Jinglei Shi

Birthday: 07. Sep. 1992
Telephone: +33 07 82 70 66 25
Email: jlshi@outlook.com
Research interests: Computational imaging (Light Field), Compression, Video processing, Scene reconstruction, Geometry estimation
LinkedIn, WeChat ID: jl_shi1992

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, *Learning-based light field depth estimation and view synthesis*, PI: Christine Guillemot

French National Research Agency (DeepCim Project) 2020-2023
Contributor, *Optimization-based solutions in computational imaging*, PI: Christine Guillemot

Workshop on Computational Imaging Sep.2021
Invited talk on '*Deep Residual Architecture Using Pixel and Feature Cues for View Synthesis*'