

YONG SHENG SOH

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EDUCATION

California Institute of Technology – Pasadena, CA, USA Sep '12 – Sep '18

- Ph.D. in Applied and Computational Mathematics
- Advisor: Venkat Chandrasekaran
- Thesis: Fitting Convex Sets to Data: Algorithms and Applications, awarded the W.P. Carey & Co. Prize in Applied Mathematics and the Ben P.C. Chou Doctoral Prize in Information Science and Technology

University of Cambridge – Cambridge, UK Sep '08 – Jun '11

- B.A. in Mathematics

EXPERIENCE

Research Scientist, Institute of High Performance Computing Nov '18 – Present
Singapore

Intern, Lumiata Jul '15 – Sep '15
San Mateo, CA, USA

Research Engineer, Institute for Infocomm Research Aug '11 – Aug '12
Singapore

IN PREPARATION

- Estimating Train Logs by Calculating Correlations between Passengers, H. E. Tan, D. W. Soh, Y. S. Soh, and M. A. Ramli
- Self-Learning Model Decomposition for Remote Monitoring, C. Zhang, Y. S. Soh, L. Feng, Q. Li, and J. T. Zhou

JOURNAL PUBLICATIONS

- Group Invariant Dictionary Learning, Y. S. Soh, *arXiv pre-print*, Jul '20
- A Note on Convex Relaxations for the Inverse Eigenvalue Problem, U. Candogan, Y. S. Soh, and V. Chandrasekaran, *arXiv pre-print*, Nov '19
- Fitting Tractable Convex Sets to Support Function Evaluations, Y. S. Soh and V. Chandrasekaran, *arXiv pre-print*, Mar '19
- Learning Semidefinite Regularizers, Y. S. Soh and V. Chandrasekaran, *Foundations of Computational Mathematics*, Mar '18, awarded the INFORMS Optimization Society, Student Paper Prize
- High-Dimensional Change-Point Estimation: Combining Filtering with Convex Optimization, Y. S. Soh and V. Chandrasekaran, *Applied and Computational Harmonic Analysis*, Nov '15

- Cognitive Hybrid Division Duplex for Two-Tier Femtocell Networks, Y. S. Soh, T. Q. S. Quek, M. Kountouris, and G. Caire, *IEEE Transactions in Wireless Communications*, Oct '13
- Energy Efficient Heterogeneous Cellular Networks, Y. S. Soh, Tony Q. S. Quek, M. Kountouris, H. Shin, *IEEE JSAC Special Issue on Spectrum and Energy Efficient Design of Wireless Communication Networks*, May '13

CONFERENCE PROCEEDINGS

- High-Dimensional Change-Point Estimation: Combining Filtering with Convex Optimization, Y. S. Soh and V. Chandrasekaran, *IEEE ISIT*, Hong Kong, '15
- Dynamic Sleep Mode Strategies in Energy Efficient Cellular Networks, Y. S. Soh, Tony Q. S. Quek, M. Kountouris, *IEEE ICC*, Budapest, '13
- Flexible Duplex for Cognitive Femtocells in Two-Tier Networks, Y. S. Soh, Tony Q. S. Quek, M. Kountouris, G. Caire, *IEEE Globecom*, Anaheim CA, '12
- Hybrid Division Duplex for Cognitive Small Cell Networks, Tony Q. S. Quek, Y. S. Soh and M. Kountouris, *WPMC*, Taipei, '12

HONORS / AWARDS

- W.P. Carey & Co. Prize in Applied Mathematics, '19
- Ben P.C. Chou Doctoral Prize in Information Science and Technology, '19
- INFORMS Optimization Society, Student Paper Prize, '18
- National Science Scholarship, A*STAR, Singapore, '12
- Foundation Scholar, Pembroke College, University of Cambridge, '10
- College Scholarship and Prize, Pembroke College, University of Cambridge, '09
- International Mathematical Olympiad, Silver, '05

TEACHING EXPERIENCE

- Teaching Assistant, Mathematical Optimization, '14, '16, '17
- Summer Undergraduate Research Fellowship (SURF) Mentor, with N. Ghosh, '17
- Teaching Assistant, Statistical Inference, '15
- National Team Trainer, Singapore National Team to the 49th International Mathematical Olympiad, Nov '07 - Jul '08

SERVICE

- Mini-symposia organizer (with A. Taieb), *Lift-and-Project Methods in Data Analysis*, SIAM Conference in Optimization, May '17
- Mini-symposia organizer (with D. Soon), *Algebraic Methods for Convex Sets*, SIAM Conference on Applied Algebraic Geometry, Jun '19