) *Polycube Parameterization for Hexahedral Remeshing*, Symposium on Hexahedral Remeshing of Volumetric Domains, SIAM Conference Geometric & Physical Modeling, Orlando, FL, USA, October 2011.
16) *On Computation and Applications of Inter-shape Mapping*, Cognitive Science Department, Xiamen University, Xiamen, China, September 2011.
17) *Volumetric Data Mapping via Shape Decomposition with Feature Alignment*, Department of Computer Science, Stony Brook University (SUNY), Stony Brook, NY, USA, May 2010.
18) *Geometric Data Mapping through Shape Decomposition*, SIAM (Society for Industrial and Applied Mathematics) Student Chapter, Louisiana State University, Baton Rouge, LA, USA, May 2010.
19) *Shape Mapping Framework for Graphics and Visual Computing*, Department of Computer Science, Hong Kong Baptist University, Hong Kong, China, April 2008.

20) *Shape Mapping Framework for Graphics and Visual Computing*, Division of Computing, Hong Kong Polytechnic University, Hong Kong, China, April 2008.
21) *A Shape Mapping Framework for Graphics and Visual Computing*, Division of Computing Studies, Arizona State University, Mesa, Arizona, March 2008.
22) *A Shape Mapping Framework for Graphics and Visual Computing,* Center for Advanced Computer Studies, University of Louisiana at Lafayette, Lafayette, LA, USA, March 2008.
23) *Shape Mapping and its Applications*, Graphics and Visualization Student Symposium, IBM TJ Watson Research Center, Yorktown, NY, USA, April 2007.

5. Funded Projects

1) S. Chen, **X. Li**, B. Guo, "Dissemination of an Adolescent Obesity Prevention Intervention to Louisiana Schools," NIH, $451,182. (X. Li is the TAMU PI, TAMU amount: $90,044), 4/2023-3/2026.
2) S. Siddiqui, B. Roe, C. Babbitt, C. Chavis, R. Neff, "SRS RN: Multiscale RECIPES (Resilient, Equitable, and Circular Innovations with Partnership and Education Synergies) for Sustainable Food Systems," NSF, $15,000,000 (**X. Li** is the LSU/TAMU PI, LSU/TAMU amount: $275,135), 10/2021-9/2026.
3) **X. Li**, "Deep Generative Learning for Visual Data Synthesis and Manipulation," TAMU TAMIDS Course Development Grant Program, $15,000, 6/2023-12/2024.
4) **X. Li**, "XR Computing Platform for Millennial Learners," Louisiana State University, STF Funds, $147,770. 6/2021 – 5/2023.
5) R. Parker, M. Aubanel, D. Ostrenko, **X. Li**, J. Buch, I. Pletcher, J. Allison, H. Nam, "Virtual Production Program at LSU", Louisiana Economic Development (LED), $1,250,000, 7/2021—6/2026.
6) M. Khonsari, S. Guo, G. Li, G. Palardy, B. Bourdin, L. Butler, **X. Li**, W. Meng, M. Sun, J. Zhang, D. Nikitopoulos, P. Sprunger, J. Pojman, "RII Track-1: Louisiana Materials Design Alliance (LAMDA)," NSF, $8,197,361, 7/2020-6/2025.
7) N. Jafari, **X. Li**, Q. Chen. "Reconstruction of Flood Hydrographs in Louisiana during Hurricanes and Floods", Louisiana Board of Regents, ITRS, $221,226. 10/2018 – 9/2022.
8) J. Sharma, **X. Li**, "Cross-Modality Super-Resolution of GRACE Gravity Data for Geophysical Exploration," NASA/EPSCoR Research Enhancement Award, $32,072. 9/1/2020—8/31/2022.
9) C. Marlveaux, M. de Queiroz, **X. Li**, H. Hassan, "Real-Time Work Zone Traffic Management via Unmanned Air Vehicles", Transportation of South-Central States (Tran-SET), US Department of Transportation, $80,000. 8/15/2019-02/15/2021.
10) S. Shao, M. Khonsari, S. Guo, W. J. Meng, G. Manas, G. Palardy, Y. Wang, F. Lu, J. Zhang, L. Butler, D. Zhang, P. Sprunger, **X. Li**, N. Emami, S. Yao, J. Francis, M. Beck. "Establishing Center for Enhanced Strucutral Integrity Research (CEnSIR) at LSU", LSU Faculty Research Grant, $87,500, 07/2019 – 06/2021.
11) Q. Chen, R. Twilley, S. Brandit, H. Liu, Z. Xue, J. Liang, S. Bentley, **X. Li**, "CyberSEES: Type 2: A Coastal Resilience Collaboratory: Cyber-enabled Discoveries

for Sustainable Deltaic Coasts," National Science Foundation, CyberSEES-1539567, $1,199,154, 10/2015-9/2019.

12) N. Jafari, Q. Chen, **X. Li**, "RAPID: Fast Reconstruction of Flood Hydrographs in the Houston Metropolitan Area during Hurricane Harvey Based on Image Processing and In-situ Measurements," National Science Foundation, NSF-EAR-1760582, $61,167, 10/2017 – 9/2018.
13) **X. Li**, M. Manhein, W. Waggenspack, "Digital Forensic Facial Reconstruction from Incomplete Datasets," National Science Foundation, CISEIIS-1320959. $447,611. 08/2013-07/2018.
14) S. Ishak, **X. Li**, "Establishing an Intelligent Transportation Systems (ITS) Lab at LTRC (Phase II)," Louisiana Transportation Research Center, LTRC-736-99-1723/10-6SS, $704,983, 8/2010–06/2018.
15) **X. Li**, Eric Konrad "Virtual Reality Exposure Therapy for Post-Traumatic Stress Disorder in Civilian Gunshot Victims: A Design and Feasibility Trial," LSU Biomedical Collaborative Research Program, PG007883. $50,000, 08/2016-07/2017.
16) **X. Li**, M. Manhein, W. Waggenspack, "REU Supplement for Digital Forensic Facial Reconstruction from Incomplete Datasets," National Science Foundation, CISE IIS-1320959. $32,000, 05/2014-07/2017.
17) J. Tao, W. Berger, **X. Li**, "BIGDATA: Small: DCM: Collaborative Research: An efficient, versatile, scalable, and portable storage system for scientific data containers", NSF, Big Data Science & Engineering, IIS-1251095, $150,000, 7/2013-6/2017.
18) **X. Li**, "Developing an Interactive Image Pattern Analysis and Classification System for Barre Assessment and Grading," U.S. Department of Agriculture (USDA) Agricultural Research Service, AR0008REIM. $20,000, 05/2015-10/2015.
19) D. Koppleman, G. Baumgartner, R. Kooima, **X. Li**, L. Peng, and R. Vaidyanathan, "Many-Thread (GPU) and Many-Core (MIC) Accelerator Equipment for Research and Instruction on Next-Generation Graphics and Scientific Simulation", Louisiana Board of Regents, LEQSF(2015-16)-ENH-TR-10, $96,240, 6/2015-5/2016.
20) M. Aubanel, R. Kooima, **X. Li**, H. Y. Nam, F. Ostrenko, "Digital Media Arts and Engineering Lab", Louisiana Board of Regents, LEQSF(2015-16)-ENH-TR-04, $75,297, 6/2015-5/2016.
21) H. Liu et al. "MRI: Acquisition of SuperMIC -- A Heterogeneous Computing Environment to Enable Transformation of Computational Research and Education in the State of Louisiana," National Science Foundation, ACI-1338051, $3,924,181 (there is an additional LSU match of $1,681,792), 10/2013-9/2016. (Role: Senior Investigator).
22) H. Liu, H. Kaiser, J. Lupo, M. Jarrell, Z. Yun, J. Ramanujam, D. Koppelman, **X. Li**, "CUDA Research Center at LSU," NVIDIA Research Program, 1/2013-12/2015.
23) **X. Li**, "Large-scale Geometric Data Processing and Integration for Scientific Simulation in Coastal Modeling," LA-BOR NSF PFunds, LEQSF-EPS(2015)-PFUND-397, $10,000. 10/2014-9/2015.
24) J. Tohline et al. "CADIS – Cyberinfrastructure Advancing Data-Interactive Sciences," National Science Foundation, ACI-1246443, $499,758, 01/2013-12/2015. (Role: Senior Investigator).

25) B. Ullmer et al., "MRI: Development of Melete: an interaction-oriented, software-rich computer cluster with tangible interface support for collaborative research and the classroom," National Science Foundation, CNS-1126739, $900,000, 9/2011-8/2015. (Role: Senior Investigator).

26) **X. Li**, "Large-scale Geometric Data Processing for Scientific Simulations in Coastal Modeling and Biomedical Informatics," LSU Economic Development Assistantships. $25,000, 01/2014-06/2014.

27) H. Liu, et al., "II-NEW: Shelob - A Heterogeneous Computing Platform to Enable Transformation of Computational Research and Education in the State of Louisiana," National Science Foundation, CNS-1205682, $539,999, 7/2012-6/2014. (Role: Senior Investigator).

28) **X. Li**, "3D Human Body Scanning, Measurement, and Posture Analysis using Kinects," Pennington Biomedical Research Center, PBRC-40498, $21,045. 5/2013-8/2013.

29) **X. Li**, "Spatiotemporal geometric data matching for biomedical applications," LA-BOR NSF PFunds, $10,000, LEQSF-EPS(2013)-PFUND-312, 01/01/2013-12/31/2013.

30) **X. Li**, "Volumetric Mapping and Parameterization for Digital Media, Shape Modeling and Scientific Simulation," Board of Regents, State of Louisiana, Research Competitive Subprogram, LEQSF(2009-12)-RD-A-06, $124,500, 7/2009–6/2013.

31) **X. Li**, "Geometric Information Analysis and Computing Towards Intelligent Medical Planning and Management," IBM Faculty Awards, $40,000, 1/2012 – 1/2014.

32) **X. Li**, "Surface and Volumetric Matching for Forensic Facial Reconstruction from Incomplete Skulls," Board of Regents, State of Louisiana, Pilot Funding for New Research (PFund) Competition, LEQSF-EPS(2011)-PFund-236, $10,000, 3/2011–2/2012.

33) **X. Li**, H. Zhang, "Volumetric Partitioning for Geometric Data Mapping and Processing," Louisiana State University Faculty Research Grant. $10,000. 9/2010–9/2011.

34) D. Koppleman, **X. Li**, L. Peng, J. Ramanujam and R. Vaidyanathan, "A Facility for GPU and GPGPU Research and Instruction," Board of Regents, State of Louisiana, LEQSF(2009–10)-ENHTR, $80,800, 6/2009–6/2011.

35) **X. Li**, "Solid Shape Parameterization for Efficient Finite Element Analysis and Scientific Simulations," Board of Regents, State of Louisiana, Pilot Funding for New Research (PFund) Competition, NSF(2009)-PFund-133, $10,000, 2/2009–1/2010.

36) **X. Li**, "A Facility for Geometric and Visual Computing Research and Instruction," LSU Center for Computation and Technology AVATAR Funds, Louisiana State University, $50,000, 4/2010–6/2010.

6. Student Supervision

@ TAMU:

- Yongqing Liang (CSE PhD student), co-supervised with Wenping Wang
- Zhengming Yu (CSE PhD student), co-supervised with Wenping Wang
- Jingdong Zhang (CSE PhD student), co-supervised with Wenping Wang
- Zhuowen Shen (CSE PhD student), co-supervised with Wenping Wang
- Cheng Niu (CSE MS student)
- Zixi Liu (CSE MS student)
- Ashish Kumar (CSE MS student)
- Junhui Han (CSE MS student)

- John Alberse (VIS MS student)
- Kofi Kyei-Amponsah (VIS MS student)

@LSU:

- Graduated PhD students (9): H. Xu, S. Wan, R. Dibiano, W. Yu, K. Zhang, K. Sekeroglu, H. Kamran, C. Liu, M. Korban
- On-going PhD students (2): S. Pillai, E. Ravanbakhsh
- Graduated MS students (21): Y. Zhang, P. Du, N. Urella, T. Ngyuen, M. Hajij, P. Ravi, H. Xu, S. Wan, L. Penubaku, Z. Zhang, C. Zhang, J. Li, P. Pudota, S. Chilakapati, G. Payyavula, R. Duggapu, N. Bathula, S. Kolpaka, K. Vutukuri, K. Chirra, Q. Huang.

7. Professional Activities/Services

- Journal Editorial Board (6)
  - Computer-aided Design (CAD),
    - Associate Editor (2020 – Present)
    - Guest Editor (2019, 2020)
  - Journal of Computer Science and Technology (JCST), Associate Editor, (2018 – present)
  - AAAS Science Partner Journal – Research, Associate Editor, (2018 – present)
  - Computer Aided Geometric Design (CAGD), Guest Editor (2021-Present)
  - Sensors, Guest Editor, 2021- Present
  - Lecture Notes of Computer Science (LNCS), Special Issue of Visual Computing, Co-editor, 2019.
- Conference Organization (11)
  1) SIAM Conference on Geometric Design (GD) 2023, Technical Program Co-chair.
  2) International Conference on Geometric Modeling and Processing (GMP) 2022, Technical Program Co-Chair.
  3) SIAM Conference on Geometric and Physical Modeling (SPM/GD) 2021, Conference Co-Chair.
  4) ACM Symposium on Solid and Physical Modeling (SPM) 2020, Technical Program Co-Chair.
  5) IEEE International Conference on Computer Science & Education 2020, Technical Program Co-Chair.
  6) ACM Symposium on Solid and Physical Modeling (SPM) 2019, Technical Program Co-Chair.
  7) International Geometry Summit (IGS) 2019, Technical Poster Program Co-Chair.
  8) International Symposium of Visual Computing (ISVC) 2019, Computer Graphics Program Co-Chair.
  9) IEEE International Conference on Computer Science & Education 2019, Publication Co-Chair.
  10) IEEE International Conference on Shape Modeling and Applications (SMI) 2018, Poster Program Chair.
  11) IEEE International Conference on Computer Science & Education 2018, Technical Program Co-Chair.
- Conference Technical Program Committee (past three years):

2024:

- Annual AAAI Conference on Artificial Intelligence (AAAI) (2024)

2023:

- Pacific Graphics (PG) (2023)
- Computer Graphics International (CGI) (2023)
- International Conference on Geometric Modeling and Processing (GMP) (2023)
- International Symposium on Visual Computing (ISVC) 2023
- IEEE International Conference on Shape Modeling and Applications (SMI) 2023

2022:

- IEEE International Conference on Shape Modeling and Applications (SMI) 2022.
- Winter Conference on Applications of Computer Vision (WACV) 2022.
- International Conference on Computer Animation and Social Agents (CASA) 2022
- International Conference on Computer Graphics, Visualization and Computer Vision (WSCG) 2022
- International Symposium on Visual Computing (ISVC) 2022
- Motion, Interaction and Games (MIG) 2022

2021:

- IEEE International Conference on Shape Modeling and Applications (SMI) 2021
- Winter Conference on Applications of Computer Vision (WACV) 2021
- SIAM Conference on Geometric Design (GD) 2021

- Steering Committee, International Solid Modeling Association, 1/1/2023 – 12/31/2027.
- Paper reviewing:
  - TPAMI, TOG, TVCG, TRO, TIP, TSP, TNNLS, TIST, RAL, CGA, CGF, GMOD, CAD, CAGD, TVCJ, CAG, CVIU, CAVW, JCST, JCAM
  - SIGGRAPH, SIGGRAPH Asia, CVPR, ICCV, VIS, InfoVIS, ICRA, GD, WACV, SPM, IMR, SPM, SMI, ECCV, ACCV, ISVC, HAVE, CASA, VRCAI, EG, PG, GMP, WSCG, AAAI, GLOBECOM.
- Professional memberships
  - Senior Member of IEEE
  - Life Member of ACM
  - Member of SIAM