

# Curriculum Vitae



## PERSONAL INFORMATIONS:

🇮🇹 Italian citizen

🎂 27 September 1989

✉ danilo.lewanski@units.it

🏠 Università di Trieste, Sezione di Matematica,  
via Valerio 12/1 - 34127 Trieste

🌐 <https://sites.google.com/view/danilolewanski>

## Education and professional experience

### Ricercatore di tipo b). (Assistant/Associate Professor)

*U Trieste, IT*  
since 2022

SC 01/A2 (Geometry and Algebra), SSD MAT/03 (Geometry).

### Principal Investigator of SNF Ambizione Grant

*U Genève, CH*  
Nov 21 - Oct 25

Project “Resurgent Topological Recursion, Enumerative Geometry and Integrable Hierarchies”, funded by the Swiss National Science Foundation (~ 1M CHF).

### Post-doctoral researcher

*IHES and IPhT, Paris, FR*  
Nov 19 - Oct 21

Funded by the ERC Synergy Grant “ReNewQuantum” with PI Prof. Andersen, Prof. Eynard, Prof. Kontsevich, Prof. Mariño.

### Post-doctoral researcher

*Max-Planck-Institut, Bonn, DE*  
Nov 17 - Oct 19

PIs: Gaëtan Borot and Don Zagier.

### Ph.D. in Mathematics

*Univ. Amsterdam, NL*  
Nov 13 - Oct 17

Thesis Title: “Enumerative geometry and moduli spaces of curves via topological recursion”  
Topics: Algebraic Geometry and Mathematical Physics  
Supervisor: Sergey Shadrin

### M.Sc. in Mathematics

*Università di Padova, IT*  
Sep 11 - Jul 13

Specialization in Algebra, Geometry and Number Theory (ALGANT courses)  
Thesis title: “Moduli Spaces in Algebraic Geometry” on Mumford’s Geometric Invariant Theory  
Thesis Supervisor: Francesco Bottacin

### B.Sc. in Mathematics

*Università di Bologna, IT*  
Sep 09 - July 11

Thesis title: “Knot Theory of robotic arms in 3D and 4D spaces” on Algebraic Topology  
Thesis Supervisor: Massimo Ferri

## Publications and preprints

- Resurgent large genus asymptotics of intersection numbers.** *Article*  
ARXIV:2305.16940 2023  
Joint work with B. Eynard, E. Garcia-Failde, A. Giacchetto, P. Gregori.
- Resurgent Asymptotics of Jackiw-Teitelboim Gravity and the Nonperturbative Topological Recursion.** *Article*  
ARXIV:2309.03143 2022  
Joint work with B. Eynard, E. Garcia-Failde, P. Gregori, R. Schiappa.
- The spin Gromov-Witten /Hurwitz correspondence for  $P^1$**  *Article*  
ARXIV:2208.03259 2022  
Joint work with A. Giacchetto, R. Kramer, A. Sauvaget.
- An intersection-theoretic proof of the Harer-Zagier formula** *Article*  
ALGEBRAIC GEOMETRY 10 (2) (2023), 130–147 2021  
Joint work with A. Giacchetto, P. Norbury
- On some hyperelliptic Hurwitz-Hodge integrals** *Article*  
MATH. PROC. CAMBRIDGE PHIL. SOC., 175(2), 271-284 2021
- A natural basis for intersection numbers** *Article*  
ACCEPTED IN RENDICONTI DELL'ISTITUTO DI MATEMATICA DELL'UNIVERSITÀ DI TRIESTE 2021  
Joint work with B. Eynard
- A new spin on Hurwitz theory and ELSV via theta characteristics** *Article*  
ARXIV:2104.05697, SUBMITTED 2021  
Joint work with A. Giacchetto, R. Kramer
- On the Kontsevich Geometry of the combinatorial Teichmüller space** *Article*  
ARXIV:2010.11806, SUBMITTED 2020  
Joint work with J. Andersen, G. Borot, S. Charbonnier, A. Giacchetto, C. Wheeler
- On the Goulden-Jackson-Vakil conjecture for double Hurwitz numbers** *Article*  
ADVANCES IN MATHEMATICS 403, 108339 2020  
Joint work with N. Do.
- Double Hurwitz numbers: polynomiality, topological recursion and intersection theory** *Article*  
MATH. ANNALEN (2022): 1-65 2020  
Joint work with G. Borot, N. Do, M. Karev, E. Moskovsky.
- Masur-Veech volumes and intersection theory: the principal strata of quadratic differentials** *Appendix*  
DUKE MATH. J. 172(9), 2023, 1735-1779. 2019  
D. Chen, M. Möller, A. Sauvaget, with an appendix joint with G. Borot, A. Giacchetto
- Topological recursion for Masur-Veech volumes** *Article*  
J. LONDON MATH. SOCIETY, VOL.107 (1), 2023, 254-332. 2019  
Joint work with J. Andersen, G. Borot, V. Delecroix, S. Charbonnier, A. Giacchetto, C. Wheeler

- Wall-crossing and recursion formulae for tropical Jucys covers** *Article*  
 TRANSACTIONS OF THE AMERICAN MATHEMATICAL SOCIETY 373 (2020), 4685-4711 2019  
 Joint work with M. Anas Hahn.
- Half-spin tautological relations and Faber’s proportionalities of kappa classes** *Article*  
 SIGMA: SYMMETRY, INTEGRABILITY AND GEOMETRY: METHODS AND APPLICATIONS, 15, [080] 2019  
 Joint work with E. Garcia Failde, R. Kramer, S. Shadrin
- Tropical Jucys covers** *Article*  
 MATHEMATISCHE ZEITSCHRIFT (2022) 2018  
 Joint work with M. Anas Hahn.
- Harer-Zagier formula via Fock space** *Article*  
 COMMUNICATIONS IN NUMBER THEORY AND PHYSICS, 13 (2019), 3, 619-626 2018
- Wall-crossing formulae and strong piecewise polynomiality for mixed Grothendieck dessins d’enfants, monotone and simple double Hurwitz numbers** *Article*  
 ADVANCES IN MATHEMATICS 336 (2018), 38-69 2017  
 Joint work with M. Anas Hahn, R. Kramer.
- Special cases of the orbifold version of Zvonkine’s  $r$ -ELSV formula** *Article*  
 MICHIGAN MATHEMATICAL JOURNAL, 70(2): (2021), 369-402. 2017  
 Joint work with G.Borot, R.Kramer, A. Popolitov, S. Shadrin.
- Towards an orbifold generalization of Zvonkine’s  $r$ -ELSV formula** *Article*  
 TRANSACTIONS OF THE AMERICAN MATHEMATICAL SOCIETY, 372 (2019), 4447-4469 2017  
 Joint work with R.Kramer, A. Popolitov, S. Shadrin.
- On ELSV-type formulae, Hurwitz numbers and topological recursion** *Expository*  
 AMS PROCEEDINGS OF SYMPOSIA IN PURE MATHEMATICS, VOLUME 100, 2018. 2017  
[HTTPS://DOI.ORG/10.1090/PSPUM/100/01764](https://doi.org/10.1090/PSPUM/100/01764).
- The tautological ring of  $\mathcal{M}_{g,n}$  via Pandharipande-Pixton-Zvonkine  $r$ -spin relations** *Article*  
 ALGEBRAIC GEOMETRY 5.6 (2018), 703-727 2017  
 Joint work with R.Kramer, F. Labib, S. Shadrin
- Quasi-polynomiality of monotone orbifold Hurwitz numbers and Grothendieck’s dessins d’enfant** *Article*  
 DOCUMENTA MATHEMATICA 24, 857-898 (2019) 2016  
 Joint work with R.Kramer, S. Shadrin
- Ramifications of Hurwitz theory, KP integrability and quantum curves** *Article*  
 JOURNAL OF HIGH ENERGY PHYSICS, 2016(5), DECEMBER 2015 2016  
 Joint work with A. Alexandrov, S. Shadrin
- $\mathcal{W}$ -algebra constraints and topological recursion for  $A_N$ -singularity** *Appendix*  
 INTERNATIONAL JOURNAL OF MATHEMATICS 27, 1650110(2016) 2016  
 The main author is T. Milanov, appendix by D. Lewanski

## Polynomiality of orbifold Hurwitz numbers, spectral curve, and a new proof of the Johnson-Pandharipande-Tseng formula

Article

JOURNAL OF THE LONDON MATHEMATICAL SOCIETY 92(3), 547-565, APRIL 2015.

2015

Joint work with P. Dunin-Barkowski, A. Popolitov, S. Shadrin

## Chiodo formulas for the $r$ -th roots and topological recursion

Article

LETTERS IN MATHEMATICAL PHYSICS, 107(5), 901-919.

2015

Joint work with A. Popolitov, S. Shadrin, D. Zvonkine

## Awards, titles, certifications

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- Nov 2021 - Oct 2025** SNF **Ambizione** Grant (~ 1M CHF)  
**2023 - 2032** Abilitazione Scientifica Nazionale, Fascia I, Geometria e Algebra (Italian Abilitation)
- May 2021 - Apr 2030** Abilitazione Scientifica Nazionale, Fascia II, Geometria e Algebra (Italian Abilitation)
- Nov 2021 - Oct 2023** Part of **ERC Consolidator** Grant "ROGW" n. 864919 (~2M Euros) as postdoctoral researcher (declined)
- Nov 2021 - Oct 2024** Assegno di Eccellenza MIUR at SISSA, Trieste, IT (3 years contract, excellent postdocs provided at the national level, declined)
- Nov 2019 - Oct 2021** Part of **ERC Synergy** Grant "ReNewQuantum" n. 810573 (~ 10M Euros) as postdoctoral researcher, PI: Profs. Jørgen Andersen, Bertrand Eynard, Maxim Kontsevich, Marcos Mariño.

## Partecipation in research projects

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- Nov 2021 - Oct 2025** PI of **SNF Ambizione** Grant (~1M CHF)
- Nov 2021 - Oct 2023** Part of **ERC Consolidator** Grant "ROGW" n. 864919 (~2M Euros) as postdoctoral researcher, PI: Prof. Penka Georgieva.
- Nov 2019 - Oct 2021** Part of **ERC Synergy** Grant "ReNewQuantum" n. 810573 (~10M Euros) as postdoctoral researcher, PI: Profs. Jørgen Andersen, Bertrand Eynard, Maxim Kontsevich, Marcos Mariño.
- Nov 2013 - Oct 2017** Part of **NWO-VICI** Research Grant (~1.5M Euros) as PhD candidate, PI: Prof. Sergey Shadrin.
- 2019 - 2021** Part of **GNSAGA**: Italian Research Group for Algebraic and Geometric structures and their Applications

## Scientific expeditions

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- SISSA, Trieste (IT)** Teaching and research visit, Apr - May 2022
- IPhT and IHES, Paris (FR)** Research visit with host Prof. E. Eynard and several collaborators, Nov 2021 - Feb 2022
- UniSalento University (IT)** Research visit with host Prof. R. Vitolo, June 2021
- Melbourne University (AU)** Research visit with host Prof. P. Norbury, March 2020
- Monash University, Melbourne (AU)** Research visit with host Prof. N. Do, February 2020
- Amsterdam University (NL)** Research visit with host Prof. S. Shadrin, July 2019
- Monash University, Melbourne (AU)** Bartnik Visiting Grant awardee (~8K AUD) with host Prof. N. Do, February 2019
- Institut Henri Poincaré, Paris (FR)** Thematic trimester *Combinatorics and interactions*, February-March 2017
- Matrix Institute, Creswick (AU)** Event *Interactions between topological recursion, modularity, quantum invariants and low-dimensional topology*, November-December 2016

## Events organised

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- Sep 2022** Organiser of PhD + Postdoc Advanced school in Otranto, IT. Funded by ERC Synergy ReNewQuantum project
- Mar 2022** Organiser of Algebraic Geometry researchers workshop in Leysin, CH. Funded by own SNF grant
- Mar 2022** Organiser of intersection theory software developing workshop in Les Diablerets, CH. Funded by own SNF grant
- Sep 2021** Organiser and lecturer of Master students + PhD School in Otranto, IT. Funded by ERC Synergy ReNewQuantum project
- Sep 2021** Organiser of PhD + Postdoc Advanced school in Otranto, IT. Funded by ERC Synergy ReNewQuantum project
- Sep 2021** Organiser of researcher collaborative open-problem workshop in Otranto, IT. Funded by ERC Synergy ReNewQuantum project

## Selected Talks

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### Moduli spaces of curves and their cohomology

SEMINAR

*Bari, IT*

*Jan, 2022*

### Spin structures and Gromov-Witten theory

SEMINAR

*Palermo, IT*

*Nov, 2021*

### Recursive universal procedures for enumerative algebraic geometry

MATHEMATICAL PHYSICS SEMINAR

*IBS, Pohang, KOREA*

*Nov, 2021*

### Discussant for John Novak

COMBINATORICS AND TOPOLOGICAL RECURSION CONFERENCE

*Norway*

*Nov, 2021*

### ELSV formulae

TROPICAL CURVES, LOGARITHMIC STRUCTURES, AND ENUMERATIVE GEOMETRY

*Oberwolfach, DE*

*Oct, 2021*

### Dubrovin-Frobenius manifolds and topological recursion

MATHEMATICAL PHYSICS SEMINAR

*SISSA, Trieste, IT*

*Oct, 2021*

### Recursive universal procedures for enumerative algebraic geometry

CAGA SEMINAR

*Padova, IT*

*Oct, 2021*

### Counting graphs on surfaces

SEMINAR

*UniMore, IT*

*Oct, 2021*

### Enumerative geometry and mathematical physics

SEMINAR

*Bicocca, Milano, IT*

*Jul, 2021*

### A new spin for Hurwitz numbers and Chiodo classes

ENUMERATIVE GEOMETRY OF SURFACES

*Oberwolfach, DE*

*Jun, 2021*

### A new spin for Hurwitz numbers and Chiodo classes

CONFERENCE MOSCATR VII

*Moscow, RUS*

*Jun, 2021*

### Topological Recursion and moduli spaces of curves.

*Bologna University, IT*

*Jun 2021*

### Cohomologie des espaces de modules des courbes de la physique mathématique.

MATHEMATICAL PHYSICS SEMINAR

*IMB, Dijon, FR*

*Mar, 2021*

### ELSV-type formulae and new conjectures for BKP integrability II .

INTERNATIONAL TOPOLOGICAL RECURSION AND INTEGRABILITY SEMINAR

*Higher School for Economics,*

*Moscow, RUS*

*Mar, 2021*

<b>ELSV-type formulae and new conjectures for BKP integrability I .</b>	<i>Higher School for Economics, Moscow, RUS</i>
INTERNATIONAL TOPOLOGICAL RECURSION AND INTEGRABILITY SEMINAR	<i>Mar, 2021</i>
<b>Cohomologie des espaces de modules des courbes de la physique mathématique.</b>	<i>IMB and LaBRI, Bordeaux, FR</i>
GENERAL MATHEMATICAL SEMINAR	<i>Feb, 2021</i>
<b>Mathematical Physics for the Algebraic Geometry of moduli spaces of curves.</b>	<i>Copenhagen University, DK</i>
	<i>Feb 2021</i>
<b>Interaction between string theory, integrable systems and moduli spaces of curves.</b>	<i>KU Leuven, BE</i>
GEOMETRY SEMINAR	<i>Feb 2021</i>
<b>Topological recursion, matrix models, and moduli spaces of curves.</b>	<i>SISSA Trieste, IT</i>
MATHEMATICAL PHYSICS SEMINAR	<i>Jan, 2021</i>
<b>Resurgent Topological Recursion.</b>	<i>Les Diablerets, CH</i>
CONFERENCE WINTER SCHOOL IN MATHEMATICAL PHYSICS 2021	<i>Jan 2021</i>
<b>Topological Recursion for Hurwitz theory and intersection theory of moduli spaces of curves.</b>	<i>Bologna University, IT</i>
	<i>Jan 2021</i>
<b>Hurwitz theory, topological recursion, and ELSV formulae</b>	<i>Miami, USA</i>
CONFERENCE TOPOLOGICAL AND GEOMETRIC RECURSION IN INTERACTION WITH RESURGENCE	<i>Feb, 2020</i>
<b>Resurgence theory</b>	<i>Melbourne, RUS</i>
UNIVERSITY OF MELBOURNE	<i>Feb, 2020</i>
<b>On a conjecture of Goulden, Jackson, and Vakil</b>	<i>Paris, FR</i>
JUSSIEU ENUMERATIVE GEOMETRY SEMINAR	<i>Dec 5, 2019</i>
<b>Topological recursion and Masur-Veech volumes</b>	<i>Paris, FR</i>
IHES ENUMERATIVE GEOMETRY SEMINAR	<i>Dec 2, 2019</i>
<b>Topological recursion and Masur-Veech volumes</b>	<i>Montréal, CAN</i>
INTERNATIONAL SYMPOSIUM QUANTUM THEORY AND SYMMETRIES AT CRM MONTRÉAL	<i>Jul 2, 2019</i>
<b>Tropical Jucys covers</b>	<i>Genève, CH</i>
UNIVERSITÉ DE GENÈVE	<i>Mar 18, 2019</i>
<b>Virasoro constraints for simple maps and free probability</b>	<i>Moscow, RUS</i>
CONFERENCE MOSCATR VI	<i>June 7, 2018</i>

## Tautological ring and Pandharipande-Pixton-Zvonkine tautological relations

UNIVERSITÉ DE BOURGOGNE

Dijon, FR

Sep 7, 2017

## Orbifold Hurwitz numbers, topological recursion and ELSV-type formulae

WINTER SCHOOL ON COMBINATORICS AND INTERACTIONS, CIRM

Marseille, FR

Jan 13, 2017

## Topological recursion and Hurwitz numbers

CONFERENCE TOPOLOGICAL RECURSION AND MODULARITY

Matrix center, Creswick, AUS

Dec 22, 2016

## From Topological Recursion to Johnson-Pandharipande-Tseng Formula (and back)

2016 AMS VON NEUMANN SYMPOSIUM: TOPOLOGICAL RECURSION AND ITS INFLUENCE IN ANALYSIS, GEOMETRY, AND TOPOLOGY

Charlotte, NC, USA

Jul 6, 2016

## On Hurwitz enumerative problems

FIFTH WORKSHOP ON COMBINATORICS OF MODULI SPACES, HURWITZ NUMBERS, AND COHOMOLOGICAL FIELD THEORIES

Moscow, RUS

Jun 9, 2016

## Gromov-Witten Invariants

CONFERENCE PROSPECTIVES IN PHYSICAL MATHEMATICS

Bologna, IT

Dec 18, 2014

## Service

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### Editor

Special Issue on *Topological Recursion and its applications*, Journal of Geometry and Physics (JGP), Guest editor with G. Borot, B. Eynard, E. Garcia-*Failde*.

### Referee

Referee for Manuscripta Mathematica, Communications in Mathematical Physics, Journal of High Energy Physics, Selecta Mathematica, SIGMA, Bulletin of London Mathematical Society

### Committee

Msc thesis reviewer for Mikhael Lozhkin, St. Petersburg Department of Steklov Mathematical Institute of Russian Academy of Sciences

## Conferences

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### TRSalento2021: School/Workshop on Topological Recursion

Otranto, Salento region, IT

Sep 6- Sep 17, 2021

### Noncommutative geometry meets topological recursion

Münster, DE

Aug 16 - Aug 20, 2021

### MFO Workshop: Enumerative geometry of surfaces

Oberwolfach, DE

Jun 14 - Jun 18, 2021

### MOSCATR VII: 7th Workshop on Combinatorics of Moduli Spaces, Cluster Algebras, and Topological Recursion

Moscow, RUS

May 31 - Jun 5, 2021

### Conference Winter School in Mathematical Physics 2021

Les Diablerets, CH

Jan 2021

<b>Conference Topological and Geometric Recursion in Interaction with Resurgence</b>	<i>Miami, USA</i> Feb, 2020
<b>International Symposium Quantum Theory and Symmetries at CRM Montréal</b>	<i>Montréal, CAN</i> Jul 2, 2019
<b>ICM 2018: International Conference of Mathematicians</b>	<i>Rio, BR</i> Aug 1-9, 2018
<b>MOSCATR VI: 6th Workshop on Combinatorics of Moduli Spaces, Cluster Algebras, and Topological Recursion</b>	<i>Moscow, RUS</i> June 4-9, 2018
<b>Workshop on Moduli Spaces of Curves, Integrable Systems and related subjects</b>	<i>Dijon, FR</i> Sep 4-8, 2017
<b>Trimester Combinatorics and Interactions, IHP</b>	<i>Paris, FR</i> Feb 27- Mar 31, 2017
<b>Winter school on combinatorics and interactions, CIRM</b>	<i>Marseille, FR</i> Jan 9-13, 2017
<b>Interactions between Topological recursion, modularity, quantum invariants and low-dimensional topology, Matrix center</b>	<i>Creswick, AUS</i> Nov 28 - Dec 23, 2016
<b>2016 AMS von Neumann Symposium: Topological Recursion and its Influence in Analysis, Geometry, and Topology</b>	<i>Charlotte, NC, USA</i> Jul 4-8, 2016
<b>Fifth Workshop on Combinatorics of Moduli Spaces, Hurwitz numbers, and Cohomological Field Theories</b> HSE, STEKLOV INSTITUTE, SKOLKOVO INSTITUTE OF SCIENCE AND TECHNOLOGY AND INDEPENDENT UNIVERSITY	<i>Moscow, Russia</i> Jun 6-11, 2016
<b>2015 AMS Summer Research Institute in Algebraic Geometry</b> UNIVERSITY OF UTAH	<i>Salt Lake City, UT, USA</i> Jul 13-24, 2015
<b>Counting Instantons</b> LORENTZ CENTER	<i>Leiden, The Netherlands</i> Jun, 16-20, 2015
<b>Workshop on mathematical physics</b> UNIVERSITEIT VAN AMSTERDAM In occasion of the PhD Defense of Petr Dunin-Barkowski	<i>Amsterdam, The Netherlands</i> May 26-28, 2015
<b>Perspectives in Physical Mathematics</b> UNIVERSITÀ DI BOLOGNA	<i>Bologna, Italy</i> Dec 18-19, 2014



## Geometry and Quantum Theory Colloquium

GQT CLUSTER

*The Netherlands*

*Nov 6-7, 2014*

## Geometry and Quantum Theory Colloquium

GQT CLUSTER

*The Netherlands*

*Jul 3-4, 2014*

## Workshop on Instanton Counting: Moduli Spaces, Representation Theory and Integrable Systems

LORENTZ CENTER

*Leiden, The Netherlands*

*Jun 16, 2014*

## Fourth Workshop on Combinatorics of Moduli Spaces, Cluster Algebras and Topological Recursion

HSE, STEKLOV INSTITUTE, AND INDEPENDENT UNIVERSITY

*Moscow, Russia*

*May 26-31, 2014*

## Mirror Symmetry and Spin Curves

PALAZZONE DI CORTONA

*Cortona, Italy*

*Apr 28-30, 2014*

## On Quantization of Moduli Spaces

*Geneva, Switzerland*

*Apr 22-25, 2014*

## Moduli of curves and mathematical physics

UNIVERSITEIT VAN AMSTERDAM

In occasion of the PhD Defense of Loek Spitz

*Amsterdam, The Netherlands*

*Jan 23, 2014*

## Geometry and Quantum Theory Colloquium

GQT CLUSTER

*The Netherlands*

*Jan 17-18, 2014*

## Workshop on Algebraic Cycles and Tautological classes

In occasion of the PhD Defense of Qizheng Yin

*Nijmegen, The Netherlands*

*Dec 18, 2013*

## VBAC2013: Hilbert Schemes, Sheaves and Representations

SISSA

*Trieste, Italy*

*Jun 17-21, 2013*

## Recent trends in Algebraic Analysis

UNIVERSITÀ DI PADOVA

*Trieste, Italy*

*Feb 19-23, 2013*

## Teaching

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### Curricular PhD course at SISSA: Introduction to topological recursion and moduli spaces of curves

*Lecturer*

*SISSA, Trieste (IT), Apr-May 2022*

### PhD mini-course: Hurwitz theory and topological recursion

*Lecturer*

*School TRSalento2021 (IT), Sep 2021*

## PhD mini-course: Hurwitz theory and enumerative geometry

Lecturer

U Nairobi (KE), Aug 2021

## PhD mini-course: Moduli spaces of curves and topological recursion

Lecturer

UniSalento Lecce (IT), Jun 2021

## Outreach teaching activities with SAMI (see below)

TOPOLOGY, GEOMETRY, ALGEBRA, PROBABILITY, PHYSICS, PROGRAMMING COURSES

Lecturer

African maths institutes, 2016 - 2021

## Wiskunde N2

ORDINARY AND PARTIAL DIFFERENTIAL EQUATIONS

Assistant

U Amsterdam (NL), Fall 16

## Algebra I

GROUP THEORY

Assistant

U Amsterdam (NL), Spring 15

## Wiskunde N2

ORDINARY AND PARTIAL DIFFERENTIAL EQUATIONS

Assistant

U Amsterdam (NL), Fall 15

## Algebra I

GROUP THEORY

Assistant

U Amsterdam (NL), Spring 15

## Wiskunde N2

ORDINARY AND PARTIAL DIFFERENTIAL EQUATIONS

Assistant

U Amsterdam (NL), Fall 14

## Galois Theorie

GALOIS THEORY

Assistant

U Amsterdam (NL), Spring 14

## Wiskunde N3

COMPLEX ANALYSIS

Assistant

U Amsterdam (NL), Fall 13

## Outreach activities

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I have taken up the role of Director of the UK based Charity SAMI (Supporting African Maths Initiatives, <https://samicharity.co.uk>) since 2019. SAMI wants to address the huge divides in terms of access and quality of education across Africa, in particular with respect to Mathematics. Since 2013 SAMI has supported activities for more than 1600 African highschool students in seven African countries thanks to more than 500 volunteers among local and international scientists.

### ”Crosspollination” workshop on maths education in African Institute for Mathematical Sciences of Rwanda, Kigali

ESTABLISHING A COMMUNITY OF PRACTICE WITH INTERNATIONAL MATHS EDUCATORS AT DIFFERENT LEVELS

Organiser

Spring 22

### Development of an open-access maths educational online repository for local delivery in times of Covid-19 pandemic (<https://virtualmathscamp.com>)

LEADING THE VIDEO TEAM AND OVERALL ORGANISATION

Team leader and organiser

Summer-Fall 20

## **SAMI (Supporting African Mathematics Initiatives) Maths Camp Rwanda**

ORGANISER OF A TWO WEEKS MATHS CAMP FOR HIGH SCHOOL STUDENTS

*Main organizer*

*Summer 19*

## **”Crosspollination” workshop on maths education in Africa in Cape Coast, Ghana**

ESTABLISHING A COMMUNITY OF PRACTICE WITH INTERNATIONAL MATHS EDUCATORS AT DIFFERENT LEVELS

*Speaker and participant*

*Spring 19*

## **SAMI (Supporting African Mathematics Initiatives) Maths Camp Kenya**

VOLUNTEERING IN A TWO WEEKS MATHS CAMP FOR HIGH SCHOOL STUDENTS

*Co-organizer*

*Summer 18*

## **SAMI (Supporting African Mathematics Initiatives) Maths Camp Ghana**

VOLUNTEERING IN A TWO WEEKS MATHS CAMP FOR HIGH SCHOOL STUDENTS

*Co-organizer*

*Summer 17*

## **SAMI (Supporting African Mathematics Initiatives) Maths Camp Tanzania**

VOLUNTEERING IN A TWO WEEKS MATHS CAMP FOR HIGH SCHOOL STUDENTS

*Co-organizer*

*Summer 16*

## **Skills**

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**Programming** Sage, Mathematica, Matlab, C/C++, LaTeX

**Languages** Italian (Mother tongue), English (C1), Spanish, French (B2), Dutch, German (B1)

**Others** Judo instructor for two years, Scout educator, one-year Italian civil servant (on voluntary basis)