

Jinglei Shi

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Research interests: Computational imaging (Light Field), Compression, Video processing, Scene reconstruction, Geometry estimation

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EDUCATION

French Institute for Research in Computer Science and Automation (INRIA)	Rennes, France
Ph.D. degree in Computer Science, Supervisor: Christine Guillemot (IEEE fellow)	10.2017–06.2021
Project website: ERC Clim Thesis link: Thesis manuscript	
IMT Atlantique	Brest, France
M.S. & Engineer degrees in Image Proc., GPA: 3.75/4.00	08.2014–09.2017
Awarded: China Scholarship Council Scholarships	
University of Electronic Science and Technology of China (UESTC)	Chengdu, China
B.S. in Electronic Information Engineering, GPA: 3.92/4.00 (Top 1%)	09.2011–08.2014
Awarded: The Top-Class People's Scholarship	

WORK/INTERNSHIP EXPERIENCE

French Institute for Research in Computer Science and Automation (INRIA)	Rennes, France
Post-doctoral research fellow (Team SIROCCO)	06.2021–now
- Neural Radiance Field (NeRF)-based Light Field Compression	
Orange S.A.	Paris, France
Intern at DSI department	03.2017–09.2017
- Implemented a prototype for robots Pepper and Nao, making them interact with clients to offer product information.	
- Constructed a learning-based vocal conversion system.	
IMT Atlantique	Brest, France
Intern at CS department	06.2016–09.2016
- Constructed a dataset containing 2000+ of the robot's movement trajectories.	
- Focused on a handwriting task, where I implemented a neural network that uses high-level representations of digits to generate sequences of low-level commands to drive the robot.	

PUBLISHED PAPERS

- [1] **J. Shi**, X. Jiang, and C. Guillemot, "A framework for learning depth from a flexible subset of dense and sparse light field views", *IEEE Trans. Image Process. (TIP)*, vol. 28, no. 12, pp. 5867–5880, Dec. 2019.
- [2] **J. Shi**, X. Jiang, and C. Guillemot, "Learning fused pixel and feature-based view reconstructions for light fields", in *IEEE Conf. on Computer Vision and Pattern Recognition (CVPR Oral)*, Jun. 2020.
- [3] **J. Shi**, X. Jiang, and C. Guillemot, "Deep video frame rate up-conversion network using feature-based progressive residue refinement", in *International Conference on Computer Vision Theory and Applications (VISAPP)*, Feb. 2022.

- [4] X. Jiang, **J.Shi**, and C. Guillemot, “A learning based depth estimation framework for 4D densely and sparsely sampled light fields”, in *IEEE Int. Conf. on Acoustics, Speech and Signal Processing (ICASSP)*, 2019, pp. 2257–2261.
- [5] Z. Xiao, **J.Shi**, X. Jiang, and C. Guillemot, “A learning-based view extrapolation method for axial super-resolution”, *Elsevier Neurocomputing (NC)*, May 2021.

PAPERS UNDER REVIEW

- [1] **J.Shi** and C. Guillemot, “Distilled low rank neural radiance field with quantization for light field compression”, *IEEE Trans. Pattern Anal. Mach. Intell. (TPAMI)*, Jan. 2022.
- [2] **J.Shi**, X. Jiang, and C. Guillemot, “Deep residual architecture using pixel and feature cues for view synthesis and temporal interpolation”, *IEEE Trans. Comput. Imaging (TCI)*, Aug. 2021.
- [3] Z. Xiao, **J.Shi**, X. Jiang, and C. Guillemot, “Axial refocusing precision model with light fields”, *Elsevier Signal Proc.: Image Communication (SPIC)*, Jul. 2021.
- [4] X. Jiang, **J.Shi**, and C. Guillemot, “Untrained neural network prior for compact light field representation and compression”, *IEEE Trans. Image Process. (TIP)*, Sep. 2021.

PEER REVIEWING ACTIVITIES

Conferences: ICME Workshop, Eurographics

Journals: IEEE Trans. Pattern Anal. Mach. Intell. (**TPAMI**), IEEE Trans. Image Process. (**TIP**)

RESEARCH ACTIVITIES

ERC advanced grant CLIM Project	2016-2022
Contributor , <i>Learning-based light field depth estimation and view synthesis</i> , PI: Christine Guillemot	
French National Research Agency (DeepCim Project)	2020-2023
Contributor , <i>Optimization-based solutions in computational imaging</i> , PI: Christine Guillemot	
Workshop on Computational Imaging	Sep.2021
Invited talk on ‘ <i>Deep Residual Architecture Using Pixel and Feature Cues for View Synthesis</i> ’	