Yuting Irene Li

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Postdoctoral researcher, Hannezo Group,
Institute of Science and Technology Austria

Career

- **2023 - present**
  Postdoctoral researcher at Hannezo Group, ISTA

  Independent funding from the IST-Bridge international postdoctoral program

- **2021 - 2023**
  Research Associate at Simons Lab, University of Cambridge

  Supervised by Prof. Ben Simons.

- **2017 - 2021**
  PhD student at Trinity College, University of Cambridge

  Supervised by Prof. M.E. Cates in the Soft Matter Group at Department of Applied Mathematics and Theoretical Physics.

- **2016 - 2017**
  Master of Maths at Trinity College, University of Cambridge

  Specialising in applied maths and theoretical physics: quantum field, statistical field, symmetry groups and soft condensed matter.
  Graduated with Distinction.

- **2013 - 2016**
  BSci in Physics at Trinity College, University of Cambridge

  First Class in all three years.

Awards

- 2023 - 2024: **IST-Bridge** fellowship, part of Marie Skłodowska-Curie cofund Action.

- 2020: **Royal Society** RAMP Early Career Investigator Award (RECIA) for exceptional contribution towards pandemic modelling.

- 2017 - 2021: **Jardine** and **Cambridge Trust** scholarship for PhD students

- 2017 - 2021: **Research Scholar** at Trinity College, Cambridge

- 2013 - 2017: **Junior Scholar** and then **Senior Scholar** at Trinity College, Cambridge.

- 2013: Silver medal at **International Physics Olympiad**. Representing the United Kingdom.

Publications

- Li, Y. I., Garcia-Millan, R., Cates, M. E., Fodor, É., Towards a liquid-state theory for active matter. *Europhysics Letters*, 142 (5), 57004

- Li, Y. I., Cates, M. E. (2021). Hierarchical microphase separation in non-conserved active mixtures. *The European Physical Journal E*, 44(9), 1-8.

- Li, Y. I., Turk, G., Rohrbach, P. B., Pietzonka, P., Kappler, J., Singh, R., . . . , Jack, R. L. (2021). Efficient Bayesian inference of fully stochastic epidemiological models with applications to COVID-19. *Royal Society Open Science*, 8(8), 211065.

- Li, Y. I., Cates, M. E. (2020). Steady state entropy production rate for scalar Langevin field theories. *Journal of Statistical Mechanics: Theory and Experiment*, 2021(1), 013211.

- Li, Y. I., Cates, M. E. (2020). Non-equilibrium phase separation with reactions: a canonical model and its behaviour. *Journal of Statistical Mechanics: Theory and Experiment*, 2020(5), 053206.

- Engel, E. A., Li, Y., Needs, R. J. (2018). First-principles momentum distributions and vibrationally corrected permittivities of hexagonal and cubic ice. *Physical Review B*, 97(5), 054312.

Talks and seminars

- 2023 **ISTA** FriSBi (Friday Systems Biology) seminars, Phase waves in biological systems

- 2018, 2022 **DAMTP, University of Cambridge** Statistical Physics and Soft Matter Seminars, various topics.

- 2020 **RAMP** meeting between RAMP volunteers and SPI-M members on Covid modelling, Inference of the Covid epidemic in the UK using Pyross library.

- 2020 **University of Cambridge** Lennard-Jones Centre seminars, Non-equilibrium phase separation with reactions.

- 2020 **Imperial College** Group meeting of Non-equilibrium systems, Steady state entropy production rate for scalar Langevin field theories.

- 2018, **Warwick** Statistical Mechanics Seminar, Non-equilibrium phase separation with reactions.

- poster presentations at various conferences including **Statphys27, Physics of Living Matter, Edwards Centre Symposium, EMBO Physics of Living Systems**, etc.

Teaching and outreach

- **Master project supervision (2022)** Supervising a physics master student in Cambridge for a research project on the Kuramoto Model.

- **Undergraduate supervisions** Supervising Maths third year courses including Principles of Quantum Mechanics (2017, 2018, 2019), Statistical Physics (2018, 2019, 2021) and Mathematical Biology (2020, 2021).

- **Pint of Science public outreach (2022)** Speaking at the Pint of Science event in Cambridge on Active Matter.

- **Outreach for A-level students (2019)** Teaching interview preparation classes at Women in STEM residential for Year 12 students hosted by Trinity College.

- **Outreach for Maths master students (2019)** Volunteering at events organised for female Maths Part III students.

- **Trinity Maths Society Symposium (2019)** Presenting at the Trinity Maths Society Centenary Symposium (an undergraduate maths society) on Active matter.

Past Experiences

- **2020: Pyross Project** Developing open source software for epidemiological modelling with Cambridge Soft Matter group as part of the RAMP initiative. `https://github.com/rajeshrinet/pyross`.

- **2017, 2016: Summer Student at Theory of Condensed Matter group in Cavendish Laboratory, University of Cambridge**. Working on using Matrix Product State for machine learning (2017), and anharmonic vibrational corrections to ice (2016).

- **2015: Summer Student with California Institute of Technology at CERN**. Working on applying Machine Learning techniques (Self Organising Map, Neural Autoregressive Density Estimator) to optimise the search for supersymmetric particles at the Compact Muon Solenoid (CMS) experiment.