

Chao-Ming LIN

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Interests

Differential Geometry / Complex Geometry / Geometric Analysis / Real Algebraic Geometry.

Education

- Sep 2017–June 2023
Ph.D. in Mathematics
University of California, Irvine
Advisors: [Zhiqin Lu](#) and [Xiangwen Zhang](#)
Thesis: [Class of Curvature Equations, Convexity, and Real Algebraic Geometry](#)
- Sep 2014–July 2016
M.S. in Mathematics
National Taiwan University
Advisor: [Chung-Jun Tsai](#)
Thesis: Survey on G_2 manifolds and further applications
- Sep 2010–May 2014
B.S. in Mathematics
National Taiwan University

Work Experience

- Aug 2023–Present
Zassenhaus Assistant Professor
[Ohio State University](#)
Mentor: [Bo Guan](#)
- Aug 02 2023–Aug 07 2023
Visitor in Mathematics
[Chinese University of Hong Kong](#)
Mentor: [Man Chun Lee](#)
- July 2023–Aug 2023
Visitor in Mathematics
[National Taiwan University](#)
Mentor: [Chung-Jun Tsai](#)

Nov 2022–Dec 2022, Dec 2020–April 2021
Visitor in Mathematics
National Center for Theoretical Sciences
Mentor: Chung-Jun Tsai

Aug 2016–June 2017
R.A. in Mathematics
National Center for Theoretical Sciences
Mentor: Chung-Jun Tsai

Papers

Sep 2022
On the Convexity of General Inverse σ_k Equations
Journal of Functional Analysis, 2023
<https://arxiv.org/abs/2209.11370>

Jan 2022
The deformed Hermitian–Yang–Mills Equation, the Positivstellensatz, and the Solvability
Advances in Mathematics, accepted (2023)
<https://arxiv.org/abs/2201.01438>

Dec 2020
Deformed Hermitian–Yang–Mills equation on Compact Hermitian Manifolds
Mathematical Research Letters, [accepted](#) (2022)
<https://arxiv.org/abs/2012.00487>

Conference Talks

May 2024
Recent Advances in Differential Geometry
American Mathematical Society Spring Western Sectional Meeting
https://www.ams.org/meetings/sectional/2299_program.html

Dec 2023
Geometric Analysis Session
Canadian Mathematical Society Winter Meeting
<https://www.winter23.cms.math.ca>

Jul 2023
Recent Progress in special Lagrangian Equations and deformed

Hermitian–Yang–Mills Equation

National Center for Theoretical Sciences

https://ncts.ntu.edu.tw/events_2_detail.php?nid=404&fbclid=IwAR3G7E03LkoHbTDJ0vANOzckpibCvn8ZU0s237Gkmwypyv8jEbwoTLPkvwM

Dec 2021

Recent Developments in Complex Geometry and Geometric Analysis

Canadian Mathematical Society Winter Meeting

<https://www2.cms.math.ca/Events/winter21/abs/rdc#cml>

Invited Seminar Talks

May 2023

Differential Geometry Seminar

Ohio State University

<https://math.osu.edu/events/convexity-general-inverse-sigmak-equations-and-some-applications>

April 2023

UCR Geometry-Topology seminar

University of California, Riverside

<https://sites.google.com/view/brian-coller/ucr-geometry-topology-seminar>

Feb 2023

Algebraic Geometry in String Theory Seminar

Center of Mathematical Sciences and Applications at Harvard University

<https://cmsa.fas.harvard.edu/event/agst-22423/>

Feb 2023

Informal Complex Geometry and PDE Seminar

Columbia University

<http://math.columbia.edu/~kjs/seminar>

Jan 2023

Joint Geometric Analysis Seminar

Chinese University of Hong Kong

<https://www.math.cuhk.edu.hk/seminars/convexity-general-inver>

se-k-equations-and-some-applications

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- I Apr 2022
The Mathematics Colloquium at Rutgers-Newark
Rutgers University
<https://sites.rutgers.edu/chen-wan/colloquium/>
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- I Mar 2022
Geometric Analysis Seminar
Beijing International Center for Mathematical Research
<https://bicmr.pku.edu.cn/content/show/43-2663.html>
<https://www.math.pku.edu.cn/teachers/jianchunchu/seminar.html>
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- I Feb 2022
Geometry and Topology Seminar
McMaster University
https://www.math.mcmaster.ca/news-events/events/g-1-4r0bt9198d8j7q501kob4lbt5v_202202032030.html
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- I Oct 2021
Differential Geometry Seminar
University of California, Irvine
<https://www.math.uci.edu/node/37181>
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- I I I I Dec 2022, Nov 2022, Mar 2021, Dec 2018, Apr 2017
NCTS Differential Geometry Seminar
National Center for Theoretical Sciences
https://ncts.ntu.edu.tw/events_1_detail.php?nid=2389
https://ncts.ntu.edu.tw/events_1_detail.php?nid=2367
https://ncts.ntu.edu.tw/events_1_detail.php?nid=1917
https://www.math.sinica.edu.tw/www/seminar/abstract_view.jsp?seminar_id=2689
https://140.112.36.108/events_1_detail.php?nid=889
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- II Apr 2021, Dec 2020
NCTS Postdoc Seminar on Differential Geometry
National Center for Theoretical Sciences

Teaching Experience

Lecturer

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- I Autumn 2023

Math 1131 Calculus for Business

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Summer II 2022

Math 3A Introduction to Linear Algebra

Teaching Assistant

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Spring 2023

Math 2A Calculus

_____ II

Winter 2019, Summer II 2018

Math 2B Calculus

_____ I I

Summer I 2021, Fall 2019

Math 3A Introduction to Linear Algebra

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Winter 2020, Summer I 2020, Summer I 2019, Spring 2019, and
Fall 2018

Math 3D Elementary Differential Equations

_____ II

Spring 2022, Fall 2021

Math 5A Calculus for Life Sciences

_____ I

Fall 2020

Math 5B BioCalculus

_____ I I

Fall 2020, Fall 2019

Math 118 Theory of Differential Equations

_____ II I

Winter 2022, Spring 2021, Winter 2021

Math 134B Financial Derivatives

_____ I I I

Spring 2023, Spring 2021

Math 134C Financial Models

_____ I I

Summer I 2022, Summer I 2020

Math 175 Combinatorics

_____ I

Spring 2020

Math 205C Introduction to Graduate Analysis

Honors and Awards

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Spring 2021

Von Neumann Outstanding Performance as a Graduate Student
Award

_____ | Spring 2016
Phi Tau Phi Scholastic Honor

_____ | Fall 2015
Excellent TA Award
Tsai Wang-Lin Scholarship
Hu Dun-Fu Scholarship

_____ | Fall 2011
High GPA Award
Li Bung-Fung Scholarship

Misc Experience

_____ | June 2018–April 2023
Treasurer of Taiwanese Graduate Student Association
University of California, Irvine

Last updated: September 16, 2023.