

Alan Pinoy | Curriculum Vitæ

KTH, Matematik – Lindstedvägen 25, 100 44 Stockholm – Sweden

French citizen, born on March 30th, 1993.

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Positions

Postdoctoral researcher <i>KTH Royal Institute of Technology</i>	Stockholm 2022 – 2024
Temporary research and teaching assistant (ATER) <i>École Normale Supérieure de Lyon</i>	Lyon 2021 – 2022
Ph.D candidate <i>University of Montpellier</i>	Montpellier 2018 – 2021

Education

Ph.D candidate <i>University of Montpellier</i>	Montpellier 2018 – 2022
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Thesis: *Asymptotically complex hyperbolic geometry and curvature constraints.*

Advisors: Marc HERZLICH and Philippe CASTILLON.

Reviewers: Gilles CARRON and John M. LEE.

Jury: Gilles CARRON (president), Carla CEDERBAUM, Romain GICQUAUD and Colin GUILLARMOU.

Bachelor and Master in Mathematics <i>École Normale Supérieure de Lyon</i>	Lyon 2014 – 2018
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- 2018: Master in Advanced Mathematics – Geometry.
- 2017: Agrégation¹ de Mathématiques. Ranked 13.
- 2015: Bachelor in Advanced Mathematics.

Research

Scientific interests.....

My scientific activities focus on the Riemannian geometry of complete non-compact manifolds with constraints on the geometry at infinity.

During my Ph.D, I studied the asymptotically complex hyperbolic case. More broadly, I am interested in asymptotically symmetric spaces, the parabolic geometry of their conformal boundaries, and their interaction.

I am also interested in various aspect of geometric analysis, and I am planning to study topics related to the isoperimetric inequalities in the complex hyperbolic space.

Articles.....

1. *Asymptotic strictly pseudoconvex CR structure for asymptotically locally complex hyperbolic manifolds*, arXiv:2201.12132, submitted.
2. *CR compactification for asymptotically locally complex hyperbolic almost Hermitian manifolds*, arXiv:2307.04062.

¹National competitive examination used to recruit some teachers in high schools and universities.

Talks.....

Research seminars

- 04/06/2023: Séminaire de Géométrie, Marseille.
- 03/24/2023: Séminaire de Géométrie Différentielle, Nantes.
- 03/02/2023: Differential Geometry Seminar, KTH, Stockholm.
- 11/29/2022: Differential Geometry Seminar, KTH, Stockholm.
- 10/06/2022: Block seminar on Einstein 4-manifolds, Sulzbürg.
- 05/24/2022: Séminaire de géométrie, Tours.
- 05/13/2022: Differential Geometry seminar, KTH, Stockholm.
- 02/16/2022: Séminaire de Géométrie, Groupes et Dynamique, ENS de Lyon.
- 01/27/2022: Séminaire de Théorie Spectrale et Géométrie, Grenoble.
- 12/17/2021: Séminaire Darboux, Montpellier.

International conferences:

- 07/12/2023: Einstein metrics and Special Geometry, Mittag-Leffler Institute.

Ph.D seminars:

- 11/18/2020: IMAG's Ph.D students seminar, Montpellier.
- 02/08/2020: ENS de Lyon and UCBL joint Ph.D students seminar, Lyon.
- 02/06/2019: IMAG's Ph.D students seminar, Montpellier.

Workshops

- 01/08/2019: Work group on Scalar curvature and Rigidity, Montpellier.
- 01/01/2019: Work group on Scalar curvature and Rigidity. Montpellier.
- 2016: Work group on Morse theory, ENS de Lyon.
- 2015: Work group on knot theory, ENS de Lyon.

Attended conferences.....

- 07/2023: Einstein Spaces and Special Geometry, Mittag-Leffler Institute.
- 06/2023: Workshop on Real Analysis and Geometry, CIRM, Marseille.
- 04/2023: Central European Relativity Seminar 13, Stockholm.
- 12/2022: Winter school Aussois 2022, Aussois.
- 10/2022: Block seminar on Einstein 4-manifolds, Sulzbürg.
- 03/2022: Geometry and analysis on non-compact manifolds, CIRM, Marseille.
- 07/2021: Summer school Curvature constraints and space of metrics, Grenoble.
- 10/2020: ANR CCEM meeting, Montpellier.
- 09/2019: Joint seminar on Geometric Analysis, CIRM, Marseille.
- 07/2019: On Geometric Analysis, Toulouse.
- 04/2019: ANR CCEM meeting, Nantes.
- 02/2019: Foundations of Geometric Structures of Information, Montpellier.
- 11/2018: GDR Platon Parole aux jeunes chercheurs en groupes et géométrie, Lyon.
- 01/2018: Workshop Entropy and Soficity, Lyon.
- 01/2018: Advanced school Entropy and Soficity, Lyon.

Internships.....

Master's thesis

Conformal compactification of asymptotically locally hyperbolic manifolds.

2018

12 weeks internship under the supervision of Marc HERZLICH.

Master 1 thesis

Boy's and Girl's surfaces.

ICJ, University of Lyon

2016

8 weeks internship under the supervision of Vincent BORELLI.

Bachelor's thesis

IMAG, University of Montpellier

On $\alpha\beta$ -sets.

2015

6 weeks internship under the supervision of Daniel MASSART.

Other activities.....

- 2019–2021: Co-organizer of the Ph.D students seminar with Tom FERRAGUT, Montpellier.

Teaching activities

Teaching assistant

KTH Royal Institute of Technology

Duties: tutorials, seminars, exams and finals grading, jury for oral exams.

2022 – 2023

- Spring 2023:
 - Exercises sessions and Seminars in Multivariable calculus. First year bachelor in engineering.
 - Lecture in Differential Geometry (substituting). First year Master in Mathematics.

Teaching assistant

ENS de Lyon

Duties: lectures, tutorials, writing up worksheets, exams and finals grading.

2021 – 2022

- Spring 2022:
 - Examinations of oral sessions in Algebra & Analysis, Master 2. Preparatory class for the Agrégation.
 - Tutorials in Algebra 2. Third year bachelor in Advanced Mathematics.
- Fall 2021:
 - Lectures in Geometry, Master 2. Preparatory class for the Agrégation.
 - Examinations of oral sessions in Algebra & Analysis, Master 2. Preparatory class for the Agrégation.
 - Tutorials in Advanced geometry. Master 1.

Teaching assistant

University of Montpellier

Duties: tutorials, exams and finals grading.

2018 – 2021

- Spring 2021:
 - Examinations of oral sessions in *Algebra & Geometry* and *Analysis*, Master 2. Preparatory class for the Agrégation.
 - Tutorials in *Linear Algebra & Analysis 1*. First year bachelor in engineering.
- Fall 2020:
 - Tutorials in *Algebra 3*. Second year bachelor in Mathematics.
- Spring 2020:
 - Examinations of oral sessions in *Algebra & Geometry* and *Analysis*, Master 2. Preparatory class for the Agrégation.
 - Tutorials in *Algebra 2*. First year bachelor in Mathematics.
- Fall 2019:
 - Examinations of oral sessions in *Algebra & Geometry* and *Analysis*, Master 2. Preparatory class for the Agrégation.
 - Tutorials in *Linear algebra & Analysis 1*. First year bachelor students in engineering.
- Spring 2019:
 - Tutorials in *Linear algebra & Analysis 2*. First year bachelor in Computer science.
- Fall 2018:
 - Tutorials in *Measure theory & Integration*. Third year bachelor in Mathematics.

Tutor

ENS de Lyon

Tutoring of a first year bachelor student.

2016 – 2017

Teaching assistant in Mathematics

Lycée du Parc, Lyon

*Duties: Weekly oral examinations in Classe préparatoire MP*1 & MP*2.*

2016 – 2018

Skills

Languages.....

French (native), English (fluent), Spanish (basic notions), Swedish (currently learning).

Computer skills.....

- \LaTeX , html, CSS, CamL, SageMath.
- Linux user and FOSS aficionado.