

Kuang-Ru Wu (吳侑儒)

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Research Interests:

- Complex Differential Geometry, Partial Differential Equations, Several Complex Variables.

Education:

- *Ph.D. in Mathematics*, Purdue University 2014 - 2020.
Advisor: László Lempert.
- *M.S. in Mathematics*, National Taiwan University 2011 - 2013.
Advisor: Chiung-Ju Liu.
- *B.S. in Physics and Mathematics*, National Tsing Hua University 2007 - 2011.

Employment:

- Visiting Assistant Professor, National Tsing Hua University. 2023 – present.
- Postdoctoral Researcher, Institute of Mathematics, Academia Sinica. 2020 – 2023.
- Adjunct Assistant Professor, Department of Mathematics, NTU. 2021 – 2023.

Publication and Preprints:

- [1] A potential theory for the Wess-Zumino-Witten equation in the space of Kähler potentials. ArXiv: 2410.00710.
- [2] Positively curved Finsler metrics on vector bundles III. ArXiv: 2312.16848.
- [3] Positively curved Finsler metrics on vector bundles II, *Pacific Journal of Mathematics*, 326(2023), no.1, 161–186. ArXiv: 2210.12645.
- [4] Positively curved Finsler metrics on vector bundles, *Nagoya Math. Journal*, 248 (2022), 766-778. ArXiv: 2107.00538.
- [5] A Wess-Zumino-Witten type equation in the space of Kähler potentials in terms of Hermitian-Yang-Mills metrics, *Analysis and PDE*, Volume 16 (2023), No.2, 341-366. ArXiv: 2001.08623.
- [6] Griffiths extremality, interpolation of norms, and Kähler quantization, *Journal of Geometric Analysis* 32 (2022), no. 7, Paper No. 203. Joint with T. Darvas. ArXiv: 1910.01782.
- [7] A Dirichlet problem in noncommutative potential theory, *Michigan Math. Journal*, Volume 69, Issue 2 (2020), 369-380. ArXiv: 1804.05278.

Invited Conference and Seminar Talks:

- *Several Complex Variables and Complex Geometry Conference dedicated to the mathematical work of Yum Tong Siu*, Academia Sinica, January 2025.
- *Math Department Colloquium*, National Tsing Hua University, October 2024.
- *Young Mathematicians Workshop on SCV*, Osaka Metropolitan University, August 2024.
- *Taiwanese Mathematical Society Annual Meeting, Special Sessions*, January 2024.
- *The Fourth Taiwan-Japan Joint Conference on Differential Geometry*, NCTS, November 2023
- *Complex analysis and geometry: celebrating the 70+1th birthday of László Lempert*, short talk, June, 2023.
- *Geometry and Geometric Analysis Seminar*, Purdue University, April, 2023.
- *Colloquium*, National Cheng Kung University, December 2022.
- *The 5th International Workshop, Geometry of Submanifolds and Integrable Systems*, Takamatsu Japan, November 2022.
- *KIAS, seminar talk, virtual*, November 2022.
- *Rutgers Complex Analysis/Geometry Seminar, virtual*, April 2022.
- *Taiwanese Mathematical Society Annual Meeting, Special Sessions*, January 2022.
- *Math Department Colloquium*, National Tsing Hua University, November 2021.
- *AS-NCTS Geometry Seminar*, Academia Sinica, September 2021.
- *Virtual East-West Several Complex Variables Seminar*, September 2021.
- *Chongqing University of Technology*, virtual, July 2021.
- *NCTS Differential Geometry Seminar*, National Taiwan University, April 2021.
- *Taipei Postdoc Seminar*, Academia Sinica, November 2020.
- *AS-NCTS Geometry Seminar*, Academia Sinica, October 2020.
- *AMS Sectional Meeting*, Purdue University, April 2020. (meeting canceled)
- *Geometry and Topology Seminar*, University of Wisconsin-Madison, Feb 2020.
- *Geometric Analysis Seminar*, Purdue University, October 2019.
- *Informal Geometric Analysis Seminar*, University of Maryland, December 2018.
- *AMS Sectional Meeting*, University of Arkansas, November 2018.
- *AMS Sectional Meeting*, Ohio State University, March 2018.
- *Geometric Analysis Seminar*, Purdue University, March 2018.

Teaching Experience:

- National Tsing Hua University:
 - Calculus 2 (Spring 2025)
 - Calculus 1 and Precalculus (Fall 2024)
 - Calculus 2 (Spring 2024)
 - Calculus 1 (Fall 2023)
- National Taiwan University:
 - Calculus 3 and 4 lecturer (Spring 2023)
 - Calculus 1 and 2 lecturer (Fall 2022)
 - Calculus 3 and 4 lecturer (Spring 2022)
 - Calculus 1 and 2 lecturer (Fall 2021)
- Purdue University:
 - MA261 Calculus 3 recitation (Fall 2019)

- MA261 Calculus 3 recitation (Fall 2018)
- MA165 Calculus 1 recitation (Fall 2017)
- MA527 Advanced Mathematics for Engineers and Physicists I grader (Fall 2015)
- MA351 Linear algebra grader (Summer 2015)
- MA351 Linear algebra grader (Spring 2015)
- MA351 Linear algebra grader (Fall 2014)
- National Taiwan University:
 - Honors advanced calculus recitation (Spring 2013)
 - Complex analysis recitation (Fall 2012)
 - Calculus 2 recitation (Spring 2012)
 - Calculus 1 recitation (Fall 2011)
- National Tsing Hua University:
 - Advanced Calculus recitation (Spring 2011)
 - Calculus 1 recitation (Fall 2010)

Research Assistantship:

- Purdue University:

Spring 2016, Fall 2016, Spring 2017, Spring 2018, Spring 2019.

Honors and Awards:

- Outstanding Teaching Award at NTU (2023)
- Graduation with Distinction Award (2011)
- ZyXEL Scholarship (highest honor to a junior student in College of Science, 2010)
- Presidential Award (awarded to the top College of Science student, 2010)
- Six-week Exchange Scholarship to Tsinghua University, Beijing (2009)
- College of Science Young Elite Scholarship (three times, awarded to top three students)