Contact information.

> Stony Brook University
> Department of Mathematics
> 100 Nicolls Road
> Stony Brook, NY 11794, USA
> `johan.asplund@stonybrook.edu`
> `math.stonybrook.edu/~jasplund`

Research interests.

- Symplectic geometry, contact geometry
- Symplectic field theory, Floer theories, holomorphic curves
- String topology, knot theory

Education

Ph.D. in Mathematics, Uppsala University   2016–2021
　　Thesis: *Chekanov–Eliashberg dg-algebras and partially wrapped Floer cohomology*
　　Advisors: Tobias Ekholm, Thomas Kragh
MSc. in Mathematics, Uppsala University   2014–2016
　　Thesis: *Contact homology of Legendrian knots in five-dimensional circle bundles*
　　Advisor: Thomas Kragh
BSc. in Mathematics, Uppsala University   2011–2014
　　Thesis: *Linking and Morse theory*
　　Advisor: Tobias Ekholm

Appointments

James H. Simons Instructor, Stony Brook University   2024–2027
　　Mentor: Mark McLean
Postdoctoral Research Fellow, Columbia University   2022–2024
　　Mentor: Mohammed Abouzaid
Research assistant, Uppsala University   2021
Head teaching assistant, Uppsala University   2014–2016
Teaching assistant, Uppsala University   2013–2014

Scholarships and grants

Knut and Alice Wallenberg postdoc scholarship (KAW 2020.0285)   2022–2024
Liljewalchs travel scholarship   2020
Stecksén–Norbergs   2016

Research visits

Institute for Basic Science, Center for Geometry and Physics   Mar 2023
Institut Mittag-Leffler (Knots, Strings, Symplectic Geometry and Dualities)   Fall 2020

Publications and preprints

Singular Legendrian unknot links and relative Ginzburg algebras   Preprint
　　Submitted. [`arxiv:2311.03330`]
Lagrangian cobordism of positroid links   Preprint
　　with Youngjin Bae, Orosola Capovilla-Searle, Marco Castronovo,
　　Caitlin Leverson, and Angela Wu
　　Submitted. [`arxiv:2305.16232`]

Tangle contact homology	Preprint
Submitted. [arxiv:2210.03036]	
Simplicial descent for Chekanov–Eliashberg dg-algebras	2023
J. Topol., 16(2):489–541, 2023. [arxiv:2112.01915]	
Chekanov–Eliashberg dg-algebras for singular Legendrians	2022
Joint with Tobias Ekholm.	
J. Symplectic Geom., 20(3):509–559, 2022. [arxiv:2102.04858]	
Fiber Floer cohomology and conormal stops	2021
J. Symplectic Geom., 19(4):777–864, 2021. [arxiv:1912.02547]	

Invited talks

Paris algebra seminar (Online)	Jan 2024
Institut de Mathématiques de Jussieu-Paris Rive Gauche	
Geometry & Topology Seminar, Uppsala University	Dec 2023
CGP Seminar, Institute for Basic Science	Mar 2023
Princeton/IAS Symplectic Geometry seminar, Princeton University	Oct 2022
Symplectic seminar, MIT	Sep 2022
Symplectic geometry, gauge theory and low-dimensional topology seminar	Sep 2022
Stony Brook University	
Recent developments in Lagrangian Floer theory	Mar 2022
Simons Center for Geometry and Physics	
Symplectic Zoominar (Online), CRM-Montréal, Princeton/IAS, Tel Aviv, and Paris	Dec 2021
Nantes–Orsay Seminar on Symplectic and Contact Topology	Nov 2021
Université Paris-Saclay	
Geometry & Topology Seminar, Uppsala University	Nov 2021
Freemath Seminar (Online)	Jun 2021
University of Lancaster, University of Cambridge, and Imperial College London	
Symplectix Seminar (Online)	Apr 2021
Institut Henri Poincaré, Université de Nantes, and Université Paris-Sud	
Geometry & Topology Seminar, Uppsala University	Feb 2021
Symplectic Geometry Seminar (Online), Humboldt-Universität zu Berlin	Jan 2021
Knots, Strings, Symplectic Geometry and Dualities, Institut Mittag-Leffler	Oct 2020
Topology Seminar (Online), Korea Institute for Advanced Study	Jun 2020

Expository talks

Legendrian knots and complex Grassmannians	Nov 2023
Postdoc Seminar Series, Columbia University	
Legendrian knot theory	Oct 2023
Columbia Undergraduate Math Society, Columbia University	
The Ozsváth–Szabó contact invariant	Apr 2023
Reading seminar on applications and computations of Floer homology,	
Columbia University	
Legendrian knot theory and the Chekanov–Eliashberg dg-algebra	Nov 2022
Michael Zhao Student Colloquium, Columbia University	
Legendrian knots and constructible sheaves	Oct 2022
Reading seminar on microlocal sheaf theory, Columbia University	
The Chekanov–Eliashberg dg-algebra	Feb 2022
Columbia Undergraduate Math Society, Columbia University	
Functoriality of Legendrian contact homology	Oct 2021
Reading seminar on Lagrangian fillings, Columbia University	
Introduction to homological mirror symmetry and the Fukaya category	Mar 2020
Uppsala Ph.D. Mathematics Conference, Uppsala University	

Legendrian approximation or how to parallel park a car   Sep 2019
    Ph.D. Seminar, Uppsala University
Associativity in topology   Nov 2018
    Ph.D. Seminar, Uppsala University
LCH and the art of counting pseudoholomorphic disks   Apr 2018
    Ph.D. Seminar, Uppsala University
Flexibility of Legendrian immersions   Sep 2017
    Geometry & Topology Seminar, Uppsala University
Morse flow trees and their relation to LCH in 1-jet spaces   Aug 2017
    Legendrian Contact Homology and a variety of augmentations,
    Krusenberg Herrgård, Uppsala

SERVICE AND ORGANIZATION

Symplectic geometry and gauge theory seminar   Fall 2023
    Columbia University (co-organizer)
Symplectic geometry, gauge theory and categorification seminar   2022
    Columbia University (co-organizer)
Reading seminar on microlocal sheaf theory in symplectic geometry   Fall 2022
    Columbia University (co-organizer)
Student Symplectic Seminar, Uppsala University (co-organizer)   2017–2020
Reviewer for MathSciNet and Zentralblatt MATH.

CONFERENCES AND WORKSHOPS ATTENDED

Birational Geometry and Quantum Invariants   Oct 2023
    Simons Center for Geometry and Physics, Stony Brook
Symplectic Geometry, Low Dimensional Topology, and Quantum Fields   Sep 2023
    Clay Mathematics Institute, Oxford
Symplectic Field Theory 10, Humboldt-Universität zu Berlin, Berlin   Aug 2023
2023 Simons Math Summer Workshop   Aug 2023
    Simons Center for Geometry and Physics, Stony Brook
GTiNY (Geometric Topology in New York), Columbia University, New York Jun 2023
Concluding Conference of Simons Collaboration on Homological Mirror Symmetry
    Simons Center for Geometry and Physics, Stony Brook   Apr 2023
AIM Workshop: Cluster algebras and braid varieties   Jan 2023
    American Institute of Mathematics, San Jose
Simons Collaboration on Homological Mirror Symmetry Annual Meeting   Nov 2022
    Ingrid Daubechies Auditorium, New York
Symplectic and contact topology early career workshop, UC Davis, Davis Aug 2022
Convexity in contact and symplectic topology, Institut Henri Poincaré, Paris Jul 2022
Frontiers of Quantitative Symplectic and Contact Geometry   Jun 2022
    Institut Mittag-Leffler, Stockholm
Reflections on Geometry: 3-manifolds, groups and singularities   Jun 2022
    Columbia University, New York
Deformations of Geometric Structures in Current Mathematics   May 2022
    Columbia University, New York
Homological Mirror Symmetry, University of Miami, Miami   Apr 2022
Recent developments in Lagrangian Floer theory   Mar 2022
    Simons Center for Geometry and Physics, Stony Brook
Uppsala–Nantes Workshop on Lagrangian cobordisms and Floer theory   Oct 2021
    Haga Slott, Enköping
Braids, mutations and twists in algebra and geometry (Online)   Jun 2021
    Uppsala University, Uppsala

Advances in Symplectic topology (Online), Institut Henri Poincaré, Paris	May 2021
From Hamiltonian Dynamics to Symplectic Topology (Online), CIRM, Marseille	Apr 2021
Spring School on Symplectic and Contact Topology (Online), CIRM, Marseille	Apr 2021
CAST 2020, University of Antwerp, Antwerp	Feb 2020
International Conference on Symplectic Topology, IMPA, Rio de Janeiro	Aug 2019
School of Symplectic Topology, IMPA, Rio de Janeiro	Aug 2019
String Math 2019, Uppsala University, Uppsala	Jul 2019
Mathematics and Physics of Knots, Institut Mittag-Leffler, Stockholm	Jun 2019
CAST 2018, Uppsala University, Uppsala	Jan 2018
Legendrian Contact Homology and a variety of augmentations	Aug 2017
Krusenberg Herrgård, Uppsala	
Holomorphic Curves and Symplectic Topology, Institut Mittag-Leffler, Stockholm	Aug 2017
Symplectic Field Theory VIII, Humboldt-Universität zu Berlin, Berlin	Aug 2016
QGM Summer School, Centre for Quantum Geometry and Moduli Spaces, Aarhus	Aug 2016

TEACHING EXPERIENCE

Stony Brook University:

MAT 127 **Calculus C**, Instructor and coordinator	Spring 2024
MAT 322 **Analysis in Several Dimensions**, Instructor	Spring 2024

Uppsala University:

1MA024 **Linear Algebra II**, Teaching assistant (recitations)	Fall 2021
1MA179 **Basic Topology**, Instructor	Spring 2021
1MA004 **Algebra I**, Teaching assistant (recitations)	Fall 2020
1MA010 **Basic Course in Mathematics**, Teaching assistant (recitations)	Fall 2020
1MA179 **Basic Topology**, Instructor	Spring 2020
1MA025 **Linear Algebra and Geometry I**, Teaching assistant (recitations)	Fall 2019
1MA010 **Basic Course in Mathematics**, Teaching assistant (recitations)	Fall 2019
1MA004 **Algebra I**, Teaching assistant (recitations)	Fall 2018
1MA008 **Algebra and Vector Geometry**, Teaching assistant (recitations)	Fall 2018
1MA013 **Single Variable Calculus**, Teaching assistant (recitations)	Spring 2018
1MA004 **Algebra I**, Teaching assistant (recitations)	Fall 2017
1MA010 **Basic Course in Mathematics**, Teaching assistant (recitations)	Fall 2017
1MA013 **Single Variable Calculus**, Teaching assistant (recitations)	Fall 2016–Spring 2017
1MA010 **Basic Course in Mathematics**, Teaching assistant (recitations)	Fall 2016
1MA013 **Single Variable Calculus M**, Teaching assistant (recitations)	Fall 2015
1MA013 **Single Variable Calculus**, Instructor	Summer 2015
1MA025 **Linear Algebra and Geometry I**, Teaching assistant (recitations)	Spring 2015
1MA024 **Linear Algebra II**, Teaching assistant (recitations)	Fall 2014
1MA013 **Single Variable Calculus**, Instructor	Summer 2014
1MA010 **Basic Course in Mathematics**, Teaching assistant (recitations)	Fall 2013
1MA013 **Single Variable Calculus**, Instructor	Summer 2013
1MA013 **Single Variable Calculus**, Teaching assistant (recitations)	Fall 2012