

Scientific CV of Hồng Vân Lê

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Academic training and degrees:

20.6.1983: Diplom (M.Sc.) in Mathematics, Moscow State University Lomonosov.

09.01.1987: Ph.D. in Mathematics, Moscow State University Lomonosov.

06.04.1990: Dr. Sciences, Moscow State University Lomonosov.

03.12.2009: Dr. Habilitation, University Opava.

Prizes, Awards, and Research Grants

1990: Prize of the Moscow Mathematical Society.

1991: Majorana Prize of the International Center for Theoretical Physics, Trieste, Italy.

1994-1998: Heisenberg Fellowship of the Deutsche Forschungsgemeinschaft.

2007-2010: Principal Investigator of the Grant Project Nr.100190701 of the Czech Academy of Sciences “Manifolds with special geometric structures”

2018-2020: Principal Investigator of the joint German-Czech Research Grant 18-01953J “Geometric methods of statistical learning theory and its applications.

2018-2020: Co-Principal Investigator of the Czech Grant project GACR-18-00496S “Singular spaces from special holonomy and foliations”.

Academic positions since 1990

1990-1991: Researcher at the Institute of Mathematics in Hanoi

1991: Visiting mathematician at the International Centre for Theoretical Physics, ICTP, Trieste

1992-1993: Visiting mathematician at the Max-Planck-Institute for Mathematics in Bonn

1994-1997: Heisenberg fellow at the Max-Planck-Institute for Mathematics in Bonn

1997-1998: Heisenberg fellow at the Institute of Mathematics, University Leipzig

1999-2005: Research associate of the Max-Planck-Institute of Mathematics in Leipzig

Since December 2005: Scientist and then senior scientist of the Mathematical Institute of the Czech Academy of Sciences.

2007-2011: Foreign Professor of the Abdus Salam School of Mathematics. Lahore-Pakistan.

2012-2014: Visiting Professor of Vietnam National University for Sciences.

July-October 2022: Visiting Professor of the Kyoto University, Japan.

Selected Publications

(1) Curvature estimate for the volume growth of globally minimal submanifolds. *Math. Ann.* 296 (1993), no. 1, 103–118.

(2) (joint with K. Ono) Symplectic fixed points, the Calabi invariant and Novikov homology. *Topology* 34 (1995), no. 1, 155–176.

(3) (joint with J. Vanžura) Cohomology theories on locally conformal symplectic manifolds, *Asian J. of Math*, Vol. 19 (2015), No. 1, pp. 45-82.

(4) (joint with N. Ay, J. Jost, L. Schwachhöfer) Information geometry and sufficient statistics, *Probab. Theory Relat. Fields*, 162(2015), 327-364.

(5) (joint with N. Ay, J. Jost, L. Schwachhöfer) Information geometry. *Ergebnisse der Mathematik und ihrer Grenzgebiete. Springer*, 2017.

(6) (joint Y.-G. Oh, A. Tortorella and L. Vitagliano) Deformations of coisotropic submanifolds in abstract Jacobi manifolds, *J. of Symplectic Geometry*, 16 (2018), 1051-1116.

(7) (joint with J.-F. Barraud, A. Gąbka, R. Golovko) Novikov fundamental group, *International Mathematical Research Notice*, Volume 2020, Issue 24, 10447-10494.

(8) (joint with M. Borovoi, W. De Graaf) Classification of of real trivectors in dimension nine, *Journal of Algebra*, 603 (2022), 118-163.

Invitations to lectures, conferences and scientific visits since 2018

- February 2018, Visit of the Max-Planck-Institute for Mathematics, Leipzig, Germany.
- April 2018, Invited sectional lecture at the AMS meeting, Boston, USA.
- April 2018, Visit and invited lecture at the GIT, Atlanta, USA.
- May 2018, Lecture at the conference XX Geometrical Seminar, Vrnjačka Banja, Serbia.
- July 2018, Lecture at The 32nd International Colloquium on Group Theoretical Methods in Physics, Prague, Czech Republic.
- August 2018, Visit and public lecture series at the Vietnam Institute for Advanced Study in Mathematics, Hanoi, Vietnam.
- December 2018, Visit RIMS, Kyoto, Japan.
- February 2019, Visit and invited lecture at Ecole Nationale de l'Aviation Civile, Toulouse, France.
- April 2019, Visit and invited lecture at TU Dortmund, Germany.
- July 2019, Invited sectional lecture at the 12th International ISAAC congress, Aveiro, Portugal.
- September 2019, Lecture at the International Conference on Differential Geometry and its Applications, Hradec-Kralove, Czech Republic.
- October 2019, Invited lecture series at the Workshop "Information Geometry", University Toulouse III, Toulouse, France.
- November 2019, Invited lecture at the Workshop "Contact and Poisson Geometry", Timisoara, Romania.
- June 2020, Invited lecture at the online Symposium "Categorical Probability and Statistics" originally planned as a part of the 75th Meeting of the Canadian Society of Mathematicians, Ottawa, Canada.
- July 2020, Keynote lecture at the workshop "Joint Structures and Common Foundation of Statistical Physics, Information Geometry and Inference for Learning" at the Ecole de Physique des Houches, Les Houches, France.
- September 2020, Visit of the Toulouse University III, France.
- October 2020, Keynote lecture at the Online Conference "1st International Conference on Recent Advances in Mathematics(CORAM2020)", Lahore, Pakistan.
- November 2020, Invited lecture at the Moscow Online Seminar "Differential Geometry and its Applications".
- June 2021, Invited speaker at the Online Minisymposium "Geometry defined by differential forms" at the 8.ECM.
- September 2021, Invited speaker at the International Conference on Topology and Its Applications, Moscow, Russia.
- January 2022, Invited lecture at the Monthly Global Diffeology Seminar.
- May 2022, Invited lecture of the Conference "Mathematical Concepts in the Sciences and Humanities", Leipzig, Germany.
- July 2022, Invited lecture of the Conference "Applied Geometry for Data Sciences", Chongqing, China.
- July-October 2022, Visiting Professor of the Kyoto University, Japan.
- November 2022, Invited lecture at "Weekly Seminar of Institute for Basic Sciences, Center for Geometry and Physics", Pohang, Korea.
- January 2023, Invited lecture at the International Workshop "Lie in Prato", Prato, Italy.
- February 2023, Invited lecture at the University of Cambridge, England.