CURRICULUM VITAE

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Name: Georgios Dimitroglou Rizell
Citizenship: Swedish
Birth year: 1982
Adress: Department of Mathematics
               Uppsala University
               Box 480
               SE-751 06 UPPSALA
               SWEDEN
Phone: +46 18 471 3225
E-mail: `georgios.dimitroglou@math.uu.se`
Web: `https://katalog.uu.se/profile/?id=N7-1534`
               `https://www.dimitroglou.name/`

Research interests. I work in the field of symplectic and contact topology. The main themes of my research concern classification of Lagrangians and Legendrians up to Hamiltonian isotopy, development of algebraic symplectic and contact invariants, and quantitative questions in contact topology. The technique of pseudoholomorphic curves with punctures in symplectic manifolds with conical ends of the type that is used in Symplectic Field Theory (SFT) is an important tool in my research. Concerning the invariants, I am currently developing theories that feature combinations of Floer theory and SFT. For recordings and slides of scientific talks consult my webpage `http://www.dimitroglou.name/talks.html`.

1. POSITIONS HELD

2021–now: Associate Professor in Mathematics (Universitetslektor) at Uppsala University, Sweden.
            My position is funded by the **Wallenberg Academy Fellowship** grant KAW 2021.0191 from the Swedish Knut & Alice Wallenberg Foundation.
            I am also a **Wallenberg Scholar** with grant KAW 2021.0300.
2017–2021: Assistant Professor in Mathematics (Biträdande Universitetslektor) at Uppsala University, Sweden.
            My position was funded by the **Wallenberg Academy Fellowship** grant KAW 2016.0198 from the Swedish Knut & Alice Wallenberg Foundation.
2016–2017: Post doc. grant from the Knut & Alice Wallenberg Foundation, Sweden.
            Hosting institution: Uppsala University, Sweden.
2014–2016: Post doc. grant from the Knut & Alice Wallenberg Foundation, Sweden.
            Hosting institution: University of Cambridge, UK.
            Host: Prof. Ivan Smith.
2015:   Residency at *Institut Mittag-Leffler*, Sweden, for a program on symplectic topology during the autumn semester.
2013–2014: Post doc. at Université Paris-Sud, France.
            Advisor: Prof. Frédéric Bourgeois.
2012–2013: Post doc. at Université Libre de Bruxelles, Belgium.
            Advisor: Prof. Frédéric Bourgeois.

2. Education

2007–2012: Ph.D. studies in mathematics at Uppsala University, Uppsala, Sweden.
            Advisor: Prof. Tobias Ekholm.
            Subject: Symplectic and contact geometry.
            Thesis: *Surgeries on Legendrian submanifolds*.
            Defense date: 13 september 2012.
            Opponent: Prof. Frédéric Bourgeois, Université Libre de Bruxelles.
2011:   Acquired a licentiate degree from Uppsala University, Sweden.
            Licentiate thesis: *Legendrian Surfaces with few Reeb Chords*.
            Examiner: Prof. Frédéric Bourgeois, Université Libre de Bruxelles.
2002–2007: Student of Mathematics at Uppsala University, Sweden.
            Degree: Degree of Master of Science (One Year) in Mathematics.
            Master Thesis: *Winding numbers and attaching Riemann surfaces*.
            Advisor: Prof. Burglind Juhl-Jöricke.

3. Administration and Organisation

Administrative duties.

July 2020 – :	Head of the Deparment of Mathematics, Uppsala University.
January 2019 – June 2020 :	Teacher representative in the *Educational Board of Science* at the Disciplinary Domain of Science and Technology (Naturvetenskapliga Utbildningsnämnden, Tek-Nat) Uppsala University.

Organisation of conferences.

2022: Organiser of *Frontiers of Quantitative Symplectic and Contact Geometry* at Institute Mittag–Leffler, Sweden.
       10 speakers and 40 participants (30 international).
2021: Organiser of *UU – Nantes Workshop on Lagrangian cobordisms and Floer theory*, Enköping, Sweden.
       30 participants (20 international) and 10 speakers.
2019: Organiser of *String Math Public Lecture*, Uppsala University, July 2019.
       2 speakers, ca 1000 participants, in the grand audotorium of Uppsala University.
2018: Organiser of *The 12th Workshop on Symplectic Geometry, Contact Geometry and Interactions (CAST)* at Uppsala University, 11–13 January 2018.
       11 speakers and 60 participants (50 international).
       Partly financed by my Wallenberg Fellowship grant KAW 2016.0198.

4. Grants and support

2021: **Wallenberg Academy Fellows prolongation**, from the Swedish *Knut & Alice Wallenberg Foundation.*
Title: *Lagrangian Poincaré Recurrence via Pseudoholomorphic Foliations.*
Grant nr: KAW 2021.0191
1.750.000 SEK per year during five years.

2021: **Wallenberg Scholar**, from the Swedish *Knut & Alice Wallenberg Foundation.*
Grant nr: KAW 2021.0300
3.000.000 SEK

2020: **Research Project Grant** from the *Swedish Research Council.*
Title: *The Fukaya category for conical singularities.*
Grant nr: 2020-04426.
800.000 SEK per year during four years.

2020: Grant for **nomination of guest professor in mathematics**, from the Swedish *Knut & Alice Wallenberg Foundation.*
A fellowship for funding a guest professorship for Paolo Ghiggini, Université de Nantes, at Uppsala University for the period November 2020 – April 2021.
Grant nr: KAW 2019.0531.
Amount: 580.000 SEK.

2020: Scholarship from *Svensk–Franska Stiftelsen* (the Swedish–French foundation) for conducting research at Institute Henri Poincaré, Paris, during the 2021 trimester *Symplectic topology, contact topology, and interactions.* (Date of decision 2020-04-29.)

2019: Scholarship from *Esseens, f matematik*, Uppsala University, for a collaborative visit to IMPA, Rio de Janeiro, Brazil. (Date of decision 2019-05-15.)

2018: Scholarship from *Esseens, f matematik*, Uppsala University, for a collaborative visit to Université de Montreal, Canada. (Date of decision 2018-05-24.)

2018: An invitation to Université de Nantes, France, as a *professeur invité* during two weeks in March 2018 with support from the same institution.

2017: **Wallenberg Academy Fellow:** A research grant from the Swedish *Knut & Alice Wallenberg Foundation.*
Title: *The space of Lagrangian Submanifolds and Homological Mirror Symmetry.*
Grant nr: KAW 2016.0198.
1.000.000 SEK per year during five years.

2016: An invitation to Université de Nantes, France, as a *professeur invité* during two weeks in October 2016 with support from the same institution.

2016: The Knut & Alice Wallenberg Foundation, Sweden.
A two-year prolongation of the previous post doc. grant at Uppsala University.
Grant nr: KAW 2016.0446.

2015: A stay at *Institut Mittag-Leffler*, Djursholm, Sweden, during the period September–November 2015 with support from the same institution.

2014: **Postdokprogram för utresande forskare inom matematik med svensk doktorsexamen**: a post-doc grant from the Swedish *Knut & Alice Wallenberg Foundation*, for funding two years at the University of Cambridge (host: Ivan Smith).
Grant nr: KAW 2013.0321.
Amount: €50.000 per year during two years.

2012: **Short visit grant** from the European Science Foundation,
joint application with Jonathan D. Evans.

2012: Grant from the fund *Hierta-Retzius fond för vetenskaplig forskning*,
The Royal Swedish Academy of Sciences.

5. Pedagogical experience and Outreach

Pedagogical education and experience.

Pedagogical education:

2019: *Supervising students for degree projects*, two week full-time course,
Uppsala University, Sweden.

2018: *Supervising PhD Students*, three week full-time course,
Uppsala University, Sweden.

2012: *University Teacher Training Course*, five week full-time course,
Uppsala University, Sweden.

Courses taught as main lecturer:

2021: Ph.D. course in geometry and topology, 5hp course for Ph.D. students.
2021: Kursplan för Matematikprojekt med LaTeX, under-graduate level.
2021: Holomorphic curve theories in symplectic geometry, 5hp course for Ph.D. students.
2020: Linear algebra II, 5hp course for engineers.
2019: Ph.D. course in geometry and topology, 5hp course for Ph.D. students.
2018: Several variables calculus, 5hp course for engineers.
2012: Basic Topology, under-graduate level.
2011: Transform Methods (Fourier Analysis), under-graduate level.
2011: Basic Topology, under-graduate level.
2010: Transform Methods (Fourier Analysis), under-graduate level.

Bachelor thesis supervised:

2022:   *The Surgery Formula for Weinstein Surfaces*, Martin Bäcke.
        Barcode of a pair of compact exact Lagrangians in a punctured exact two-dimensional symplectic manifold, Tangi Pasquer (Intern from ENS Paris Ulm).
2021:   *Connections on the circle bundle*, Liam Nestius
        The Hamiltonian formulation of geodesics, Viktor Hildebrandsson
2020:   *An Introduction to Kleinian geometry via Lie groups*, Josefin Wahlström.
2019:   *Removing cusps from Legendrian front projections*, Gustav Franklin.
2018:   *Morse Theory and Handle Decomposition*, Kawa Rasolzadah.

Masters thesis supervised:

2022:   *DG-algebra computations for singular Legendrian knots*, Martin Bäcke.
        Symplectic Fibrations and Connections, Kawah Rasolzadah.
2021:   *Local unknottedness of planar Lagrangians with Boundary*, Zixuan Wang .
2021:   *Symplectic Homology and Shape of Cotangent Bundles*, Tobias Våge Henriksen.

Ph.D. students.

2022 – :   Martin Bäcke,
           Topics: Computations, generation, and mutation of Partially Wrapped Fukaya categories.
2019 – :   Johan Rydholm,
           Topics: Mirror symmetry for ADE-resolutions.

Popularisation & Outreach.

2020:   Popular scientific video lecture about knot theory for high school students, organised by
        Uppsala University.
        `https://uppsala.box.com/s/ctkr2lnondxi60ukjsanroa990vr14d6`
2019:   Organiser of String Math Public Lecture, Uppsala University, July 2019.
2009:   Workshop leader for *Sonja Kovalevsky-dagarna* at Uppsala University.
        This is a mathematics event for high-school students.
2008:   Workshop leader for *Sonja Kovalevsky-dagarna* at Uppsala University.
        This is a mathematics event for high-school students.

6. Publications

Georgios Dimitroglou Rizell
Uppsala University

Published / Accepted for publication.

1. Geometric generation of the wrapped Fukaya category of Weinstein manifolds and sectors (with B. Chantraine, P. Ghiggini, & R. Golovko), accepted for publication in *Annales scientifiques de l'École normale supérieure* (2022).
2. Legendrian submanifolds from Bohr-Sommerfeld covers of monotone Lagrangian tori (with R. Golovko), accepted for publication in *Communications in Analysis and Geometry* (2021).
3. Families of Legendrians and Lagrangians with unbounded spectral norm, *Journal of Fixed Point Theory and Applications* **24** Article nr. 43 (2022) doi:10.1007/s11784-022-00964-7
4. Linking of Lagrangian tori and embedding obstructions in symplectic 4-manifolds (with L. Côté), *International Mathematics Research Notices*, Volume 2022, Issue 8, April 2022, Pages 63470–6401 (2022) doi:10.1093/imrn/rnaa384.
5. Bulky Hamiltonian isotopies of Lagrangian tori with applications, Proceedings of the Gökova Geometry-Topology Conferences 2018/2019. Gökova Geometry/Topology Conference (GGT), Gökova, 2021, 138–163.
6. On Legendrian products and twist spuns (with R. Golovko), *Algebraic & Geometric Topology* **21** (2021) 665—695. doi:10.2140/agt.2021.21.665.
7. Refined disk potentials for immersed Lagrangian surfaces (with T. Ekholm & D. Tonkonog), accepted for publication in *Journal of Differential Geometry* (2020).
8. The persistence of the Chekanov-Eliashberg algebra (with M. Sullivan), *Selecta Mathematica New Series* **26** Article nr. 69 (2020), doi:10.1007/s00029-020-00598-y.
9. An energy-capacity inequality for Legendrian submanifolds (with M. Sullivan), *Journal of Topological Analysis* **12** issue 03 (2020) 537 – 623.
10. Floer theory for Lagrangian cobordisms (with B. Chantraine, P. Ghiggini, & R. Golovko), *Journal of Differential Geometry* **114** no. 3 (2020) 393–465.
11. The classification of Lagrangians nearby the Whitney immersion, *Geometry & Topology* **23** no. 7 (2019) 3367 – 3458.
12. Positive Legendrian isotopies and Floer theory (with B. Chantraine & V. Colin), *Annales de l'Institute Fourier* **69** no. 4 (2019) 1679 – 1737.
13. The number of Hamiltonian fixed points on symplectically aspherical manifolds (joint with R. Golovko), Proceedings of the Gökova Geometry-Topology Conference 2015. Gökova Geometry/Topology Conference (GGT), Gökova, 2016, 151–167.
14. Lagrangian isotopy of tori in $S^2 \times S^2$ and $\mathbb{C}P^2$ (with E. Goodman & A. Ivrii), *Geometric and Functional Analysis* **26** no. 5 (2016) 1297–1358.
15. Nontriviality results for the characteristic algebra of a DGA, *Mathematical Proceedings of the Cambridge Philosophical Society* **162** no. 3 (2017) 419–433.
16. The stable Morse number as a lower bound for the number of Reeb chords (joint with R. Golovko) to appear in *Journal of Symplectic Geometry* (2016).

17. Uniqueness of extremal Lagrangian tori in the four-dimensional disc, Proceedings of the Gökova Geometry-Topology Conference 2015. Gökova Geometry/Topology Conference (GGT), Gökova, 2016, 151–167.
18. Noncommutative augmentation categories (with B. Chantraine, P. Ghiggini, & R. Golovko), Proceedings of the Gökova Geometry-Topology Conference 2015. Gökova Geometry/Topology Conference (GGT), Gökova, 2016, 116–150.
19. Legendrian Ambient Surgery and Legendrian Contact Homology, *Journal of Symplectic Geometry* **14** no. 3 (2016) 811–901.
20. Floer homology and Lagrangian concordance (with B. Chantraine, P. Ghiggini, & R. Golovko), Proceedings of 21st Gökova Geometry-Topology Conference 2014. Gökova Geometry/Topology Conference (GGT), Gökova, 2015, 76–113.
21. Exotic spheres and the topology of symplectomorphism groups (with J. D. Evans), *Journal of Topology* **8** no. 2 (2015) 586–602.
22. Estimating the number of Reeb chords using a linear representation of the characteristic algebra (with R. Golovko), *Algebraic & Geometric Topology* **15** no. 5 (2015) 2887–2920.
23. On homological rigidity and flexibility of exact Lagrangian endocobordisms, (with R. Golovko), *International Journal of Mathematics* **25** no. 10 (2014),
24. Exact Lagrangian caps and non-uniruled Lagrangian submanifolds, *Arkiv för Matematik* **53** no. 1 (2015) 37–64,
25. Lifting pseudo-holomorphic polygons to the symplectization of $P \times \mathbb{R}$ and applications, *Quantum Topology* **7** no. 1 (2016) 29–105.
26. Unlinking and unknottedness of monotone Lagrangian submanifolds (with J. D. Evans), *Geometry & Topology* **18** no. 2 (2014),
27. Legendrian Surfaces with few Reeb Chords, *Algebraic & Geometric Topology* **11** no. 5 (2011) 2903–2936.

Preprints.

1. C^0-limits of Legendrian knots and contact non-squeezing (2022),
   joint with M. G. Sullivan
2. The persistence of a relative Rabinowitz–Floer complex (2021),
   joint with M. G. Sullivan
3. Symplectic Rigidity of Fibers in Cotangent Bundles of Riemann Surfaces (2020),
   joint with L. Côté