Alan PINOY | Curriculum Vitæ

Department of mathematics, ENS de Lyon, 46 allée d'Italie
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French citizen, born on March 30th, 1993.

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EDUCATION

Graduate assistant   **Lyon**
École Normale Supérieure de Lyon   *Current*
Temporary research and teaching assistant

PhD student   **Montpellier**
University of Montpellier   *2018 – 2021*
Under the supervision of Marc HERZLICH and Philippe CASTILLON, on the theme "Asymptotically complex hyperbolic geometry and curvature constraints".
Defense scheduled on june 2022.

Master in Advanced Mathematics   **Lyon**
École Normale Supérieure de Lyon   *2015–2018*

Agrégation de mathématiques   **Lyon**
École Normale Supérieure de Lyon   *2017*
National competitive examination for recruitment of teachers. Ranked 13.

Bachelor in Advanced Mathematics   **Lyon**
École Normale Supérieure de Lyon   *2015*

Classes préparatoires MPSI-MP*   **Marseille**
Lycée Thiers   *2011 – 2014*
Intensive courses in mathematics and physics preparing the national competitive examination for admission to the French "Grandes Écoles". Admitted to the École Normale Supérieure de Lyon.

Baccalauréat S, option mathematics   **Martigues**
Lycée Paul Langevin   *2011*

RESEARCH

Scientific interests

My scientific activities focus on the Riemannian geometry of complete non-compact manifolds that have a constrained asymptotic geometry, modeled on that of non-compact rank one symmetric spaces. During my PhD, I studied the asymptotically complex hyperbolic case, that is the asymptotic geometry of complete non-compact Kähler manifolds whose curvature tensor is asymptotic to that of the complex hyperbolic space.

Articles

1. *Asymptotic strictly pseudoconvex CR structure for asymptotically locally complex hyperbolic manifolds.* arXiv:2201.12132. Submitted.

Talks

Research seminars;
- (Scheduled) 05/24/2022, Séminaire de Géométrie, Institut Denis Poisson, Tours.
- 02/16/2022, Séminaire de Géométrie, Groupes et Dynamique, UMPA, ENS de Lyon.
- 01/27/2022, Séminaire de Théorie Spectral et Géométrie, IJF, Grenoble-Alpes University.
- 12/17/2021: Séminaire Darboux, IMAG, University of Montpellier.

Doctoral seminars:
- 11/18/2020: "Heisenberg geometry". PhD students seminar, University of Montpellier.
- 02/08/2020: "Heisenberg geometry". PhD students seminar, University of Lyon.
- 02/06/2019: "Conformal compactification for asymptotically hyperbolic manifolds". PhD students seminar, IMAG, University of Montpellier.

Work groups:
- 01/08/2019: Dirac operator and Lichnérowicz's formula. Work group on Scalar curvature and Rigidity, IMAG, University of Montpellier.
- 01/01/2019: Clifford algebra and spin manifolds.
- Work group on Scalar curvature and Rigidity. IMAG, University of Montpellier.
- 2016: Morse functions. Work group on Morse theory, ENS de Lyon.
- 2015: Seifert's surfaces. Work group on knot theory, ENS de Lyon.

Others:
- 2019–2021: Organizer of the PhD students seminar, IMAG, University of Montpellier. Jointly with Tom FERRAGUT.

TEACHING ACTIVITIES

Graduate assistant.   **ENS de Lyon**
Duties: Lectures, Tutorials, writing up Worksheets, Exams and Finals grading.   *2021–2022*
- Spring 2022:
  - Examinations of oral sessions in Algebra and 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 and 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.   *2020–2021*
- Spring 2021:
  - Examinations of oral sessions in *Algebra & Geometry* and *Analysis*, Master 2. Preparatory class for the Agrégation.
  - Tutorials in *Linear Algebra and Analysis 1.* First year bachelor in engineering.
- Fall 2020:
  - Tutorials in *Algebra 3.* Second year bachelor in Mathematics.

Teaching assistant.   **University of Montpellier**
Duties: Tutorials, Exams and Finals grading.   *2019–2020*
- 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.
- o Fall 2019:
  - Examinations of oral sessions in *Algebra & Geometry* and *Analysis*, Master 2. Preparatory class for the Agrégation.
  - Tutorials in *Linear algebra and Analysis 1.* First year bachelor students in engineering.

Teaching assistant.   **University of Montpellier**
Duties: Tutorials, Exams and Finals grading.   *2018–2019*

- o Spring 2019:
  - Tutorials in *Linear algebra and Analysis 2.* First year bachelor in Computer science.
- o Fall 2018:
  - Tutorials in *Measure theory and Integration.* Third year bachelor in Mathematics.

Tutor.   **ENS de Lyon**
Tutoring of a first year undergraduate student.   *2016–2017*

Teaching assistant in Mathematics.   **Lycée du Parc, Lyon**
Duties: Weekly oral examinations in Classe préparatoire MP*.   *2016–2018*

References

Research
- o Marc Herzlich, IMAG, Université de Montpellier
- o Philippe Castillon, IMAG, Université de Montpellier
- o Gérard Besson, IJF, Université Grenoble-Alpes

Teaching
- o Julien Vovelle, UMPA, École Normale Supérieure de Lyon
- o Bertrand Rémy, UMPA, École Normale Supérieure de Lyon

Work experience

Internships

During my education in ENS de Lyon:

Master's thesis.   **IMAG, University of Montpellier**
Conformal compactification of asymptotically locally hyperbolic manifolds.   *2018*

12 weeks internship under the supervision of Marc Herzlich.

Master 1 thesis.   **ICJ, University of Lyon**
Boy's and Girl's surfaces.   *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

To finance my studies, I worked as an electrician for Engie (formerly Ineo GDF-Suez) during summers 2011 and 2012, in the area of Marseille.

SKILLS

Languages
- French: mother tongue.
- English: fluent.
- Spanish: basic notions.

Computer skills
- LaTeX, html, CamL, SageMath.
- OS: Linux (Ubuntu, Debian, Mint), Windows.
- Software: Pack LibreOffice, Pack Office.