# MARCO RAMPAZZO

## **CURRICULUM VITAE, 21 OCTOBER 2021.**

### PERSONAL INFORMATION

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### ACADEMIC ACTIVITY

Current position 2021 – now

Postdoc, University of Bologna

Previous position 2016 – 2020

Spring 2019

PhD student in mathematics, University of Stavanger

Supervisor: Michał Kapustka

Thesis: "Equivalences of Calabi-Yau mainfolds and roofs of projective bundles"

Guest positions / Thematic programs

Guest of the Paul Sabatier University, Toulouse

Funding: Norwegian Research Council mobility grant

Host: Laurent Manivel

### **EDUCATION**

Master's degree in Physics
University of Milan

Bachelor's degree in Physics 2013

University of Milan

## **RESEARCH INTERESTS**

*Algebraic varieties*: Calabi–Yau varieties, homogeneous varieties and homogeneous vector bundles, Fano varieties with multiple projective bundle structures

*Derived categories of coherent sheaves*: semiorthogonal decompositions, mutations of exceptional collections, derived equivalence, Fourier–Mukai transform

Birational geometry: roofs of projective bundles, K-equivalence, DK-conjecture

*Gauged linear sigma models*: multiple geometric phases, phase transitions, variation of GIT

### **TEACHING**

fall 2021
fall 2020
fall 2020
spring 2020
fall 2019
fall 2018
fall 2017

### CONFERENCE TALKS

Workshop "Algebraic Geometry days". Mukai roofs and K3 surfaces

Conference "Nasjonalt Algebramøte 2019". Derived equivalence of Mukai roofs: the case of K3 surfaces of degree 12

Seminar of Algebra of the Jagellonian University. Computing Hodge numbers of Calabi–Yau varieties in Grassmannians

Conference "Nasjonalt Matematikermøte 2018". A GLSM description for a pair of non birational Calabi–Yau threefolds

Workshop "Motives of Calabi–Yau manifolds". A gauged linear sigma model description for a pair of non birational Calabi–Yau threefolds

Kraków, 19–21 May 2018

# SEMINARS ORGANIZED

Seminar: *Bridgeland stability conditions*Bologn

Bologna – Chemnitz – Nancy, fall 2021.

Organizer together with Simone Billi, Francesco Denisi,

Franco Giovenzana, Annalisa Grossi and

Mihai-Cosmin Pavel.

Homepage: https://marcorampazzo.github.io/bridgeland

Seminar: The mathematics of gauged linear sigma models

Organizer and speaker

Toulouse, spring 2019.

### **PUBLICATIONS AND PREPRINTS**

- 1. PhD Thesis: Marco Rampazzo. Equivalences between Calabi—Yau manifolds and roofs of projective bundles. (2021). https://doi.org/10.31265/usps.78

  Available online at https://ebooks.uis.no/index.php/USPS/catalog/book/78
- 2. *Publication:* Michał Kapustka, Marco Rampazzo. *Mukai duality and roofs of projective bundles.* (2021). Accepted by the Bulletin of the London Mathematical Society.
- 3. *Publication:* Michał Kapustka, Marco Rampazzo. *Torelli problem for Calabi-Yau threefolds with GLSM description.* Communications in Number Theory and Physics, Volume 13, No. 4 (2019).
- 4. *Preprint*: Enrico Fatighenti, Michał Kapustka, Giovanni Mongardi, Marco Rampazzo. *The generalized roof* F(1,2,n): *Hodge structures and derived categories*. (2021). Available at https://arxiv.org/abs/2110.10475
- 5. *Preprint*: Marco Rampazzo. *Calabi*–*Yau fibrations, simple K-equivalence and mutations.* (2020). Available at https://arxiv.org/abs/2006.06330