Emma Lepri



Personal information

Birthdate: 15 May 1995

Nationality: Italian

Current position

Sep. 2023 – **Research associate**, *University of Glasgow*, Glasgow, Mentor: Michael Wemyss.

Education

Nov. 2019 – **Ph.D. in Mathematics**, *Università la Sapienza*, *Rome*, cum laude, Tutor: Domenico May 2023 Fiorenza, Supervisor: Marco Manetti thesis title: " L_{∞} morphisms and semiregularity".

Sep. 2017 – Master Degree in Mathematics, Università la Sapienza, Rome, 110/110 cum laude July 2019 thesis title: "Model categories and deformations of diagrams of commutative algebras", under the supervision of Marco Manetti.

Sep. 2014 – **Bachelor Degree in Mathematics**, *Università la Sapienza*, *Rome*, 110/110 cum laude

July 2017 thesis title: "Categorie modello e struttura modello di Quillen sulla categoria degli spazi topologici",

("Model categories and Quillen model structure on the category of topological spaces"), under the supervision of Marco Manetti.

Papers and preprints

- E. Lepri, M. Manetti, On deformations of diagrams of commutative algebras, In: E. Colombo et al. (eds.), Birational Geometry and Moduli Spaces, Springer INdAM Series 39 (2020), 77-107. DOI: 10.1007/978-3-030-37114-2_6 arXiv:1902.10436
- o E. Lepri, M. Manetti, Connections and L_{∞} liftings of semiregularity maps, Journal of Geometry and Physics 168 (2021) 104303, DOI: 10.1016/j.geomphys.2021.104303 arXiv:2102.05016
- o E. Lepri, Cyclic forms on DG-Lie algebroids and semiregularity, Rend. Sem. Mat. Univ. Padova 151 (2024), pp. 85–121 DOI 10.4171/RSMUP/129 arXiv:2104.12658
- o E. Lepri, An elementary approach to the model structure on DG-Lie algebras, Rend. Mat. Appl., 44 no. 1-2 (2023), 53-76 journal link arXiv:2211.11669
- o R. Bandiera, E. Lepri, M. Manetti, L_{∞} liftings of semiregularity maps via Chern-Simons classes, Advances in Mathematics, Volume 435, Part A, 2023, 109358. DOI: 10.1016/j.aim.2023.109358 arXiv:2111.12985
- o R. Bandiera, E. Lepri, M. Manetti, Semiregularity maps and deformations of modules over Lie algebroids, Pure Appl. Math. Q, Volume 20 (2024) Number 5,DOI 10.4310/PAMQ.241105042944 arXiv:2208.00694
- o J. Karmazyn, E. Lepri, M. Wemyss, Trivial extension DG-algebras, unitally positive A_{∞} -algebras, and applications arXiv:2411.17359

Teaching

- 2024 Lecturer, Homological Algebra, First part, Ph.D. course, SMSTC: Scottish Mathematical Sciences Training Centre
- 2021 2022 Tutor, Istituzioni di Matematica Modulo I, Scienze Naturali, Università La Sapienza, Rome

Invited Talks

- o KCL/UCL Junior Geometry Seminar, 24/06/2021.
- o Seminario di Natale 2021, Università degli Studi di Milano, 21/12/2021.
- OGAP (Geometry, Algebra, Physics) Seminar, Penn State, 6/09/2022.
- Algebraic Geometry seminar, University of Glasgow, 28/03/2023.
- o Seminari di Algebra e Geometria Algebrica, Università di Torino, 06/06/2023.
- o Talk in the conference "Giornate di Geometria Algebrica e Argomenti Correlati XVI", Hotel San Michele, Cetraro (Università della Calabria), 12/09/2023.
- o Geometry and Analysis Seminar, University of Oxford, 27/11/2023.
- O Algebra seminar, University of Edinburgh, 20/03/2024.
- o Talk in Séminaire ALPE, University of Toulouse, 11/06/2024.
- Talk in GAP (Séminaire Itinérant de Géométrie et Physique) Edition XIX: Moduli spaces and higher structures, La Sapienza, 12/09/2024.
- o GAP (Geometry, Algebra, Physics) Seminar, Penn State, 3/12/2024.
- O Uppsala Algebra Seminar, 25/03/2025.
- O Talk in workshop "Some like it hot, Geometry & Topology in Rome", INdAM, July 2025.
- Talk in "Workshop on Derived Categories, Noncommutative Geometry and Deformation Theory", Hotel San Michele, Cetraro, July 2025

Conferences and summer schools

- Workshop "Young Perspectives in Deformation Theory", Politecnico di Torino, November 2018.
- o "Aeneas Conference: Migrating Algebraic Geometry", Roma Tre, December 2018.
- o "Geometry in Pairs", Roma Tre, December 2019.
- o Workshop "Higher Structures and Operadic Calculus", CRM Barcelona, June 2021.
- O Hausdorff School: "Hyperkähler Geometry", Hausdorff Institut Bonn, September 2021.
- o Workshop "Moduli spaces and hyper-Kähler varieties", La Sapienza, September 2021.
- o Seminario di Natale 2021, Università degli Studi di Milano, December 2021.
- o GAeL XXIX, Laboratoire de Mathématiques d'Orsay, May 2022.
- o CIRM school "Moduli Spaces and Stability Conditions", Levico Terme, June 2022.
- o "Hyperkähler varieties and related topics", La Sapienza, September 2022.
- o "Giornate di Geometria Algebrica e Argomenti Correlati XVI", Hotel San Michele, Cetraro (Università della Calabria), September 2023.
- Winter meeting in Algebra and Geometry, Roma Tre, December 2023.
- O Séminaire ALPE, University of Toulouse, June 2024.
- European Talbot "Operads in deformation theory and homotopical algebra" with Geoffroy Horel and Bruno Vallette, Germany, July-August 2024.
- o GAP (Séminaire Itinérant de Géométrie et Physique) Edition XIX: Moduli spaces and higher structures, La Sapienza, September 2024.
- School on Deformation Theory IV, La Sapienza, September 2024.
- o "Workshop on Derived Categories, Noncommutative Geometry and Deformation Theory", Hotel San Michele, Cetraro, July 2025

Grants

- Winner of a grant "Progetti di Avvio alla Ricerca tipo 1", 2020,
 Università di Roma La Sapienza, for the project "Mappa di semiregolarità e morfismi L-infinito".
- Winner of a grant "Progetti di Avvio alla Ricerca tipo 1", 2021,
 Università di Roma La Sapienza, for the project "Sollevamenti L-infinito delle componenti superiori della mappa di semiregolarità".

Organisation of conferences and seminars

May 2024 Co-organiser (with T. De Deyn, I. Kaur, M. Pressland, F. Rota) of the workshop Algebraic Geometry Days in Glasgow, 8-9 May 2024, University of Glasgow

Sep. 2024 – Organiser of the Algebraic Geometry Seminar, University of Glagsow June 2025

Scientific visits

15/08/2022 - **Pennsylvania State University**, short visit to Ping Xu. 10/09/2022

2/12/2024 – **Pennsylvania State University**, short visit to Ping Xu. 13/12/2024

------ Reviews

Oct. 2022 - Reviewer for Mathematical Reviews

now

Oct. 2023 – Reviewer for ZBMath now

Languages

• Italian: native

o English: advanced

o German: basic