

# BYRON CHIN

[byronc@mit.edu](mailto:byronc@mit.edu)

MIT Department of Mathematics  
77 Massachusetts Ave, Room 2-231A  
Cambridge, MA 02139

## EDUCATION

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|---|---------------------|
| <b>Massachusetts Institute of Technology</b><br>Ph.D. Mathematics, Advised by Elchanan Mossel     | <i>2021-Present</i> |
| <b>Princeton University</b><br>A.B. Mathematics, with high honors<br>GPA: 3.92 (4.0 Departmental) | <i>2017-2021</i>    |

## RESEARCH INTERESTS

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Discrete Probability, Combinatorics

## AWARDS

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|---|------------------|
| · NSF Graduate Research Fellowship  | <i>2021-2026</i> |
| · MIT Akamai Presidential Fellowship  | <i>2021</i>      |
| · Best Independent Work – Princeton Statistics and Machine Learning Certificate | <i>2021</i>      |
| · Shapiro Prize for Academic Excellence   | <i>2019</i>      |

## PRE-PRINTS

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6. Matching algorithms in sparse stochastic block models.  
with Anna Brandenberger, Nathan Sheffield, Divya Shyamal.  
*in preparation.*
5. Structure of lower tails in sparse random graphs.  
[arXiv:2312.12673](https://arxiv.org/abs/2312.12673)
4. The power of an adversary in Glauber dynamics.  
with Ankur Moitra, Elchanan Mossel, Colin Sandon.  
*submitted.* [arXiv:2302.10841](https://arxiv.org/abs/2302.10841)
3. When will (game) wars end?  
with Manan Bhatia, Nitya Mani, Elchanan Mossel.  
*submitted.* [arXiv:2302.03535](https://arxiv.org/abs/2302.03535)
2. Optimal reconstruction of general sparse stochastic block models.  
with Allan Sly.  
*submitted.* **Princeton SML Best Independent Work.** [arXiv:2111.00697](https://arxiv.org/abs/2111.00697)
1. Optimal recovery of block models with  $q$  communities.  
with Allan Sly.  
[arXiv:2010.10672](https://arxiv.org/abs/2010.10672)

## MENTORING/ORGANIZATION

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| · Co-organizer of SPAMS (MIT graduate student seminar) | <i>2024</i> |
| · MIT Summer Program in Undergraduate Research Mentor  | <i>2023</i> |
| · Princeton University Math Competition Officer        | <i>2019</i> |
| · Co-founder of West Windsor Math Advancement Center   | <i>2016</i> |

## RESEARCH EXPERIENCES

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- Princeton Junior Paper, Summer Research, Senior Thesis – Advised by Allan Sly *2020-2021*
- Beijing Institute of Big Data Research, Research Intern – Advised by Weinan E *2019*
- Princeton Junior Seminar Talk *2019*
- PROMYS Research Project *2015, 2016*

## OTHER ACCOMPLISHMENTS

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- Inducted to Phi Beta Kappa, Sigma Xi *2021*
- Top 150 in Putnam Competition *2018*
- Top 10 in Virginia Tech Regional Math Contest *2018*
- Qualifier of United States Mathematical Olympiad (USAMO) *2016, 2017*
- Participant of PROMYS *2015, 2016*