Søren Gammelgaard

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CURRENT EMPLOYMENT Dipartimento di Matematica e Informatica, Università degli Studi di Ferrara, Ferrara, Italy

Post-doctoral researcher (Assegnista di Ricerca)

Dec 2024 -

PREVIOUS EMPLOYMENT Scuola Internazionale Superiore di Studi Avanzati, Via Bonomea 265, 34136 Trieste, Italy

Post-doctoral researcher (Assegnista di Ricerca)

Nov 2022 - Nov 2024

EDUCATION

University of Oxford, Oxford, United Kingdom

DPhil in Mathematics

Oct 2018 – Sep 2022

- Thesis: Quiver Varieties and Moduli Spaces of Sheaves on Singular Surfaces
- Supervisor: Professor Balázs Szendrői
- · Focus: Quiver varieties, singular surfaces, moduli spaces.

University of Oslo, Oslo, Norway

MSc in Mathematics

Aug 2016 – Jun 2018

- Thesis: Cubic hypersurfaces, their Fano schemes, and special subvarieties
- Supervisor: Professor John Christian Ottem
- · Focus: Cubic hypersurfaces, Fano schemes, Chow rings.
- · Grade awarded: A.

BSc in Mathematics

Aug 2014 – Jun 2016

· Average grade: A.

EXTERNAL TALKS GAeLXXVII (Poster), Bucharest, Jun 2019

UCL/KCL Junior Geometry Seminar London, Jan 2022

Algebraic Geometry Seminar, University of Oslo, Mar 2022

Algebraic Geometry Seminar, KTH Royal Institute of Technology Stockholm, Apr 2022 Symplectic singularities in geometry and representation theory, CIRM, Marseille, Apr 2022

A day of geometry in Glasgow, University of Glasgow, Aug 2022

Quiver Representations, Quiver Varieties and Combinatorics, Università di Bologna, Jun 2023

Syzygies and Hilbert Schemes, Jagiellonian University, Krakow (Poster), Sep 2024

Algebra and Geometry seminar, Budapest University of Technology and Economics, Oct 2024

INTERNAL TALKS Oxford Geometry and Analysis seminar, Oxford, United Kingdom, Apr 2022

SISSA Algebraic Geometry seminar, SISSA Trieste, Italy, Dec 2022, May 2024

Algebraic Geometry Seminar, Dipartimento di Matematica e Informatica, University of Ferrara, Italy, Dec 2024

PUBLICATIONS

- [1] A. Craw, S. Gammelgaard, Á. Gyenge, and B. Szendrői, "Punctual Hilbert schemes for Kleinian singularities as quiver varieties," Algebraic Geometry, vol. 8, issue 6, pp. 680–704, Nov 2021. Available here.
- [2] A. Craw, S. Gammelgaard, Á. Gyenge, and B. Szendrői, "Quot Schemes for Kleinian Orbifolds," SIGMA (Symmetry, Integrability and Geometry: Methods and Applications), vol. 17, no. 099, Nov 2021. Available here.
- [3] S. Gammelgaard, "Quiver Varieties and Framed Sheaves on Compactified Kleinian Singularities", Journal of Algebra and its Applications, Aug 2024. Available here. Available as preprint here.

PREPRINTS

"Moduli spaces of framed sheaves on compactified Kleinian singularities", 2024, available here, largely superseded by

"Noncommutative projective partial resolutions and quiver varieties", 2024, coauthored with Á. Gyenge, available here, submitted.

An appendix to "Euler characteristics of affine ADE Nakajima quiver varieties via collapsing fibers", 2024, coauthored with L. Bertsch, Á. Gyenge, and B. Szendrői, available here.

SCHOLARSHIPS

Aker Scholarship,

2018 - 2022

Scholarship with stipend for advanced graduate studies at a top international university.

• SISSA Mathematical Fellowship,

2022 - 2024

Scholarship for post-doctoral research at SISSA (Scuola Internazionale Superiore di Studi Avanzati)

OTHER WORK EXPERIENCE

University of Oxford, Oxford, United Kingdom

- Several positions as Teaching Assistant and Tutor:
 - •Oct 2018 –Dec 2018: TA in Galois Theory.
 - •Oct 2019 -Dec 2019: TA in Galois Theory.
 - •Jan 2020 –Mar 2020: TA in Commutative Algebra.
 - •Jan 2021 -Mar 2021: TA in Algebraic Curves.
 - •Oct 2021 -Dec 2021: TA in Homological Algebra.
 - •Jan 2022 –Mar 2022: Tutor in Algebraic Curves.

St Peter's College, University of Oxford, Oxford, United Kingdom

■ Tutor in Topology. Jan 2020 – Mar 2020

Department of Mathematics, University of Oslo, Oslo, Norway

Several positions as Teaching Assistant, in Calculus and Linear Algebra.
Aug 2015 – Dec 2017

Sommerskolen Oslo (Oslo Summer School), Oslo, Norway

■ Taught mathematics at a summer school for high school students. 2016 – 2018

OTHER ACTIVITIES

Taruithorn, the Oxford Tolkien Society, University of Oxford

■ Secretary Jan 2021 – Feb 2022

• Responsibility for handling correspondence, booking external speakers, administrative work.

Balliol College Middle Common Room, University of Oxford

■ Secretary Jun 2019– Jun 2020

 $\bullet \ \ Responsibility \ for \ scheduling \ meetings, \ taking \ minutes, \ setting \ agendas, \ and \ handling \ external \ correspondence.$

Matematisk Ordliste (*Mathematical Wordlist*), University of Oslo, University of Agder, Norwegian University of Science and Technology, Norwegian Language Council,

Lexicography relating to algebraic geometry

May 2019

 I documented and suggested about 250 Norwegian translations from English of scientific terms in algebraic geometry and adjacent fields of mathematics.

LANGUAGES

- Norwegian, Danish: Native languages.
- English: Fluent.
- Italian: Advanced.
- French: Advanced (reading); basic (speaking, writing).
- Swedish: Advanced.
- Japanese: Basic.

DIGITAL SKILLS IFT_EX, GAP, Macaulay2, MATLAB, Python, Java, Microsoft Office, LibreOffice, Ubuntu.

OTHER INTERESTS Linguistics, cross-country skiing, fantasy literature, swimming.

OTHER

Contestant for Norway at the 2014 International Mathematical Olympiad.

INFORMATION Danish citizen.

REFERENCES

Balázs Szendrői

Professor of Mathematics

Department of Mathematics, Universität Wien Oskar-Morgenstern-Platz 1, 1090 Wien, Austria balazs.szendroi@univie.ac.at • +43-1-4277-50482

Alastair Craw

Professor of Mathematics Department of Mathematical Sciences, University of Bath, Claverton Down, Bath BA2 7AY, United Kingdom.

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■ Ugo Bruzzo

Professor

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John Christian Ottem

Professor

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