

Chung-Ming PAN

Curriculum Vitae

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Citizenship: Taiwan

Employment

2023–2024 **ATER (one-year postdoc with teaching duties)**, *Université Paul Sabatier, Institut de Mathématiques de Toulouse*, Toulouse, France

Education

2020–2023 **Ph.D.**, *Université Paul Sabatier, Institut de Mathématiques de Toulouse*, Toulouse, France
Supervisors: Vincent GUEDJ and Henri GUENANCIA
Thesis: Familles de métriques hermitiennes canoniques (defended on June 19, 2023)

2019–2020 **Master 2**, *Université Paul Sabatier*, Toulouse, France
Advisor: Vincent GUEDJ, M2 thesis: Regularity of geodesics in the space of Kähler metrics

2018–2019 **Research assistant**, *NCTS and Institute of Mathematics, Academia Sinica*, Taipei, Taiwan
Advisors: Chin-Yu HSIAO and Chung-Jun TSAI

2015–2018 **M.Sc.**, *National Taiwan University, Department of Mathematics*, Taipei, Taiwan
Advisor: Chung-Jun TSAI, Master thesis: Chern–Ricci flow on complex manifolds

2011–2015 **B.Sc.**, *National Taiwan University, Department of Mathematics*, Taipei, Taiwan

Publications and preprints

Singular cscK metrics on smoothable varieties (with T. D. Tô and A. Trusiani)

eprint: [arXiv:2312.13653](https://arxiv.org/abs/2312.13653)

Kähler–Einstein metrics on families of Fano varieties (with A. Trusiani), *submitted*

eprint: [arXiv:2304.08155](https://arxiv.org/abs/2304.08155)

See also Oberwolfach Report: [No. 29/2023](#) (Differentialgeometrie im Großen)

Families of singular Chern–Ricci flat metrics, *J. Geom. Anal.* 33 (2023), no. 2, Paper No. 66, 32 pp.

eprint: [arXiv:2112.08993](https://arxiv.org/abs/2112.08993), journal version

Singular Gauduchon metrics, *Compos. Math.* 158 (2022), no. 6, 1314–1328.

eprint: [arXiv:2106.06259](https://arxiv.org/abs/2106.06259), journal version

In preparation

Slope Lelong number versus Demailly–Lelong number, *in preparation*.

Talks

Dec 2023 **Singular cscK metrics on smoothable varieties**, *Differential Geometry Seminar*, NCTS, Taipei

Dec 2023 **Kähler–Einstein metrics on families of Fano varieties**, *2023 Taipei Conference on Complex Geometry*, AS, Taipei

Nov 2023 **Canonical metrics and pluripotential theory along degenerate families**, *Séminaire d'Analyse et Géométrie*, IMJ-PRG, Paris

Nov 2023 **Canonical metrics and pluripotential theory along degenerate families**, Aarhus University, Denmark

Aug 2023 **Kähler–Einstein metrics on families of Fano varieties**, *Semiclassic seminar*, Universität zu Köln

Jul 2023 **Kähler–Einstein metrics on families of Fano varieties (short talk)**, *Oberwolfach workshop "Differentialgeometrie im Grossen"*, MFO, Oberwolfach

Jun 2023 **Kähler–Einstein metrics on families of Fano varieties**, *Summer School and Workshop "Advances in special Kähler metrics"*, Le Croisic

Jun 2023 **Kähler–Einstein metrics on families of Fano varieties (short talk)**, *Conference "Alpine meeting on nonpositive curvature in Kähler geometry"*, Aussois

- Apr 2023 **Kähler–Einstein metrics on families of Fano varieties**, *Algebraic Geometry in String Theory Seminar*, CMSA, Harvard University
- Mar 2023 **Kähler–Einstein metrics on families of K-stable Fano varieties**, *Groupe de Travail Complex*, IMT, Toulouse
- Nov 2022 **Singular Gauduchon metrics (short talk)**, *Conference "Algebraic Geometry and Complex Geometry"*, CIRM, Marseille
- Nov 2022 **Families of degenerate complex Monge–Ampère equations**, *Informal Geometric Analysis Seminar*, UMD, Maryland (online)
- Nov 2022 **Families of degenerate complex Monge–Ampère equations**, *Informal working group*, IMT, Toulouse
- Sep 2022 **Singular Gauduchon metrics**, *Séminaire de Géométrie Complexe*, IMT, Toulouse
- Aug 2022 **Singular Gauduchon metrics**, *Differential Geometry Seminar*, NCTS, Taipei
- Jul 2022 **Singular Gauduchon metrics**, *Seminar on Several Complex Variables*, AS, Taipei
- Dec 2021 **Singular Gauduchon metrics**, *Séminaire Analyse Harmonique*, LMO, Orsay
- May 2021 **Gauduchon metrics on compact complex varieties**, *Workshop on "Pluripotential theory on non-Kähler manifolds"*, IMT, Toulouse

Visit

- 10/30-11/03 2023 **Aarhus University (Aarhus, Denmark)**, *visiting Alexandra Otiman*.
- 03/26-04/08 2023 **MIT (Boston, US)**, *visiting Tristan C. Collins*.

Teaching experience

Exercise sessions at Université Paul Sabatier

- Fall 2023 Fonctions et calculs 1, Math1-Calc1 (in French), group: A4, instructor: Laurent Bakri
- Fall 2023 Fonctions et calculs 1, Math1-Calc1 (in French), group: B3, instructor: Jawher El Goul
- Fall 2022 Complex analytic and differential geometry (in English), instructor: Vincent Guedj
- Fall 2022 Fonctions et calculs 1, Math1-Calc1 (in French), group: C6, instructor: Serge Cohen
- Fall 2021 Complex analytic and differential geometry (in English), instructor: Vincent Guedj

Exercise sessions at National Taiwan University

- Spring 2017 Differential geometry (II), instructor: Ziming Nikolas Ma
- Fall 2016 Differential geometry (I), instructor: Ziming Nikolas Ma
- Spring 2016 Calculus (II) (Math major), instructor: Chen-Yu Chi
- Fall 2015 Calculus (I) (Math major), instructor: Chen-Yu Chi

Awards

- 2020-2023 EUR-MINT Ph.D. Fellowship
- 2017 Hu Dun-Fu Scholarship

Conferences and workshops

- Dec 2023 2023 Taipei Conference on Complex Geometry, Taipei, Taiwan
- Sep 2023 Workshop "Geometric flows on complex manifolds", Cortona, Italy
- Jul 2023 Conference "Quantization in Geometry", Cologne, Germany
- Jul 2023 Oberwolfach workshop "Differentialgeometrie im Grossen", Oberwolfach, Germany
- Jun 2023 Workshop and summer school "Advances in special Kähler metrics", Le Croisic
- Jun 2023 Conference "Alpine meeting on nonpositive curvature in Kähler geometry", Aussois
- Nov 2022 Conference "Algebraic Geometry and Complex Geometry", CIRM, Marseille
- Oct 2022 Conference "Complex Geometry, Dynamical Systems and Foliation Theory", CIRM, Marseille
- Aug 2022 Workshop and summer school "HyperKähler manifolds and related geometries", Cetraro, Italy
- Nov 2021 Workshop "Balanced metrics and Monge–Ampère masses", Università di Parma, Parma, Italy
- Jun 2021 AMAZER conference, "Analysis of Monge–Ampère, a tribute to Ahmed Zeriahi", IMT, Toulouse
- May 2021 Workshop "Pluripotential theory on non-Kähler manifolds", IMT, Toulouse

Languages

Taiwanese (native), Taiwanese/Chinese Mandarin (near-native), English (fluent), French (intermediate)

Miscellaneous

Journals Referee for *Advances in Mathematics*, *Annales de l'Institut Fourier*

Responsibility Reporter of Oberwolfach workshop No. 29/2023 "Differentialgeometrie im Grossen"