# Mike Shengbo Wang

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## EDUCATION

**2017–Now** | **Institute of Cosmology and Gravitation (ICG), University of Portsmouth**
*Doctor of Philosophy* (pending)

Thesis — "Theoretical Considerations in Large-Scale Structure Analyses"
Supervisors — Robert Crittenden, Will Percival, Santiago Avila, Davide Bianchi
Research interests — galaxy clustering, primordial non-Gaussianity, likelihood analysis

**2013–2017** | **Faculty of Mathematics (DAMTP)/Clare College, University of Cambridge**
*MMath* (Distinction), *BA* (1$^{st}$ Class)

Mathematical Tripos — Part III Essay "Primordial Gravitational Waves from Cosmic Inflation" advised by Anthony Challinor

## MEMBERSHIPS

**2019–Now** | **Dark Energy Spectroscopic Instrument (DESI) Collaboration**

**2018–Now** | **Euclid Consortium**
Science Working Group (SWG) Galaxy-Clustering Working Package (GC-WP) member

**2017–Now** | **Fellow of the Royal Astronomical Society (FRAS)**

## ACHIEVEMENTS

**2013–2017** | **Horne Prize**, **Harry Patten Prize**, **Amiya Banerji Prize** (twice), **Foundation Scholarship** (Clare College, University of Cambridge)
Achieving Distinction in physical sciences, and best examination results in College in each undergraduate year

**2013–2017** | **Cambridge Overseas Trust Scholarship** (Cambridge Trust)

**2011, 2012** | **British Physics Olympiad Gold Medal** (twice) (British Physics Olympiad)
Top-15 finalist at Oxford Training Camp and Royal Society ceremony in 2012

## PUBLICATIONS

### First-author articles

✢ "Cosmological Inference from Galaxy-Clustering Power Spectrum: Gaussianization and Covariance Decomposition". **MSW**, W J Percival, S Avila, R Crittenden & D Bianchi, 2019. *MNRAS* **486**(1), 956 [arXiv:1811.08155]

✢ "Hybrid-Map Likelihood for Large-Scale Galaxy Clustering". **MSW**, R Crittenden, W J Percival, S Avila

& D Bianchi, 2020. In prep.

✤ "The Impact of Relativistic Effects on the Primordial Non-Gaussianity Signature in Large-Scale Clustering Measurements". **MSW**, F Beutler, D Bacon, 2020. In prep.

## PRESENTATIONS

✤ "Unravelling the Cosmic Web with Future Galaxy Surveys" (invited, pending)
**Talks**—*University of Surrey Maths Postgraduate Research Seminar* (Surrey, 2020)

✤ "Hybrid-Map Approach to Large-Scale Clustering Analysis" (scheduled, pending)
**Talks**—*$30^{th}$ Texas Symposium on Relativistic Astrophysics* (Portsmouth, 2019)

✤ "Linear Galaxy-Clustering Map Making and Reading"
**Talks**—*SEPnet Student-Led Conference* (Southampton, 2019)

✤ "Cosmological Inference from Galaxy-Clustering Power Spectrum: Gaussianization and Covariance Decomposition"
**Talks**—*South Coast Cosmology Meeting* (Portsmouth, 2019), *ICG Tuesday Colloquium* (Portsmouth, 2019), *Euclid Consortium UK Meeting* (Oxford, 2018), *$4^{th}$ CINY Joint Workshop on Frontiers of Cosmology* (Beijing, 2018)
**Posters**—*MPA Large-Scale Structure Summer School* (Berlin, 2018), *Annual Research & Innovation Conference* (Portsmouth, 2018)

✤ Spotlight Introductions
**Talks**—*DESI Collaboration UK Meeting* (London, 2019), *"Understanding Cosmological Observations" Workshop* (Benasque, 2019), *MPA Large-Scale Structure Summer School* (Berlin, 2018)

## EXPERIENCE

### Organisational experience

✤ Large-Scale Structure/Weak Lensing Research Group Weekly Meeting (University of Portsmouth, 2018–now)

✤ Primordial Non-Gaussianity Discussion Meeting at "Understanding Cosmological Observations" Workshop (Benasque, 2019)

### Teaching experience

✤ Undergraduate computational physics workshop (University of Portsmouth, 2019)

✤ Undergraduate examination and coursework marking (University of Portsmouth, 2018 & 2019)

✤ A-Level & IGCSE science tutorials (Chengdu, 2012 & 2014)—in maths, physics and chemistry

### Public engagement & outreach

✤ "Meet a Physicist" (Portsmouth, 2018 & 2019)—physics outreach to secondary school pupils

✤ "Stargazing Live" (Portsmouth, 2018 & 2019)—local public engagement event

### Placements & other projects

✤ *Summer Undergraduate Research Opportunities Programme* (University of Cambridge, 2016)—"Financial Applications of Random Matrix Theory" supervised by Lucy Colwell

✤ *Computing-Aided Teaching of All Mathematics* (University of Cambridge, 2014–2016)

✤ Research & Innovation Intern (BT Group, 2015)—big data analytics for BT Sport

## Skills

**Computing**

Python, MATLAB, SQL, LaTeX, reStructuredText, HTML

Repositories available upon request.

**Languages**

English (IELTS 8.0), Chinese (native), German (CEFR A2.2)

## References

Separately provided.