

# Chieh-An LIN

Born December 10<sup>th</sup>, 1989  
From Taichung, Taiwan

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## Positions

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- Since 2017 **Postdoctoral research staff**, Institute for Astronomy, University of Edinburgh.  
2016–2017 Mandatory military and civil service.  
Fenglin Veteran Hospital, Taiwan.

## Education

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- 2013–2016 **PhD degree** in cosmology.  
CEA Saclay, France. Advisor: Martin Kilbinger.  
Thesis: *Cosmology with weak-lensing peak counts*.
- 2012–2013 **MSc degree** in high energy physics.  
École Polytechnique, Palaiseau, France.
- 2009–2013 **Diplôme d'ingénieur** (French Engineering Degree).  
École Polytechnique, Palaiseau, France.
- 2007–2009 Intensive preparatory program leading to competitive entrance exams to the French *Grandes Écoles*. Lycée Louis le Grand, Paris, France.  
2007 Selected for the program *Taiwanese Students in French Classes Préparatoires*.  
Started French classes.
- Until 2007 Secondary education in Taiwan.

## Refereed papers

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- Jun 2018 **Lin C-A** & Kilbinger M. *Quantifying systematics from the shear inversion on weak-lensing peak counts*. *A&A*, 614, A36.
- Jul 2017 Beck R, **Lin C-A**, Ishida E E O, Gieseke F, et al. *On the realistic validation of photometric redshifts*. *MNRAS*, 468, 4323.
- Mar 2017 Peel A, **Lin C-A**, Lanusse F, Leonard A, et al. *Cosmological constraints with weak-lensing peak counts and second-order statistics in a large-field survey*. *A&A*, 599, A79.
- Sep 2016 **Lin C-A**, Kilbinger M, & Pires S. *A new model to predict weak-lensing peak counts III. Filtering techniques comparisons*. *A&A*, 593, A88.
- Jun 2016 Pierre M, Pacaud F, ..., **Lin C-A**, et al. *The XXL Survey: I. Scientific motivations — XMM-Newton observing plan — Follow-up observations and simulation programme*. *A&A*, 592, A1.
- Nov 2015 **Lin C-A** & Kilbinger M. *A new model to predict weak-lensing peak counts II. Parameter constraint strategies*. *A&A*, 583, A70.
- Apr 2015 **Lin C-A** & Kilbinger M. *A new model to predict weak-lensing peak counts I. Comparison with N-body simulations*. *A&A*, 576, A24.

## Proceeding

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- May 2014 **Lin C-A** & Kilbinger M. *A New Model to Predict Weak Lensing Peak Counts*. Statistical Challenges in 21st Century Cosmology, Lisbon, Portugal.

## Talks

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- May 2018 Statistical Challenges in 21st Century Cosmology, Valencia, Spain. (Contributed)

- Apr 2018 Statistical Challenges for Large-scale Structure in the Era of LSST, Oxford, UK.
- Apr 2018 ICC/CEA Seminar, Durham, UK. **(Invited)**
- Feb 2018 KiDS Busy Week, Edinburgh, UK.
- Jan 2018 Durham-Edinburgh eXtragalactic Workshop XIV, Durham, UK.
- Jun 2016 UTD Cosmology Seminar, Dallas, USA. **(Invited)**
- Jun 2016 Statistical Challenges in Modern Astronomy VI, Pittsburgh, USA. (Contributed)
- Jun 2016 Euclid Consortium Meeting, Lisbon, Portugal.
- May 2016 Statistical Challenges in 21st Century Cosmology, Chania, Greece. (Contributed)
- Sep 2015 IAP Cosmology Seminar, Paris, France.
- Jan 2015 IAS Cosmology Seminar, Orsay, France. **(Invited)**
- Jan 2015 ASIAA Seminar, Taipei, Taiwan.
- Sep 2014 International Workshop on Cosmology and Sparsity 2, Nice, France. (Contributed)
- May 2014 Euclid Consortium Meeting, Marseille, France.

## Posters

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- Jul 2016 From Theory to Applications: Celebrating a Century of Gravitational Lensing, Leiden, the Netherlands.
- Jul 2015 Theoretical and Observational Progress on Large-scale Structure of the Universe, Garching, Germany.
- May 2014 Statistical Challenges in 21st Century Cosmology, Lisbon, Portugal.

## Software

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- CAMELUS Fast weak-lensing peak-count modelling in C.

## Awards and Honors

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- Jan 2016 Grants for International Collaborations, Université Paris Diderot.
- Jun 2013 AMX Doctoral Fellowship, École Polytechnique. (Declined)
- Nov 2011 Outstanding Investment, École Polytechnique.
- Jul 2011 Team-Based Research Project Competition — First Prize, École Polytechnique.
- Dec 2006 National High School Academic Competition — Second Prize in mathematics, Ministry of Education.

## Teaching Experience

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- 2014–2016 Teaching assistant, *Nonlinear Optics MOOC*, École Polytechnique.
- Spring 2015 Instructor, *Introduction to Quantum Mechanics*, École Polytechnique.
- Fall 2014 High school project advisor, *Matière noire*.
- Spring 2013 Instructor, *Quantum Mechanics and Statistical Physics*, École Polytechnique.
- 2009–2010 High school level tutor, Collège Saint-François, France.

## Outreach

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- 2016–2017 **Scientific translation consulting** for the French version of science fictions *The Three-Body Problem* and *The Dark Forest* by Cixin Liu.
- Feb 2016 Labouret T, Pinilo M, & **Lin C-A**. *Dessine ta thèse 2 — La déformation des galaxies*. Video in French with English subtitles.
- Mar 2015 **Lin C-A**. *Popular Astrophysics from Interstellar*. Taiwan Natural Science, 125, 84.

2013–2014 **Outreach speaker** at *Palais de la découverte*, Paris, France.

## Miscellaneous

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- 2014–2017 **Editor, writer, co-founder** of *Association Aurore Formosane*, Paris, France.  
Aurore Formosane edits and publishes a French-writing magazine about Taiwanese culture.
- 2014–2016 **PhD student representative** for the Laboratory Council of SAp/AIM.
- 2010–2011 **In charge of equipment** at École Polytechnique Student Media (JTX).  
JTX is a team feeding up the campus life with humour by films and videos.
- 2011 **Summer intern** at TST Engineering Ltd., Dublin, Ireland.  
Software R&D for 3D subsurface utilities mapping.
- 2009–2010 **Volunteer educator** at Fondation d’Auteuil, Saint-Maurice-Saint-Germain, France.  
Gave tutorial courses for underprivileged adolescents and took care of their daily activities after school.

## Skills

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- Keywords weak lensing, non-Gaussian statistics, clusters, cosmological constraints, semi-analytical modelling, likelihood-free inference
- Languages Mandarin (native), Taiwanese (fluent), English (bilingual), French (bilingual), German (basic)
- Programming C, C++, Python, Java, Lisp, Caml, MPI, CSS, L<sup>A</sup>T<sub>E</sub>X
- Software CLASS, NICAEA, CAMELUS

## Interests

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- Former choir, handball, ping-pong, theater performing, video editing
- Current bridge, paper craft, piano, road running, reading, science outreach, writing

## References

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- \* Martin Kilbinger – [martin.kilbinger@cea.fr](mailto:martin.kilbinger@cea.fr) – +33 1 69 08 17 53  
Research faculty – CEA Saclay – Service d’Astrophysique
- \* Catherine Heymans – [heymans@roe.ac.uk](mailto:heymans@roe.ac.uk) – +44 131 668 8301  
Professor – University of Edinburgh – Institute for Astronomy
- \* Zoltán Haiman – [zoltan@astro.columbia.edu](mailto:zoltan@astro.columbia.edu) – +1 212 854 6822  
Professor – Columbia University – Department of Astronomy