

---

## CURRICULUM VITAE

Søren Galatius

---

url : <https://sorengalatius.com>  
e-mail : [galatius@math.ku.dk](mailto:galatius@math.ku.dk)  
phone : (+45) 35 33 05 81

---

### PERSONAL DATA

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

### EDUCATION

*PhD* in Mathematics, Aarhus University, 2004

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

### EMPLOYMENT

Professor, Copenhagen University (4/16 - present)

Professor, Stanford University (9/11 - 9/2018),

Associate Professor, Stanford University (9/08 - 8/11)

Assistant Professor, Stanford University (9/06 - 8/08)

Szegő Assistant Professor, Stanford University (9/04 - 8/06)

### SELECTED INVITED LECTURES

Invited lecture series, PCMI, Utah, 7/19

Plenary speaker, Isle of Skye, 6/18

William J. Spencer Lecture, Kansas State, 12/17

Ordway Lectures, Minnesota, 6/16

Plenary speaker, Geometry and Topology, Bonn, Germany, 8/15

ICM Invited speaker, Korea, 6/14

Adem Lectures, Mexico City, Mexico, 9/13

Aspects of Topology (Segal 70th), Oxford, UK, 12/12

Colloquium, Eugene, Oregon, 11/12

Plenary speaker, Stanford Conference, Stanford, 7/12

Plenary speaker, Young Topologists meeting, Copenhagen, 7/12

Homotopy, Algebra and its Applications, Luminy, 6/12

Moduli spaces lecture series, PCMI summer school, Utah, 7/11

Colloquium, Yale University, 11/10  
 NAS-Cinvestav lecture, Mexico City, Mexico, 12/09  
 Colloquium, Nagoya, Japan, 7/09  
 Symmetries in Geometry and Physics, Havana, Cuba, 12/08  
 European Congress of Mathematics, Amsterdam, 7/08  
 Plenary talk, AMS regional, Baton Rouge, 3/08  
 Plenary talk, Postnikov Memorial, Bedlewo, Poland, 6/07  
 Colloquium, University of Oregon, 5/07  
 Colloquium, Rutgers, 3/07  
 Colloquium, University of Virginia, 3/07  
 Colloquium, UC Santa Cruz, 10/06  
 Cornell Topology Festival, 5/06  
 Brandeis-Harvard-MIT-Northeastern joint Colloquium, 9/05

## AWARDS AND HONORS

DNRf Center (GeoTop) co-PI, 2020–  
 Eliteforsk Prize 2017  
 ERC Consolidator Grant 2016–2021  
 NSF grants DMS-0505740 (2005–2008), DMS-0805843 (2008–2011), DMS-1105058 (2011–2014), DMS-1405001 (2014–2017)  
 NSF conference grants DMS-1430456 (2014), DMS-1619698 (2016)  
 Royal Danish Academy of Sciences, elected foreign member (2013)  
 Featured in AMS–Current Events Bulletin, New Orleans 2011  
 Royal Danish Academy of Sciences “silver medal” (2010)  
 Clay Research Fellowship 2007–2010

## OTHER ACADEMIC FUNCTIONS

Mentor, *STAGOSAUR Summer School 2020*, Online, 2020  
 Coorganizer, *Arbeitsgemeinschaft*, Oberwolfach, 2003 and 2021  
 Coorganizer, *Topologie*, Oberwolfach, Germany, 2020  
 Coorganizer, *Patterns in Cohomology of Moduli Spaces*, Oxford, 2019  
 Mentor, *Talbot Workshop 2019*, Texas, 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

Natalia Pacheco-Tallaj, MIT, co-advisor  
Alexis Aumonier, Copenhagen, 2023 (expected)  
Calista Bernard, Stanford, 2021 (expected)  
Arpon Raksit, Stanford, 2021 (expected)  
Mikala Ørsnes Jansen, Copenhagen, 2021 (expected)  
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. M. Chan, S. Galatius, S. Payne: *Tropical curves, graph homology, and top weight cohomology of  $\mathcal{M}_g$* . Accepted in J. Amer. Math. Soc. Preprint, arXiv:1805.10186.
2. M. Chan, S. Galatius, S. Payne: *Topology of moduli spaces of tropical curves with marked points*. Accepted in *Facets of Algebraic Geometry: Volume in Honour of William Fulton's 80th Birthday*. Preprint, arXiv:1903.07187.
3. S. Galatius: *Lectures on invertible field theories*, exercises and solutions joint with A. Debray and M. Palmer. Eds. D. Freed, U. Tillmann. Accepted in IAS/Park City Mathematics Series.
4. S. Galatius, A. Kupers, O. Randal-Williams:  *$E_2$ -cells and mapping class groups*. Publ. Math. Inst. Hautes Études Sci. **130** (2019), 1–61.
5. S. Galatius, O. Randal-Williams: *Operations on stable moduli spaces*. Research in the Mathematical Sciences, **7** (2020), E9.
6. 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.
7. S. Galatius, A. Venkatesh: *Derived deformation rings*. Adv. Math. **327** (2018), 470–623.
8. 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.
9. S. Galatius, O. Randal-Williams: *Homological stability for moduli spaces of high dimensional manifolds II*. Ann. of Math. **186** (2017), no. 1, 127–204.
10. S. Galatius, I. Grigoriev, O. Randal-Williams: *Tautological rings for high dimensional manifolds*. Compositio Math. **153**, no. 4 (2017), 851–866.
11. S. Galatius, O. Randal-Williams: *Abelian quotients of mapping class groups of highly connected manifolds*. Math. Ann., **365** (2016), no. 1–2, 857–879.

12. S. Galatius: *Moduli spaces of manifolds*, in *Proceedings of the International Congress of Mathematicians*, Vol. II, 1197–1217, Kyung Moon Sa, Seoul, 2014.
13. 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.
14. S. Galatius, O. Randal-Williams: *Stable moduli spaces of high dimensional manifolds*. Acta Math. **212** (2014), no. 2, 257–377.
15. 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).
16. S. Galatius, Ya. Eliashberg, N. Mishachev: *Madsen–Weiss for geometrically minded topologists*. Geom. Topol. **15** (2011), no. 1, 411–472.
17. S. Galatius: *Stable homology of automorphism groups of free groups*. Ann. of Math. **173** (2011), no. 2, 705–768.
18. S. Galatius, O. Randal-Williams: *Monoids of moduli spaces of manifolds*. Geom. Topol. **14** (2010), no. 3, 1243–1302.
19. 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.
20. S. Galatius, I. Madsen, U. Tillmann, M. Weiss: *The homotopy type of the cobordism category*. Acta Math. **202** (2009), no. 2, 195–239.
21. S. Galatius: *Secondary characteristic classes of surface bundles*. Algebraic & Geometric Topology **9** (2009) 293–303
22. S. Galatius, I. Madsen, U. Tillmann: *Divisibility of the stable Miller–Morita–Mumford classes*, J. Amer. Math. Soc. **19** (2006), no. 4, 759–779.
23. S. Galatius: *Mod 2 homology of the stable spin mapping class group*, Math. Ann. **334** (2006), 439 - 455.
24. S. Galatius: *Mod  $p$  homology of the stable mapping class group*, Topology **43** (2004), 1105–1132.

## PREPRINTS

1. T. Feng, S. Galatius, A. Venkatesh: *The Galois action on symplectic K-theory*. arXiv:2007.15078.
2. M. Chan, C. Faber, S. Galatius, S. Payne: *The  $S_n$ -equivariant top weight Euler characteristic of  $\mathcal{M}_{g,n}$* . arXiv:1904.06367.
3. S. Galatius, A. Kupers, O. Randal-Williams:  *$E_2$ -cells and general linear groups of infinite fields*. arXiv:2005.05620.
4. S. Galatius, A. Kupers, O. Randal-Williams:  *$E_\infty$ -cells and general linear groups of finite fields*. arXiv:1810.11931.
5. S. Galatius, A. Kupers, O. Randal-Williams: *Cellular  $E_k$ -algebras*. arXiv:1805.07184.
6. S. Galatius, G. Szűcs: *The equivariant cobordism category*. arXiv:1805.12342.

## PROCEEDINGS EDITED

1. *Algebraic Topology: Applications and New Directions*, eds. S. Galatius, D. P. Sinha, U. Tillmann, Contemp. Math., **620**, Amer. Math. Soc., Providence, RI, 2014.

## CURRENT RESEARCH FUNDING

- DNRF Center *GeoTop*, 2020. Co-PI. DKK 60,000,000.
- ERC Consolidator, 2016–2021. EUR 1,991,061.
- Eliteforsk Prize, 2017–2020. DKK 1,200,000.