

Jiulong Liu

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Education

- 2012–2017 **Phd**, *Shanghai Jiao Tong University*, Shanghai, China.
School of Mathematical Science. **Advisor**: Xiaoqun Zhang & Hao Gao.
- 2008–2012 **Undergraduate**, *Xidian University*, Xi'an, China.
Department of Mathematics

Employment

- 2021.05–Present **Associate Professor**, *Chinese Academy of Sciences*, China.
Academy of Mathematics and Systems Science.
- 2018.01–2021.04 **Research Fellow**, *National University of Singapore*, Singapore.
Department of Mathematics.

Honors and Activities

- July, 2018 **2 Months Research Visiting**, *University of Cambridge*.
- Oct, 2017 **Research Awards**, *Shanghai Jiao Tong University Outstanding Nomination Doctoral Dissertations*.
- Oct, 2017 **Research Awards**, *China Society for Industrial and Applied Mathematics, 2017 Students Paper Award*.
- Nov, 2016 **Research Awards**, *Benyu Guo's Outstanding Paper Award for Young Scholars, First Prize*.
- Nov, 2016 **Research Awards**, *Shanghai Jiao Tong University Academic Star, Nomination Award*.
- June, 2016 **3 Months Research Visiting**, *University of California Los Angeles*.
- July, 2015 **6 Months Research Visiting**, *University of California Los Angeles*.
- Sept, 2014 **6 Months Research Visiting**, *University of California Irvine*.
- July, 2013 **Summer School**, *Peking University Applied Math Summer School*.

Talks

- Sept, 2018 **MICCAI**, *The 21th Medical Image Computing Computer Assisted Intervention*, Granada, Spain.
Image Reconstruction by Splitting Deep Learning Regularization from Iterative Inversion.
- July, 2016 **AAPM**, *AAPM 58th Annual Meeting & Exhibition*, Washington, DC.
5D Respiratory Motion Model Based Iterative Reconstruction Method for 4DCBCT.
- June, 2016 **IS16**, *SIAM Conference on Imaging Science*, Albuquerque, New Mexico.
5D Respiratory Motion Model Based Image Reconstruction Algorithm for 4DCBCT.
- Aug, 2015 **AAPM**, *AAPM 57th Annual Meeting & Exhibition*, Anaheim, CA.
Nonlocal Total Variation Based Spectral CT Image Reconstruction
- Dec, 2014 **SPOC**, *2014 International Workshop on Signal Processing, Optimization, and Control*, Harbin.
A wavelet method for Ultrasound video segmentation

Publications

- 1 *Zhaoqiang Liu, Xinshao Wang, and Jiulong Liu. Misspecified Phase Retrieval with Generative Priors. **NeurIPS 2022**.*
- 2 *Jiulong Liu, and Zhaoqiang Liu. Non-Iterative Recovery from Nonlinear Observations using Generative Models. **CVPR 2022**.*

- 3 Zhaoqiang Liu, **Jiulong Liu**, Subhroshekhar Ghosh, Jun Han, and Jonathan Scarlett. Generative Principal Component Analysis. *ICLR 2022* .
- 4 Hao Gao, **Jiulong Liu**, Yuting Lin, Gregory N. Gan, Guillem Pratx, Fen Wang, Katja Langen et al. Simultaneous dose and dose rate optimization (SDDRO) of the FLASH effect for pencil - beam - scanning proton therapy. *Medical Physics* (2021).
- 5 **Jiulong Liu**, Angelica I Aviles-Rivero, Hui Ji and Schönlieb, Carola-Bibiane. Rethinking medical image reconstruction via shape prior, going deeper and faster: Deep joint indirect registration and reconstruction. *Medical image analysis* 68, 101930, 2021
- 6 **Jiulong Liu**, and Nanguang Chen and Hui Ji. Learnable Douglas-Rachford iteration and its applications in DOT imaging. *Inverse Problems & Imaging* 14.4 (2020): 683.
- 7 **Jiulong Liu**, Tao Kuang, and Xiaoqun Zhang. Image reconstruction by splitting deep learning regularization from iterative inversion. *MICCAI, Springer, Cham*, 2018.
- 8 **Jiulong Liu**, Xue Zhang, Xiaoqun Zhang, Hongkai Zhao, Yu Gao, David Thomase, Daniel A Low, and Hao Gao. 5D respiratory motion model based image reconstruction algorithm for 4D cone-beam computed tomography. *Inverse Problems* 31.11 (2015): 115007.(Highlight of 2015, ,)
- 9 **Jiulong Liu**, Xiaoqun Zhang, Bin Dong, Zuowei Shen, and Lixu Gu. A wavelet frame method with shape prior for ultrasound video segmentation, *SIAM Journal on Imaging Sciences* 9.2 (2016): 495-519.(spotlighted by SIAM in SIAM Nuggets, and also reported in various websites: SIAM.NEWS; Science News; ScienceDaily; etc;)
- 10 **Jiulong Liu**, Huanjun Ding, Sabee Molloi, Xiaoqun Zhang, Hao Gao. TICMR: Total Image Constrained Material Reconstruction via nonlocal total variation regularization for spectral CT. *IEEE transactions on medical imaging* 35.12 (2016): 2578-2586.()
- 11 **Jiulong Liu** and Hao Gao. Material reconstruction for spectral computed tomography with detector response function. *Inverse Problems* 32.11 (2016): 114001.()
- 12 **Jiulong Liu**, Daniel A Low and H Gao. 5D Respiratory Motion Model Based Iterative Reconstruction Method for 4DCBCT. *Medical Physics* 43, 3897 (2016).()
- 13 **Jiulong Liu** and Hao Gao. Material Reconstruction for Spectral Computed Tomography with Detector Response Function. *Medical Physics* 43, 3834 (2016).()
- 14 **Jiulong Liu**, Huanjun Ding, Sabee Molloi, Xiaoqun Zhang, Hao Gao. Nonlocal Total Variation Based Spectral CT Image Reconstruction. *Medical Physics* 42, 3570-3570 (2015)()
- 15 **Jiulong Liu**, Yu Gao, David Thomas, Xiaoqun Zhang, Hongkai Zhao, Daniel A Low and Hao Gao. Simultaneous Reference-Image and Deformation-Field Reconstruction for 4DCBCT with Periodic and Non-Periodic Breathing Based On 5D Respiratory Motion Model. *Medical Physics* 42, 3731-3731 (2015)