Tristan Ozuch(-Meersseman)

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Education

2020
2017
PhD Student at ENS, Mathematics, Paris, France
Advisor : Olivier Biquard
Subject : Noncollapsed degeneration of Einstein 4-manifolds

2017
2013
Student of École Normale Supérieure (ENS), Paris, France

2016
2015
Second year of Master's degree (Analysis, Arithmetics, Geometry, Paris 11)

2015
2014
First year of Master's degree (ENS, UPMC)

2014
2013
Licence (equivalent to a *Bachelor's degree*) (ENS, UPMC)

2013
2010
Classe préparatoire MP (Mathematics and Physics), Bordeaux, France

Publications and preprints

2019 *A Lojasiewicz inequality for Ricci-flat ALE spaces*, (with Alix Deruelle, Sorbonne université) preprint, 2019.

2019 *Noncollapsed degeneration of Einstein manifolds II*, preprint, 2019.

2019 *Noncollapsed degeneration of Einstein manifolds I*, preprint, 2019.

2019 *Perelman's functionals on cones and Construction of type III Ricci flows coming out of cones*, Journal of Geometric Analysis, 2019.

2019 *How large isotopy is needed to connect homotopic diffeomorphisms* (of T^2) (with Dmitri Burago and Jinpeng Lu, Penn State University), Journal of Topology and Analysis, 2019.

Research experience

December 2019 September 2019	**Pre-PhD internship at Northwestern University** *Advisor* : Bruce KLEINER Desingularization of Einstein manifolds and Ricci flows.
July 2017 September 2016	**Pre-PhD internship at Northwestern University** *Advisor* : Aaron NABER Study of the degeneration of Einstein 4-manifolds.
February 2017 September 2016	**Pre-PhD internship at ENS** *Advisor* : Olivier BIQUARD Study of the desingularization of Einstein orbifolds and obstructions to do so.
July 2016 February 2016	**Internship at UC Berkeley/MSRI** *Advisor* : Richard BAMLER Study of Ricci flows and Perelman's functionals on cones – Conditions on the possible conical singularities of a Ricci flow and construction of asymptotically conical expanding solitons. Stronger results in dimension 3. Presentation of several theorems of the proof of the "Codimension 4 conjecture" at the Graduate student seminar. Proofreading of Richard Bamler's notes on "Structure theory of singular spaces".
July 2015 February 2015	**Internship at Penn. State University** *Advisor* : Dmitri BURAGO Study of some Geometric flows, Finslerian geometry and other topics in differential geometry. Some isotopy existence results proven (explicit constructions) by geometric flows.
June 2014 February 2014	**Undergraduate thesis** *Advisor* : Irène WALDSPURGER Semester long study of of "Riemannian geometries on the space of plane curves" Peter W. Michor, David Mumford. And redaction of a memoir explaining this article to an undergraduate level written in collaboration with Siarhei Finski.

Teaching

-	**Teaching assistant**, ENS, Paris, France	
2017	2019	In charge of the class **Mathematics for Humanities**.
	2017	coorganizer of the **undergrad mémoires** at ENS. Supervision of a mémoire on the **level set methods** for curve shortening flow and mean curvature flow.

Seminars and conferences

As a speaker :

December 2019 **The UC-Berkeley Differential Geometry Seminar**, UC Berkeley.
Presentation of *Noncollapsed degeneration of Einstein 4-manifolds I & II.*

November 2019 **Geometric Analysis and Topology Seminar**, Courant institute, NYU.
Presentation of *Noncollapsed degeneration of Einstein 4-manifolds I & II.*

October 2019 **Geometry/Topology Seminar**, Stony Brook University.
Presentation of *Noncollapsed degeneration of Einstein 4-manifolds I & II.*

May 2019 **Convergence and Low Regularity in General Relativity**, Simons Center, Stony Brook.
Presentation of *Noncollapsed degeneration of Einstein 4-manifolds.*

March 2019 **Geometry seminar**, Bruxelles.
Presentation of *Noncollapsed degeneration of Einstein 4-manifolds.*

February 2019 **Geometry seminar**, Nantes.
Presentation of *Noncollapsed degeneration of Einstein 4-manifolds.*

March 2018 **Masters-PhD meeting**, Jussieu.
Presentation of geometric analysis to masters students through the study of Einstein manifolds and Ricci flows.

February 2018 **Geometry seminar of IMJ**, Paris Diderot.
Presentation of *Perelman's functionals on cones and Construction of type III Ricci flows coming out of cones.*

January 2018 **Graduate students seminar**, ENS.
Presentation of the study of singularity formations in 3D Ricci flows.

Avril 2016 **Graduate student seminar on the proof of Cheeger-Naber of the codimension 4 conjecture**, MSRI, Berkeley.
Presentation of Colding's volume stability for Gromov-Hausdorff convergence with lower bounds on the Ricci curvature.

As a participant :

May 2019	**Master class in differential geometry : the structure of limit spaces** Institut Henri Poincaré, Paris
December 2018	**Geometric analysis at IHP** Institut Henri Poincaré, Paris
27 July 2018 23 July 2018	**McGill University Geometric Analysis Workshop 2018** McGill University, Montréal
1er juin 2018 28 mai 2018	**Geometric Analysis** ICMS, Edimburgh
16 February 2018	**Géométrie : échanges et perspectives** Institut Henri Poincaré, Paris
9 December 2017 6 December 2017	**Riemannian Geometry Past, Present and Future: an homage to Marcel Berger**, IHES, Bures-sur-Yvette
13 October 2017 9 October 2017	**Conference - Geometric Analysis at Roscoff,** Centre Henri Lebesgue, Roscoff
21 July 2017 10 July 2017	**Summer school in Geometric Analysis,** The Fields institute, Toronto "Ricci flow and intrinsic flat convergence" research team.
July 2016 February 2016	**Differential geometry semester at MSRI,** MSRI, Berkeley

OTHER SKILLS

Languages	French : Native speaker English : Fluent Italian : Good command
Activities	Competitive swimming, running, cycling, sculpting