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## CURRICULUM VITAE

Søren Galatius

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### PERSONAL DATA

Born August 1, 1976 in Randers, Denmark. Danish citizen.

### EDUCATION

PhD in Mathematics, Aarhus University, 2004

PhD thesis title: *Characteristic Classes of Surface Bundles*

PhD advisor: Ib Madsen

*Cand. Scient.* (MSc), Aarhus University, 2002

### EMPLOYMENT

Professor, Columbia University (from 7/2025)

Eilenberg Visiting Professor, Columbia University (1/2024 – 6/2024)

Visiting Professor, Columbia University (8/2023 – 12/2023, 7/2024 – 6/2025)

Professor, Copenhagen University (4/2016 – 6/2025)

Professor, Stanford University (9/2011 – 9/2018)

Associate Professor, Stanford University (9/2008 – 8/2011)

Assistant Professor, Stanford University (9/2006 – 8/2008)

Szegő Assistant Professor, Stanford University (9/2004 – 8/2006)

### SELECTED INVITED LECTURES

Eilenberg Lectures, Columbia University, 2024

Moursund Lectures, U Oregon, 2023

Distinguished Lecture, Swedish Mathematical Society 2022

William J. Spencer Lecture, Kansas State, 2017

Ordway Lectures, Minnesota, 2016

ICM invited speaker (topology section), Korea, 2014

Adem Lectures, Mexico City, Mexico, 2013

European Congress of Mathematics, Amsterdam, 7/08

Plenary lecture, AMS regional, Baton Rouge, 3/08

### AWARDS AND HONORS

Fred R. Cohen Prize, Association for Mathematical Research, 2024

Clay Research Award (with Randal-Williams) 2022

DNRF Center “GeoTop”, co-PI 2020–2026

Elite Research Prize, Danish government, 2017

ERC Consolidator Grant 2016–2021  
 NSF grant DMS-0505740 (2005–2008)  
 NSF grant DMS-0805843 (2008–2011)  
 NSF grant DMS-1405001 (2014–2017)  
 NSF grant DMS-1105058 (2011–2014)  
 NSF conference grant DMS-1430456 (2014)  
 NSF conference grant DMS-1619698 (2016)  
 Royal Danish Academy of Sciences, elected foreign member (2013)  
 Royal Danish Academy of Sciences “silver medal” (2010)  
 Clay Research Fellowship 2007–2010

## OTHER ACADEMIC FUNCTIONS

Core Member of Topology Panel for speaker selection to the ICM 2022  
 Coorganizer, *Ib Fests*, Copenhagen, Denmark, 2022  
 Coorganizer, *Higher Algebraic Structures in Algebra, Topology and Geometry*, Mittag-Leffler Institute, Stockholm 2022  
 Coorganizer, *Arbeitsgemeinschaft*, Oberwolfach, 2003 and 2021  
 Mentor, *STAGOSAUR Summer School 2020*, Online, 2020  
 Coorganizer, *Topologie*, Oberwolfach, Germany, 2020, 2022  
 Mentor, *MIT Talbot Workshop Mentor*, Texas, 2019  
 Coorganizer, *Patterns in Cohomology of Moduli Spaces*, Oxford, 2019  
 Coorganizer, *Moduli and Traces*, Copenhagen, Denmark, 2017  
 Coorganizer, *Topology of Manifolds*, Lisbon, Portugal, 2016  
 Coorganizer, *Hausdorff Trimester*, Bonn, Germany, 2015  
 Coorganizer, *Algebraic Topology: Applications and New Directions*, Stanford 7/12  
 Principal scientific organizer, *WCATSS Summer School*, Oregon 2010.  
 Coorganizer, *Homotopy of Moduli Spaces*, Oberwolfach, 10/03  
 Coorganizer, *Topology of Moduli Spaces*, Stanford, 1/07  
 Coorganizer, *Loops, Strings and Moduli Spaces*, Tianjin, China, 8/09  
 Coorganizer, Stanford topology seminar  
 Editor of *International Mathematical Research Notices*, 2016–2019  
 Editor of *Transactions of the AMS*, 2013–2016  
 Editor of *Memoirs of the AMS*, 2013–2016  
 Editor for *Algebraic and Geometric Topology*, 2010–2019  
 Director of Stanford *Math Research Center*, 2015–2018

## PHD STUDENTS

2 current students (advisor/coadvisor)  
 Pierre Elis, Copenhagen, 2024  
 Alexis Aumonier, Copenhagen, 2023  
 Arpon Raksit, Stanford, 2021  
 Calista Bernard, Stanford, 2021  
 Mikala Ørsnes Jansen, Copenhagen, 2021  
 Jens Reinhold, Stanford, 2019  
 Gergely Szűcs, Stanford, 2018

Alexander Kupers, Stanford, 2016  
 Sam Nariman, Stanford, 2015  
 Ilya Grigoriev, Stanford, 2013  
 Nisan Stiennon, Stanford, 2013  
 Man Chuen Cheng, Stanford, 2011

## PUBLICATIONS

1. S. Galatius, A. Kupers, O. Randal-Williams:  *$E_\infty$ -cells and general linear groups of infinite fields*. Duke Mathematical Journal, to appear. arXiv:2005.05620.
2. S. Galatius, A. Kupers, O. Randal-Williams:  *$E_\infty$ -cells and general linear groups of finite fields*. Annales scientifiques de l'École normale supérieure, to appear. arXiv:1810.11931.
3. S. Galatius, A. Kupers, O. Randal-Williams: *Cellular  $E_k$ -algebras*. Astérisque, to appear. arXiv:1805.07184.
4. S. Galatius, O. Randal-Williams: *The Alexander trick for homology spheres*. International Mathematics Research Notices **2024** (2024), no. 24, 14689–14703.
5. S. Galatius, O. Randal-Williams: *Algebraic independence of topological Pontryagin classes*. J. Reine Angew. Math. **802** (2023), 287–305.
6. M. Chan, C. Faber, S. Galatius, S. Payne: *The  $S_n$ -equivariant top weight Euler characteristic of  $\mathcal{M}_{g,n}$* . Amer. Math. J. **145** (2023), no. 5, 1549–1585.
7. T. Feng, S. Galatius, A. Venkatesh: *The Galois action on symplectic K-theory*. Invent. Math. **230** (2022), 225–319.
8. S. Galatius, G. Szűcs: *The equivariant cobordism category*. J. Topol. **14** (2021), no. 1, 215–257.
9. M. Chan, S. Galatius, S. Payne: *Topology of moduli spaces of tropical curves with marked points*. In *Facets of Algebraic Geometry: Volume in Honour of William Fulton's 80th Birthday*, eds. P. Aluffi, D. Anderson, M. Hering, M. Mustata, S. Payne.
10. M. Chan, S. Galatius, S. Payne: *Tropical curves, graph homology, and top weight cohomology of  $\mathcal{M}_g$* . J. Amer. Math. Soc. **34** (2021), 215–257.
11. S. Galatius: *Lectures on invertible field theories*, exercises and solutions joint with A. Debray and M. Palmer. Chapter in *Quantum Field Theory and Manifold Invariants*, eds. D. Freed, U. Tillmann. IAS/Park City Mathematics Series **28** (2021).
12. S. Galatius, A. Kupers, O. Randal-Williams:  *$E_2$ -cells and mapping class groups*. Publ. Math. Inst. Hautes Études Sci. **130** (2019), 1–61.

13. S. Galatius, O. Randal-Williams: *Operations on stable moduli spaces*. Research in the Mathematical Sciences, **7** (2020), E9.
14. S. Galatius, O. Randal-Williams: *Moduli spaces of manifolds: a user's guide*, chapter in *Handbook of Homotopy Theory*, ed. H. Miller, CRC Press, 2020.
15. S. Galatius, A. Venkatesh: *Derived deformation rings*. Adv. Math. **327** (2018), 470–623.
16. S. Galatius, O. Randal-Williams: *Homological stability for moduli spaces of high dimensional manifolds I*. J. Amer. Math. Soc. **31** (2018), no. 1, 215–264.
17. S. Galatius, O. Randal-Williams: *Homological stability for moduli spaces of high dimensional manifolds II*. Ann. of Math. **186** (2017), no. 1, 127–204.
18. S. Galatius, I. Grigoriev, O. Randal-Williams: *Tautological rings for high dimensional manifolds*. Compositio Math. **153**, no. 4 (2017), 851–866.
19. S. Galatius, O. Randal-Williams: *Abelian quotients of mapping class groups of highly connected manifolds*. Math. Ann., **365** (2016), no. 1–2, 857–879.
20. S. Galatius: *Moduli spaces of manifolds*, in *Proceedings of the International Congress of Mathematicians*, Vol. II, 1197–1217, Kyung Moon Sa, Seoul, 2014.
21. S. Galatius, O. Randal-Williams: *Detecting and realising characteristic classes of manifold bundles*, in *Algebraic Topology: Applications and New Directions*, eds. S. Galatius, D. P. Sinha, U. Tillmann 99–110, Contemp. Math., **620**, Amer. Math. Soc., Providence, RI, 2014.
22. S. Galatius, O. Randal-Williams: *Stable moduli spaces of high dimensional manifolds*. Acta Math. **212** (2014), no. 2, 257–377.
23. S. Galatius: *Lectures on the Madsen–Weiss Theorem*, in *Moduli Spaces of Riemann Surfaces*, eds. B. Farb, R. Hain, E. Looijenga. IAS/Park City Mathematics Series **20** (2013).
24. S. Galatius, Ya. Eliashberg, N. Mishachev: *Madsen–Weiss for geometrically minded topologists*. Geom. Topol. **15** (2011), no. 1, 411–472.
25. S. Galatius: *Stable homology of automorphism groups of free groups*. Ann. of Math. **173** (2011), no. 2, 705–768.
26. S. Galatius, O. Randal-Williams: *Monoids of moduli spaces of manifolds*. Geom. Topol. **14** (2010), no. 3, 1243–1302.
27. R. Cohen, S. Galatius, N. Kitchloo: *Universal moduli spaces of surfaces with flat connections and cobordism theory*. Adv. Math. **221** (2009), no. 4, 1227–1246.

28. S. Galatius, I. Madsen, U. Tillmann, M. Weiss: *The homotopy type of the cobordism category*. Acta Math. **202** (2009), no. 2, 195–239.
29. S. Galatius: *Secondary characteristic classes of surface bundles*. Algebraic & Geometric Topology **9** (2009) 293–303
30. S. Galatius, I. Madsen, U. Tillmann: *Divisibility of the stable Miller–Morita–Mumford classes*, J. Amer. Math. Soc. **19** (2006), no. 4, 759–779.
31. S. Galatius: *Mod 2 homology of the stable spin mapping class group*, Math. Ann. **334** (2006), 439 - 455.
32. S. Galatius: *Mod  $p$  homology of the stable mapping class group*, Topology **43** (2004), 1105–1132.

#### PREPRINTS

1. F. Brown, M. Chan, S. Galatius, S. Payne: *Hopf algebras in the cohomology of  $\mathcal{A}_g$ ,  $\mathrm{GL}_n(\mathbb{Z})$ , and  $\mathrm{SL}_n(\mathbb{Z})$* . arXiv:2405.11528.