SHUZE WANG

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EDUCATION

University of Michigan, Ann Arbor August 2018 - April 2023 (expected)
Ph.D. Candidate, Bioinformatics GPA: 3.98

University of Michigan, Ann Arbor August 2020 - April 2022
M.S., Electrical Engineering & Computer Science GPA: 3.98
Courses: Deep learning, Computer Vision, Machine Learning, Matrix Algebra

University of Michigan, Ann Arbor August 2016 - April 2018
M.S., Bioinformatics GPA: 4.00
Courses: Bioinformatics, High-throughput Analysis, Signal Processing, Probability and Random Process, Statistics, Biochemistry, Molecular Biology

Central University of Finance & Economics, China August 2012 - July 2016
B.M., Electronic Commerce GPA: 3.5

Purdue University, West Lafayette August 2014 - May 2015
Exchange Program, Management Information Systems GPA: 3.9

PUBLICATIONS

1. **Wang, S.**, Chakraborty, S., Fu, Y., Lee, P. M., Liu, J., Waldhaus, J. *Spatial transcriptomic reconstruction of the mouse cochlea suggests morphogen-based principles of tonotopic specification.* (Under Review)
2. **Wang, S.**, Lee, P. M., Jones, S., Liu, J., Waldhaus, J. *Mapping the regulatory landscape of auditory hair cells from single-cell multi-omics data.* Genome Research 31 (10), 1885-1899. 2021. https://doi.org/10.1101/gr.271080.120
3. Qin, T., Lee, C., Cavalcante, R. G., Orchard, P., Yao, H., Zhang, H., **Wang, S.**, Patil, S., Boyle, A. P., Sartor, M. A. *Comprehensive enhancer-target gene assignments improve gene set level interpretation of genome-wide regulatory data.* Genome Biol 23, 105 (2022). https://doi.org/10.1186/s13059-022-02668-0
4. Lee, T. C., Cavalcante, G. R., Lee, C., Qin, T., Patil, S., **Wang, S.**, Tsai, T Y. Z., Boyle, P. A., Sartor A. M. (2020). *Poly-Enrich: Count-based methods for gene set enrichment testing with genomic regions.* NAR Genomics and Bioinformatics, Volume 2, Issue 1, March 2020. https://doi.org/10.1093/nargab/lqaa006
5. Wang, H., **Wang, S.**, Yi, X., Tao, Y., Qian, H., Jia, P., Chen, Y., Sun, Y. (2018). *Estimate of ischemic stroke prevalence according to a novel 4-tiered classification of left ventricular hypertrophy: insights from the general Chinese population.* Annals of Medicine, VOL. 50, NO.6, 519-528. https://doi.org/10.1080/07853890.2018.1500702
6. Wang, H., Sun, Y., **Wang, S.**, Qian, H., Jia, P., Chen, Y., Li, Z., Zhang, L. (2018). *Body adiposity index, lipid accumulation product, and cardiometabolic index reveal the contribution of adiposity phenotypes in the risk of hyperuricemia among Chinese rural population.* Clinical Rheumatology, VOL. 37, NO. 8, 2221-2231. https://doi.org/10.1007/s10067-018-4143-x

TALKS

1. **Wang, S.**, Chakraborty, S., Fu, Y., Lee, P. M., Jones, S., Liu, J., Waldhaus, J. (2022). *Opposing gradients of retinoic acid and sonic hedgehog specify tonotopic identity in the mouse cochlea.* Presented at the 30th conference on Intelligent Systems for Molecular Biology. July 11th, 2022, Madison, Wisconsin.
2. **Wang, S.**, Fu, Y., Lee, P. M., Jones, S., Liu, J., Waldhaus, J. (2021). *Molecular Mechanism Conferring Spatial Identity during Cochlear Duct Extension.* Presented at the 12th ACM Conference on Bioinformatics, Computational Biology, and Health Informatics (ACM-BCB). August 1, 2021, Virtual Event.

3. **Wang, S.**, Lee, P. M., Jones, S., Liu, J., Waldhaus, J. (2021). *Mapping the regulatory landscape of auditory hair cells from single-cell multi-omics data.* Presented at the 14th Great Lakes Bioinformatics (GLBIO) conference. May 12, 2021, Virtual Event.
4. **Wang, S.**, Lee, P. M., Jones, S., Liu, J., Waldhaus, J. (2020). *Single Cell Chromatin Accessibility Delineates Cellular Identities of the Neonatal Organ of Corti.* Presented at the 28th conference on Intelligent Systems for Molecular Biology. July 13, 2020, Virtual Event.
5. **Wang, S.**, Lee, P. M., Jones, S., Liu, J., Waldhaus, J. (2020). *Mapping the regulatory landscape of auditory hair cells from single cell.* Presented at The Founders Lectures at University of Michigan, Ann Arbor. October 8, 2020. Virtual Event.
6. **Wang, S.**, Lee, P. M., Liu, J., Waldhaus, J. (2019). *Spatial Reconstruction of the Postnatal Cochlear Duct using scRNA-seq and scATAC-seq.* Presented at Lawrence-Hawkins lectureship at University of Michigan, Ann Arbor. October 16, 2019.

POSTER PRESENTATION

1. **Wang, S.**, Chakraborty, S., Fu, Y., Lee, P. M., Jones, S., Liu, J., Waldhaus, J. (2022). *Opposing gradients of retinoic acid and sonic hedgehog specify tonotopic identity in the mouse cochlea.* Presented at the 30th conference on Intelligent Systems for Molecular Biology. July 11th, 2022, Madison, Wisconsin.
2. **Wang, S.**, Fu, Y., Lee, P. M., Jones, S., Liu, J., Waldhaus, J. (2021). *Molecular Mechanism Conferring Spatial Identity during Cochlear Duct Extension.* Presented at the 29th conference on Intelligent Systems for Molecular Biology. July 27th, 2021, Virtual Event.
3. **Wang, S.**, Lee, P. M., Jones, S., Liu, J., Waldhaus, J. (2021). *Mapping the regulatory landscape of auditory hair cells from single-cell multi-omics data.* Presented at the 14th Great Lakes Bioinformatics (GLBIO) conference. May 12, 2021, Virtual Event.
4. **Wang, S.**, Lee, P. M., Jones, S., Liu, J., Waldhaus, J. (2020). *Single Cell Chromatin Accessibility Delineates Cellular Identities of the Neonatal Organ of Corti.* Presented at the 28th conference on Intelligent Systems for Molecular Biology. July 13, 2020, Virtual Event.
5. **Wang, S.**, Zhao, N., Du, N. (2019). *Predictive Modeling of Preterm Birth using Machine Learning.* Presented at University of Michigan, Ann Arbor. December, 2019

TEACHING EXPERIENCE

University of Michigan, Ann Arbor Fall, 2022
Graduate Student Instructor
Courses: BIOINF 527, Introduction to Bioinformatics & Computational Biology

MENTORING

University of Michigan, Ann Arbor
Zhiheng Yin, MS@EECS (project member)
Xiaotong Xu, Undergrad@LSA (project member)
Benjamin Wurman, Undergrad@LSA (project member)
Qianhui Huang, MS@BIOINF (mentorship program)
Yuheng Du, PhD@BIOINF (mentorship program)
Miriam Shahine, MS@BIOINF (mentorship program)
Ciao-Sin Chelsea Chen, MS@BIOINF (mentorship program)

AWARDS AND HONORS

- Rackham Conference Travel Grant June 2022
- Dean's List & Semester Honors at Purdue University August 2014 – May 2015
- The Scholarship of Outstanding Management of CUFE Fall 2013

OUTREACH ACTIVITIES

- Coordinator, Bioinformatics Peer Mentor Program August 2021 - Present

- Mentor, Bioinformatics Peer Mentor Program — August 2020 - Present
- Volunteer, Community Service at Delonis Shelter, Ann Arbor, MI — Spring 2018
- Volunteer, Community Service at Food Gatherers Warehouse, Ann Arbor, MI — Fall 2017
- Volunteer for Move out Project, Lafayette, IN — Spring 2015
- Volunteer in 9th China international garden EXPO, Beijing, PRC — Fall 2013

TECHNICAL STRENGTHS

Programming	R, Python, Julia, MATLAB, C, C#, Java, CSS, HTML
Statistic Software	SAS, SPSS, Stata
Other	Adobe Illustrator, Adobe Photoshop, LaTeX, Unix/Shell