Curriculum Vitae

Personal Data

Title	Prof. Dr.
First name	Duc Viet
Name	Vu
Curent position	Professor (W3)
Current institution, country	Department of Mathematics and Computer Science, University of Cologne
Identifiers/ORCID	https://orcid.org/0000-0002-0532-4966

Qualifications and Career

Stages	**Periods and Details**
Degree programme	Bachelor in Mathematics and Mathematical Education, 2006–2010, Hanoi National University of Education, Hanoi. Master in Pure Mathematics, 2012–2013, Université Pierre et Marie Curie, Paris.
Doctorate	Ph.D., Mathematics, 2017, Université Pierre et Marie Curie, Paris under the supervision of Tien-Cuong Dinh, Doctoral thesis: *Pluripotential theory and equidistribution problems*.
Stages of academic/professional career	01.04.2021-31.03.2026: Professor W2 with tenure-track to W3, Department of Mathematics and Computer Science, University of Cologne. 2018- 2021 : Postdoc, Department of Mathematics and Computer Science, University of Cologne, Germany (*Fellowship of Alexander von Humboldt foundation*). 2017-2018: Research fellow, Korea Institute for Advanced Study (KIAS), Seoul. 2016-2017: Teaching and research assistant (ATER), Université Pierre et Marie Curie, Paris. 2010-2012: Teaching assistant, Hanoi National University of Education, Hanoi.

Supplementary Career Information

Activities in the Research System

- PI of the DFG project *"Intersection of closed positive currents"* (2022-2025).
- Member of *QM2-Quantum Matter and Materials* since June, 2025.
- Member of the ANR-DFG project QuaSiDy *"Quantization, singularity and holomorphic dynamics"* (2022-2025).
- Associated member in *the SFB project (CRC/TRR 191) "Symplectic Structures in Geometry, Algebra and Dynamics"* (2021-2025).

- Member of the project *New perspectives in complex geometry and dynamics* (03.2019-12.2019) funded by Université de Lille.
- Organization of several international conferences on complex analysis and geometry in France, Germany and Vietnam. Supervisor for 17 Bachelor's and Master's theses.
- Member of the German mathematical Society (Deutsche Mathematiker-Vereinigung) since 01.01.2022.
- Referee for Crelle's journal, Journal of Differential Geometry, Geometry $\&$ Topology, Indiana J. Math, Math. Z, Proc. London. Math. Soc., etc.
- Review for Zentralblatt MATH and MathSciNet.

Supervision of Researchers in Early Career Phases

Postdoc

- Since 01.2026: Joergen Olsen Lye. Research interests: geometric flows, geometry of Calabi-Yau manifolds.
- 10.2022-12.2025: Martin Schwald. Research interests: Moduli spaces of K3 surfaces and irreducible holomorphic symplectic manifolds.

Ph.D. Student

- 10.2022-11.2025: Shuang Su. Research interests: Singularity of big cohomology classes.

Scientific Results

Category A

1. *Complex Monge-Ampère equation for measures supported by real submanifolds*, Math. Ann. 372, no. 1-2, 321-367, 2018. DOI: 10.1007/s00208-017-1565-8
2. *On the set of divisors with zero geometric defects* (with Dinh Tuan Huynh), J. reine angew. Math. 771 (2021), 193-213. DOI: 10.1515/crelle-2020-0017
3. *Relative non-pluripolar products of currents*, Ann. Global Anal. Geom. 60 (2021), no. 2, 269–311. DOI: 10.1007/s10455-021-09780-7
4. *Complex Monge-Ampère equations with solutions in finite energy classes* (with Duc Thai Do), Math. Res. Lett. 29 (2022), no. 6, 1659–1683. DOI: 10.4310/MRL.2022.v29.n6.a2
5. *Lelong numbers of currents of full mass intersection*, Amer. J. Math. 145 (2023), no. 2, 647–665. DOI: 10.1353/ajm.2023.0016.
6. *Bergman kernel functions associated to measures supported on totally real submanifolds* (with George Marinescu), J. reine angew. Math. 810 (2024), 217–251. DOI: crelle-2024-0017
7. *Higher Lelong numbers versus full Monge-Ampère mass* (with Duc Thai Do), J. Differential Geom. 128 (2024), no. 2, 903–927. DOI: 10.4310/jdg/1727712896
8. *Volumes of components of Lelong upper level sets II* (with Shuang Su), Math. Ann. 391, No. 4, 6451-6465 (2025). DOI:10.1007/s00208-024-03079-1
9. *Quantitative stability for the complex Monge-Ampère equations I* (with Hoang-Son Do), Anal. PDE 18, No. 5, 1271-1308 (2025). DOI: 10.2140/apde.2025.18.1271

10. *Kähler–Einstein metrics on quasi-projective manifolds* (with Quang-Tuan Dang), Math. Ann. (2025). DOI: 10.1007/s00208-025-03184-9.

Category B

1. *Derivative of volumes of big cohomology classes*, arXiv:2307.15909, 2023, to appear in Indiana University Mathematics Journal.
2. *Log continuity of solutions of complex Monge-Ampère equations* (with Hoang-Son Do), arXiv:2312.04128 , 2023.
3. *Uniform diameter estimates for Kähler metrics*, arXiv:2405.14680, 2024.
4. *Uniform diameter estimates for Kähler metrics in big cohomology classes* (with Duc-Bao Nguyen), arXiv:2410.18532, 2024.
5. *Non-collapsing volume estimate for local Kähler metrics in big cohomology classes* (with Thai Duong Do and Duc-Bao Nguyen), arXiv:2502.16136, 2025.
6. *A survey on asymptotic equilibrium distribution of zeros of random holomorphic sections* (with George Marinescu), arXiv:2504.15083, 2025.

Academic Distinctions

- Invited professor, CEMPI Labex, University of Lille, 10.2021, 07.2025.
- Invited professor, Institut Denis Poisson, University of Orléans, 03.2025.

Other Information

Data protection and consent to the processing of optional data

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