

# Curriculum Vitae

Jing Chen

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**Personal Information** Born on 16 March, 1994 in Hubei Province, P.R. China.

## Education Experience

- Division of Mathematical Sciences, School of Physical & Mathematical Sciences, Nanyang Technological University *Sept. 2021 - present*
  - Research fellow
  - Advisor: Associate Prof. Ping Tong
- Department of Mathematical Sciences, Tsinghua University *Aug. 2016 - Jun. 2021*
  - Doctor of Science in Mathematics, Tsinghua University
  - Advisor: Associate Prof. Hao Wu
- Visiting Ph.D Student in GFZ German Research Centre for Geosciences *Sept. 2018 - Sept. 2019*
  - Joint advisor: Senior Scientist Dr. Xiaohui Yuan
- Bachelor of Science in Mathematics, Tsinghua University *Jul. 2016*

## Research Interests

- Seismic Tomography
- Optimal Transport Problems
- Eikonal Equation Solver

## Awards

- [1] The Most Concerned Academic Paper in Beijing, Beijing Association for Science and Technology, 2019.
- [2] Excellent Youth Paper Award, China Society for Industrial and Applied Mathematics, 2017.
- [3] Excellent Youth Paper Award, Annual Meeting of Chinese Geoscience Union, 2017.

## Academic Activities

- Conference Speeches and Posters

- [1] *The American Geophysical Union Fall Meeting 2002*, Chiacago, America, 2022. (**on-line poster presentation**)
  - [2] *The Applied Math PhD Seminar*, Fudan University, Shanghai, China, 2021. (**contributed talk**)
  - [3] *The 4th Youth Forum in the 18th Annual Meeting of CSIAM*, Online, November, 2020. (**contributed talk**)
  - [4] *The 6th Doctoral Forum of Beijing for Computational Mathematics*, Peking University, Beijing, China, October, 2020. (**contributed talk**)
  - [5] *The European Geosciences Union General Assembly 2019*, Vienna, Austria, April, 2019. (**poster presentation**)
  - [6] *Doctoral Forum of GFZ German Research Centre*, Potsdam, Germany, March, 2019. (**poster presentation**)
  - [7] *The 2017 Annual Meeting of Chinese Geoscience Union Mini-symposium on “Topic 50. Seismic Wave Propagation and Imaging”*, Beijing, China, October, 2017. (**contributed talk**)
  - [8] *Youth Forum in the 15th Annual Meeting of CSIAM*, Qingdao, China, October, 2017. (**contributed talk & poster presentation**)
  - [9] *Doctoral Forum of Tsinghua University*, Sanbao, Beijing, China, March, 2017. (**contributed talk**)
- Conference Attended
    - [1] *The Workshop of Computational Geophysics and Partial Differential Equation Inverse Problems*, Northwestern Polytechnical University (Online), November, 2020.
    - [2] *The Forum of Tsinghua University for Computational Mathematics and Operations Research*, Tsinghua University, Beijing, China, November, 2020.
    - [3] *The 17th Annual Meeting of CSIAM*, Foshan, China, September, 2019
    - [4] *The 2017 Annual Meeting of NSFC Key Project Computational Methods for Multi-scale, Multi-physics Transport Problems in Hyperbolic Vehicles*, Shanghai Jiao Tong University, Shanghai, China, May, 2017.
    - [5] *2016 Workshop of Beijing-Tianjin-Hebei Society for Computational Mathematics* , Tianjing, China, Sep, 2016.
    - [6] *Computational Seismology*, Tsinghua Sanya International Mathematics Forum, Sanya, Hainan, China, Jan, 2016.

## Publications

- [1] Z. Li, Y. Tang, J. Chen, and H. Wu, *The quadratic Wasserstein metric with squaring scaling for seismic velocity inversion*. Numer. Math. Theor. Meth. Appl., accepted.
- [2] J. Chen, G. Chen, M. Nagaso, and P. Tong, *Adjoint-state travelttime tomography for azimuthally anisotropic media in spherical coordinates*. Geophys. J. Int., (2023), ggad093. <https://doi.org/10.1093/gji/ggad093>

- [3] D. Zhou, J. Chen, H. Wu, and D. Yang, *The Wasserstein-Fisher-Rao metric for waveform based earthquake location*. J. Comput. Math., 41 (2023), pp. 417-438.  
<https://doi.org/10.4208/jcm.2109-m2021-0045>
- [4] G. Chen, J. Chen, C. Tape, H. Wu, and P. Tong, *Double-difference adjoint tomography of the crust and uppermost mantle beneath Alaska*. J. Geophys. Res. Solid Earth, 128 (2023), e2022JB025168.  
<https://doi.org/10.1029/2022JB025168>
- [5] Q. Liao, J. Chen, Z. Wang, B. Bai, S. Jin, and H. Wu, *Fast Sinkhorn I: An  $O(N)$  algorithm for the Wasserstein-1 metric*. Comm. Math. Sci., 20 (2022), pp. 2053-2067.  
<https://doi.org/10.4310/CMS.2022.v20.n7.a11>
- [6] J. Chen, G. Chen, H. Wu, J. Yao, and P. Tong, *Adjoint Tomography of Northeast Japan Revealed by Common-Source Double-Difference Travel-Time Data*. Seismol. Res. Lett., 93 (2022), pp. 1835-1851.  
<https://doi.org/10.1785/0220210317>
- [7] J. Chen, S.-K. Kufner, X. Yuan, B. Heit, H. Wu, D. Yang, B. Schurr, and S. Kay, *Lithospheric delamination beneath the southern Puna plateau resolved by local earthquake tomography*. J. Geophys. Res. Solid Earth, 125 (2020), e2019JB019040.  
<https://doi.org/10.1029/2019JB019040>
- [8] J. Chen, H. Jing, P. Tong, H. Wu, and D. Yang. *The auxiliary function method for waveform based earthquake location*. J. Comput. Phys., 413 (2020), 109453.  
<https://doi.org/10.1016/j.jcp.2020.109453>
- [9] J. Chen, Y. Chen, H. Wu, and D. Yang. *The quadratic Wasserstein metric for earthquake location*. J. Comput. Phys., 373 (2018), pp. 188-209.  
<https://doi.org/10.1016/j.jcp.2018.06.066>
- [10] H. Wu, J. Chen, X. Huang, and D. Yang, *A new earthquake location method based on the waveform inversion*. Comm. Comput. Phys., 23 (2018), pp. 118-141.  
<https://doi.org/10.4208/cicp.OA-2016-0203>