

Younan Gao

✉ gaoyounan@dal.ca (Preferred)

in <https://web.cs.dal.ca/~younan/>

Education

- Sept 2020 – August 2023 **Ph.D. Computer Science, Dalhousie University, Canada**
Supervisor: *Prof. Meng He*
Thesis: Data Structures for Colored Counting in Grids and Trees
Defence Date: *August 18, 2023*
- Sept 2018 – August 2020 **M.Sc. Computer Science, Dalhousie University, Canada**
Supervisor: *Prof. Meng He*
GPA: 4.3/4.3
Thesis: Fast Preprocessing for Optimal Orthogonal Range Reporting and Range Successor with Applications to Text Indexing
- Jan 2018 – August 2018 **M.A.Sc. Applied Computer Science, Dalhousie University, Canada**
GPA: 4.15/4.3
Note: Transferred to M.Sc. in September 2018
- Sept 2008 – June 2012 **B.Eng. Software Engineering, Dalian University of Technology, China**
GPA: 83/100

Fields of Interest:

Computational Geometry, Data Structures and Algorithms, Distributed Algorithms, Pattern Matching

Employment History

- Sep 2024 – Present **Postdoctoral Researcher** University of Milano-Bicocca, Italy
Supervisor: *Prof. Paola Bonizzoni* and *Prof. Gianluca Della Vedova*
- Oct 2023 – Aug 2024 **Postdoctoral Researcher** Université du Québec en Outaouais (UQO), Canada
Supervisor: *Prof. Andrzej Pelc*
- Jan 2015 – June 2017 **Network Technology Engineer** Huawei Technologies Co., Ltd.
Mexico City, Mexico/Cairo, Egypt/Douala, Cameroon
- July 2012 – Dec 2014 **Java Developer** Huawei Technologies Co., Ltd., Shenzhen, China

Manuscripts

- Sniffing Helps Meeting: Deterministic Rendezvous of Anonymous Agents in the Grid**
Younan Gao and Andrzej Pelc
submitted
- Leader Election for Anonymous Mobile Agents with Footprints**
Younan Gao and Andrzej Pelc
submitted

Research Publications

Conference Proceedings

- 1 Gao, Y., & He, M. (2024). On approximate colored path counting. In *Proceedings of the 16th Latin American Theoretical Informatics Symposium (LATIN)*. doi:10.1007/978-3-031-55598-5_14

- 2 Gao, Y., & Pelc, A. (2024). Gathering teams of deterministic finite automata on a line. In S. Bonomi, L. Galletta, E. Rivière, & V. Schiavoni (Eds.), *Proceedings of the 28th International Conference on Principles of Distributed Systems (OPODIS)* (Vol. 324, 11:1–11:17). [doi:10.4230/LIPICS.OPODIS.2024.11](https://doi.org/10.4230/LIPICS.OPODIS.2024.11)
- 3 Gao, Y. (2023). Adaptive data structures for 2d dominance colored range counting. In *Proceedings of the 18th International Algorithms and Data Structures Symposium (WADS)*, **publishing in a special issue**. [doi:10.1007/978-3-031-38906-1_30](https://doi.org/10.1007/978-3-031-38906-1_30)
- 4 Gao, Y. (2022). Computing matching statistics on repetitive texts. In *Proceedings of the 32nd Data Compression Conference, (DCC)*. [doi:10.1109/DCC52660.2022.00015](https://doi.org/10.1109/DCC52660.2022.00015)
- 5 Gao, Y., & He, M. (2022). Faster path queries in colored trees via sparse matrix multiplication and min-plus product. In *Proceedings of the 30th Annual European Symposium on algorithms (ESA)*, **Accepted Rate: 31.8%** (59:1–59:15). [doi:10.4230/LIPIcs.ESA.2022.59](https://doi.org/10.4230/LIPIcs.ESA.2022.59)
- 6 Gao, Y., & He, M. (2021). Space efficient two-dimensional orthogonal colored range counting. In *Proceedings of the 29th Annual European Symposium on Algorithms (ESA)*, **Accepted Rate: 24.8%** (46:1–46:17). [doi:10.4230/LIPIcs.ESA.2021.46](https://doi.org/10.4230/LIPIcs.ESA.2021.46)
- 7 Gao, Y., He, M., & Nekrich, Y. (2020). Fast preprocessing for optimal orthogonal range reporting and range successor with applications to text indexing. In *Proceedings of the 28th Annual European Symposium on Algorithms (ESA)*, **Accepted Rate: 26.7%** (54:1–54:18). [doi:10.4230/LIPIcs.ESA.2020.54](https://doi.org/10.4230/LIPIcs.ESA.2020.54)

Talks

- Gathering Teams of Deterministic Finite Automata on a Line**
The 28th International Conference on Principles of Distributed Systems, Lucca, Italy
 Slides: https://web.cs.dal.ca/~younan/publications/opodis_presentation
- Adaptive Data Structures for 2D Dominance Colored Range Counting**
The 18th Algorithms and Data Structures Symposium, WADS 2023, Montreal, Canada
 Slides: https://web.cs.dal.ca/~younan/publications/wads_slides_2023
- Faster Path Queries in Colored Trees via Sparse Matrix Multiplication and Min-Plus Product**
European Symposium on Algorithms, ESA 2022, Online
 Video: <https://www.youtube.com/watch?v=Hd7KTmeNPiM>
- Computing Matching Statistics on Repetitive Texts**
Data Compression Conference, DCC 2022, Online
 Video: <https://www.youtube.com/watch?v=mtsDq5hyBLU>
- Space Efficient Two-Dimensional Orthogonal Colored Range Counting**
European Symposium on Algorithms, ESA 2021, Online
 Video: <https://www.youtube.com/watch?v=yG0jgFmhXSs>
- Fast Preprocessing for Optimal Orthogonal Range Reporting and Range Successor with Applications to Text Indexing**
European Symposium on Algorithms, ESA 2020, Online
 Video: <https://www.youtube.com/watch?v=NElhHxCCYkg&t=228s>

Marker/Teaching Assistant

- CSCI 6057/4117: Advanced Data Structures**
Winter 2021, Winter 2022
- CSCI 3110: Design and Analysis of Algorithms**
Summer 2019, Fall 2019, Fall 2020, Summer 2021, Fall 2021, and Fall 2022
- CSCI 2110: Data Structures and Algorithms**
Winter 2022

