

# Hang Zhou

Professor at *École Polytechnique*

✉ [zhouhang32@gmail.com](mailto:zhouhang32@gmail.com)  
📄 [www.normalesup.org/~zhou](http://www.normalesup.org/~zhou)

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## Employment and Education

- 2017 – present    **École Polytechnique, France**
- Professor, since September 2023.
  - Assistant Professor (tenured), September 2017 – August 2023.
  - Habilitation in Computer Science (2022).
- 2015 – 2017    **Max Planck Institute, Germany**
- Postdoctoral Researcher, hosted by Kurt Mehlhorn.
- 2009 – 2015    **École Normale Supérieure de Paris, France**
- PhD in Computer Science (2015). Advisor: Claire Mathieu.
  - Master in Computer Science (2012). Advisor: Marc Lelarge.
  - Bachelor in Computer Science (2010).
- 2007 – 2009    **Peking University, China**

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## Publications

*In my field, the authors are usually listed in alphabetical order.*

- Math. Program.’24** A Tight  $(1.5 + \epsilon)$ -Approximation for Unsplittable Capacitated Vehicle Routing on Trees.  
Claire Mathieu and Hang Zhou.  
*Mathematical Programming*, 2024
- SoCG’24** Faster Approximation Scheme for Euclidean  $k$ -TSP.  
Ernest van Wijland and Hang Zhou.  
*International Symposium on Computational Geometry*, 2024.
- SOSA’23** Capacitated Vehicle Routing in Graphic Metrics.  
Tobias Mömke and Hang Zhou.  
*SIAM Symposium on Simplicity in Algorithms*, 2023.
- TALG’23** A PTAS for Capacitated Vehicle Routing on Trees.  
Claire Mathieu and Hang Zhou.  
*ACM Transactions on Algorithms*, 2023.
- ICALP’23** A Tight  $(1.5 + \epsilon)$ -Approximation for Unsplittable Capacitated Vehicle Routing on Trees.  
Claire Mathieu and Hang Zhou.  
*EATCS International Colloquium on Automata, Languages and Programming*, 2023.
- STACS’23** An Approximation Algorithm for Distance-Constrained Vehicle Routing on Trees.  
Marc Dufay, Claire Mathieu, and Hang Zhou.  
*International Symposium on Theoretical Aspects of Computer Science*, 2023.
- RSA’23** A Simple Algorithm for Graph Reconstruction.  
Claire Mathieu and Hang Zhou.  
*Random Structures and Algorithms*, 2023.
- ITCS’23** Unsplittable Euclidean Capacitated Vehicle Routing: A  $(2 + \epsilon)$ -Approximation Algorithm.  
Fabrizio Grandoni, Claire Mathieu, and Hang Zhou.  
*Innovations in Theoretical Computer Science*, 2023.
- Algorithmica’23** Correlation Clustering and Two-edge-connected Augmentation for Planar Graphs.  
Philip Klein, Claire Mathieu, and Hang Zhou.  
*Algorithmica*, 2023.

- ICALP'22** A PTAS for Capacitated Vehicle Routing on Trees.  
 Claire Mathieu and Hang Zhou.  
*EATCS International Colloquium on Automata, Languages and Programming, 2022.*
- RSA'22** Iterated Tour Partitioning for Euclidean Capacitated Vehicle Routing.  
 Claire Mathieu and Hang Zhou.  
*Random Structures and Algorithms, 2022.*
- ESA'21** A Simple Algorithm for Graph Reconstruction.  
 Claire Mathieu and Hang Zhou.  
*European Symposium on Algorithms, 2021.*
- ISAAC'21** Probabilistic Analysis of Euclidean Capacitated Vehicle Routing.  
 Claire Mathieu and Hang Zhou.  
*International Symposium on Algorithms and Computation, 2021.*
- STOC'18** A  $(5/3 + \epsilon)$ -Approximation for Unsplittable Flow on a Path: Placing Small Tasks into Boxes.  
 Fabrizio Grandoni, Tobias Mömke, Andreas Wiese, and Hang Zhou.  
*ACM Symposium on Theory of Computing, 2018.*
- TALG'18** Graph Reconstruction and Verification.  
 Sampath Kannan, Claire Mathieu, and Hang Zhou.  
*ACM Transactions on Algorithms, 2018.*
- CC'18** Backtracking-Assisted Multiplication.  
 Houda Ferradi, Rémi Géraud, Diana Maimut, David Naccache, and Hang Zhou.  
*Cryptography and Communications, 2018.*
- SODA'17** Optimization of Bootstrapping in Circuits.  
 Fabrice Benhamouda, Tancrède Lepoint, Claire Mathieu, and Hang Zhou.  
*ACM-SIAM Symposium on Discrete Algorithms, 2017.*
- SODA'17** To Augment or Not to Augment: Solving Unsplittable Flow on a Path by Creating Slack.  
 Fabrizio Grandoni, Tobias Mömke, Andreas Wiese, and Hang Zhou.  
*ACM-SIAM Symposium on Discrete Algorithms, 2017.*
- ICALP'15** Near-Linear Query Complexity for Graph Inference.  
 Sampath Kannan, Claire Mathieu, and Hang Zhou.  
*EATCS International Colloquium on Automata, Languages and Programming, 2015.*
- STACS'15** Correlation Clustering and Two-edge-connected Augmentation for Planar Graphs.  
 Philip Klein, Claire Mathieu, and Hang Zhou.  
*International Symposium on Theoretical Aspects of Computer Science, 2015.*
- TCS'14** Sublinear-Time Algorithms for Monomer-Dimer Systems on Bounded Degree Graphs.  
 Marc Lelarge and Hang Zhou.  
*Theoretical Computer Science, 2014.*
- ICALP'13** Graph Reconstruction via Distance Oracles.  
 Claire Mathieu and Hang Zhou.  
*EATCS International Colloquium on Automata, Languages and Programming, 2013.*
- ISAAC'13** Sublinear-Time Algorithms for Monomer-Dimer Systems on Bounded Degree Graphs.  
 Marc Lelarge and Hang Zhou.  
*International Symposium on Algorithms and Computation, 2013.*

## Awards and Grants

- [Lise Meitner Award](#) for Excellent Women in Computer Science, 2016
- Grant of Hi!Paris, principal investigator, 2022–2025
- International Selection Fellowship, École Normale Supérieure, 2009–2012
- Chinese Enlightenment Award, Peking University, 2008
- Chinese Olympiad in Informatics:
  - Silver Medal in National Finalists' Olympiad, 2006
  - Bronze Medal in National Finalists' Olympiad, 2005
  - First Prizes in National Olympiad in Shanghai and Jiangsu Province, 2003, 2004, 2005, 2006

- First Prize, Mathematics Olympiad in Jiangsu Province, China, 2003
- Second Prize, Physics Olympiad in Jiangsu Province, China, 2003

## Supervision

- Polytechnique Marc Dufay, PhD (since 2024) and M1 (2022), co-advised with Claire Mathieu.  
*M1 research award from the French Academy of Sciences.*
- Polytechnique Jean Zabolcki, M1 (2024).
- ENS Paris Ernest van Wijland, M2 (2023).
- ENS Paris Noé Weeks, M1 (2023).
- Polytechnique Antoine Stark, M1 (2023).
- Polytechnique Pedro Gomes Cabral, L3 (2023).
- Polytechnique Khanh Nguyen, L3 (2022).

## Teaching

- Lecture & TD International Collegiate Programming Contest (ICPC) Training.  
*Coach of the École Polytechnique team that won the championship in the ICPC Southwestern Europe Regional Contest (SWERC) and three times advanced to the ICPC World Finals.*
- Lecture & TD Competitive Programming. École Polytechnique.
- Lecture & TD Algorithms and Advanced Programming. École Polytechnique.
- Lecture & TD Introduction to Algorithms. École Polytechnique.
- Lecture Approximation Algorithms. Max Planck Institute. In collaboration with Tobias Mömke.
- TD Design and Analysis of Algorithms. École Polytechnique.
- TD Introduction to Computer Science. Université Paris Cité.
- TD Programming in C. Université Paris Cité.

## Responsibilities

- Program Committee Member for SIAM Symposium on Simplicity in Algorithms (SOSA) 2023 and International Symposium on Theoretical Aspects of Computer Science (STACS) 2024.
- Reviewer for ACM Symposium on Theory of Computing (STOC), IEEE Symposium on Foundations of Computer Science (FOCS), ACM-SIAM Symposium on Discrete Algorithms (SODA), International Symposium on Computational Geometry (SoCG), EATCS International Colloquium on Automata, Languages and Programming (ICALP), ACM Symposium on Parallelism in Algorithms and Architectures (SPAA), European Symposium on Algorithms (ESA), Conference on Integer Programming and Combinatorial Optimization (IPCO), SIAM Journal on Computing (SICOMP), etc.
- Member of the Professor Hiring Committee, Université Paris Cité, 2024.
- Member of the Faculty Hiring Committee, École Polytechnique, 2019, 2021, 2022.
- Member of the Postdoc Selection Committee, Max Planck Institute, 2017.
- Member of the Master Selection Committee, Max Planck Institute, 2016–2017.

## Selected Talks

- Invited speaker at the Workshop on Complexity and Algorithms, France, 2023
- Fontainebleau Workshop on Algorithmic Theory of New Data Models, France, 2024
- French-Israeli Workshop on Foundations of Computer Science, 2023
- Seminar at University of Cambridge, United Kingdom, 2023
- Seminar at IRIF, Université Paris Cité, France, 2022
- EPFL Workshop on Modern Trends in Combinatorial Optimization, Switzerland, 2022
- Bonn Workshop on Combinatorial Optimization, Germany, 2022
- Workshop on Algorithmic Challenges of Big Data, Poland, 2022
- Workshop on Combinatorial Optimization and Approximation Algorithms, Chile, 2022

- Workshop on Complexity and Algorithms, Institut Henri Poincaré, France, 2022
- Seminar at Google Paris, 2022
- Colloquium at Collège de France, 2018
- Highlights of Algorithms conference, Germany, 2017
- Workshop for Finalists of German Olympiad in Informatics, Germany, 2017
- Lecture series at the Max Planck Institutes, Germany, 2016
- Seminar at EPFL, Switzerland, 2016
- Dagstuhl Seminar on Optimization Problems in Planar Graphs, Germany, 2016
- Seminar at École Normale Supérieure, France, 2014
- Seminar at University of Copenhagen, Denmark, 2014
- Seminar at ETH Zurich, Switzerland, 2012
- Seminar at École Polytechnique, France, 2011

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## Languages

English (fluent), French (fluent), Chinese (fluent), German (advanced)