

# Curriculum Vitae

Tat Dat TÔ

Ecole Nationale de l'Aviation Civile, Toulouse, France

## Personal Information

Date of Birth: Aug 17, 1990.  
Place of Birth: Thai Binh, Vietnam.  
Nationality: Vietnamese  
Languages: Vietnamese (native), English (good), French (good).  
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## Education

2015 - 2018 Institut de Mathématiques de Toulouse, Université Paul Sabatier, France.  
Ph.D in Mathematics,  
Advisor: Prof. Vincent GUEDJ.  
2014 - 2015 Université Paul Sabatier, France,  
M.S in Mathematics, second year.  
2013 - 2014 Hanoi Institute of Mathematics, Vietnam,  
M.S in Mathematics, first year.  
2008 - 2013 Hanoi University of Sciences and Technology, Vietnam,  
B.S in Mathematics.

## Academic Appointments

2018 - Now Postdoc, at ENAC (Ecole Nationale de l'Aviation Civile), France  
2013 - 2016 Researcher, Institute of Mathematics, Vietnam Academy of Science and Technology

## Awards and Fellowships

2019 Award of l'Académie des Sciences Inscriptions et Belles-Lettres de Toulouse for Phd thesis  
2017 ATUPS travel grant, March-May 2017 and EDMITT travel grant, November 2017.  
2015 - 2018 Jean-Pierre Aguilar Ph.D fellowship, la Fondation CFM pour la recherche, France.  
2014 - 2015 Master scholarship, Centre International de Mathématiques et d'Informatique de Toulouse, France.  
2013-2018 Awards for Excellent Mathematical Students, National Program for the Development of Mathematics, Vietnam.

## Research Interests

- **Complex Geometry:** Kähler-Einstein metrics, Canonical metrics on Hermitian manifolds, Minimal Model Program.
- **Geometric flows:** Kähler-Ricci flow, Chern-Ricci flow
- **Partial differential equations:** Monge-Ampère Equation, Nonlinear elliptic and parabolic equations.

## Publications

1. Regularizing properties of Complex Monge-Ampère flows, **J. Funct. Anal.** 272 (2017), no. 5, 2058–2091.
2. Regularizing properties of Complex Monge-Ampère flows II: Hermitian manifolds, **Math. Ann.** 372 (2018), Issue 1–2, pp 699–741
3. (with S. Dinew and H.S Do) A viscosity approach to the Dirichlet problem for degenerate complex Hessian-type equations, **Analysis & PDE**, 12 (2019), No. 2, 505–535
4. (with Duong H. Phong) Fully non-linear parabolic equations on compact Hermitian manifolds, to appear in **Annales Scientifiques de l'ENS**, arXiv:1711.10697
5. Convergence of the weak Kähler-Ricci Flow on manifolds of general type, arXiv:1905.01276, to appear in **International Mathematics Research Notices** (2019), DOI: 10.1093/imrn/rnz256
6. (with H. S. Do, G. Le) Viscosity solutions to parabolic complex Monge-Ampère equations, accepté dans **Calculus of Variations and PDEs**, arXiv:1905.11818 (2019)

## Preprints

1. (with Stéphane Puechmorel) Convergence of the Hesse-Koszul flow on compact Hessian manifolds, In preparation

## Academic Visits

- |                |                                                                 |
|----------------|-----------------------------------------------------------------|
| March-May 2017 | Visited Duong H. Phong, Columbia University, USA                |
| November 2017  | Visited Complex Geometry group, Jagiellonian University, Poland |

## Invited Talks

- Jun, 2020 Analysis of Monge-Ampère, a tribute to Ahmed Zeriahi, Toulouse
- Mar, 2019 **C-sous-solutions pour les flots géométriques**, Séminaire d'Analyse et Géométrie, IMJ.
- Dec, 2018 **C-subolutions for geometric flows on compact Hermitian manifolds**, Journée dynamique complexe Nice, France
- Mai, 2018 **Fully non-linear parabolic equations on compact Hermitian manifolds**, NORDAN 2018 conference, Stavanger, Norway.
- Jan, 2018 **Fully non-linear parabolic equations on compact Hermitian manifolds** Informal Geometry Workshop in "Paradiso", Cogne, Italy.
- Nov, 2017 **Geometric contraction of Chern-Ricci flow**, Jagiellonian University, Poland.
- Apr, 2017 **Regularizing properties of complex Monge-Ampère flows**, Informal Complex Geometry and PDE Seminar, Columbia University, New York.
- Nov, 2016 **The Kähler-Ricci flow on complex surfaces**, Complex geometry seminar, IMT, Toulouse.
- Oct, 2016 **The Kähler-Ricci flow and Minimal model program**, Rencontres doctorales Lebesgue, Angers.

- Jun, 2016 **Parabolic Monge-Ampère equations on Kähler manifolds,**  
Journée de la Fondation CFM pour la Recherche, Paris.
- Mar, 2016 **Multiplier ideal sheaves with weights of Lelong number one,**  
Complex geometry seminar, IMT, Toulouse.
- Feb, 2016 **Kleiman's and Nakai-Moishezon's ampleness criteria,**  
Algebraic geometry seminar, IMT, Toulouse.

## Teaching

*Ecole Nationale de l'Aviation Civile, Toulouse*

Fall 2018 & 2019 , Measure Theory and Probability

Fall 2018 & 2019, Complex Analysis

*Université Paul Sabatier, Toulouse*

Spring 2018, Calculus II, Mathématiques en Licence 1 Chimie et Physique.

Fall 2017, Calculus I, L1 Sciences Fondamentales.

Spring 2017, Calculus II, Mathématiques en Licence 1 Chimie et Physique.

Fall 2016, Calculus I, Mathématiques en Licence 1 Sciences de la Vie et de la Terre.

*Institute of Mathematics, Hanoi, Vietnam*

Feb. 2017, Introduction to several complex variables, graduate course.

## Service

Mentor for Science festival, Mathematics section, LAAS-CNRS, 2015 & 2016.

Local Organizer of GSI 2019, 4<sup>th</sup> conference on Geometric Science of Information

Organizator for Workshop "Information geometry", IMT, Toulouse, 14-18 Octobre, 2019.