

# Arun Soor

## Curriculum Vitae

Dept. of Mathematics, 4831 East Hall, 530 Church St  
Ann Arbor, MI 48109  
United States

\* D.O.B. 13<sup>th</sup> December 1998

✉ soor@umich.edu

🌐 a-soor.github.io/

🌐 [lsa.umich.edu/math/people/postdoc-faculty/soor.html](https://lsa.umich.edu/math/people/postdoc-faculty/soor.html)

## Employment

- 2025- **Donald J. Lewis Research Assistant Professor**, *University of Michigan*, Ann Arbor, Michigan
- 2022–2025 **Lecturer II in Mathematics**, *Magdalen College, University of Oxford*, Oxford

## Education

- 2021–2025 **DPhil Mathematics**, *University of Oxford*, Oxford  
Advisor: Prof. Konstantin Ardakov. Thesis title: Topics in derived analytic geometry.
- 2020–2021 **MMath Mathematics**, *University of Oxford*, Oxford, *Distinction*  
Part C essay: Crystal graphs and the representation theory of the symmetric group, advisor Prof. Kevin McGerty
- 2017–2020 **BA Mathematics**, *University of Oxford*, Oxford, First Class

## Publications and pre-prints

### Pre-prints

6. **A six-functor formalism for quasi-coherent sheaves and stratifications on rigid-analytic varieties**, arXiv:2409.07592, 2024. *Submitted*.
5. **Quasicoherent sheaves for dagger analytic geometry**, arXiv:2311.03101, 2023. *To appear in Israel J. Math.*

### Publications

4. **Convergence and an explicit formula for the joint moments of the circular Jacobi  $\beta$ -ensemble characteristic polynomial**, joint with T. Assiotis and M. A. Gunes. *Mathematical Physics Analysis and Geometry*, 2022.
3. **On a distinguished family of random variables and Painlevé equations**, joint with T. Assiotis, B. Bedert and M.A. Gunes. *Probability and Mathematical Physics*, 2:613–642, 2022.
2. **Moments of generalized Cauchy random matrices and continuous-Hahn polynomials**, joint with T. Assiotis, B. Bedert and M.A. Gunes. *Nonlinearity*, 34(7):4923–4943, 2021.
1. **Origami-inspired thin-film shape memory alloy devices**, joint with P. Velvaluri, P. Plucinsky, R. Lima de Miranda, R. D. James, and E. Quandt. *Scientific Reports*, 11(1):10988, 2021.

---

## News articles

1. [Origami and the structure of materials](#), joint with H. Liu, P. Plucinsky, F. Feng, and R. D. James. SIAM news January/February 2022.

---

## Teaching experience

### University of Michigan

Fall 2025 **Instructor** for MATH 115 Calculus I (two sections).

### University of Oxford

- Trinity 2024 **College tutorials** (Magdalen) for M4 Constructive Mathematics, various revision classes.
- Hilary 2024 **College tutorials** (Magdalen) for A5 Topology, M4 Dynamics; **Tutor** for C2.6 Introduction to Schemes.
- Michaelmas 2023 **College tutorials** (Magdalen) for A2 Metric Spaces & Complex Analysis, M4 Geometry.
- Trinity 2023 **College tutorials** (Magdalen) for ASO Group Theory, ASO Multidimensional Analysis & Geometry, M4 Constructive Mathematics, various revision classes.
- Hilary 2023 **College tutorials** (Magdalen) for A5 Topology, M4 Dynamics; **Tutor** for C2.6 Introduction to Schemes.
- Michaelmas 2022 **College tutorials** (Magdalen) for A2 Metric Spaces & Complex Analysis; **Teaching assistant** for B3.1 Galois theory, and for C3.6 Modular Forms.
- Trinity 2022 **College tutorials** (Magdalen) for ASO number theory, revision classes for A2 Metric Spaces & Complex Analysis.
- Hilary 2022 **Teaching assistant** for B3.4 Algebraic Number Theory.
- Michaelmas 2021 **Teaching assistant** for B2.1 Introduction to Representation Theory.

---

## Service

- August 2024 Co-organizer for [Young Researchers In Algebraic Number Theory VI](#) (Y-RANT VI) conference, Oxford.
- ★ **Undergraduate admissions interviews** for Mathematics at Magdalen College, Oxford (December 2022, December 2023, December 2024).
  - ★ MAT (Maths Admissions Test) and Interviews Outreach Workshop, St Edmund Hall, University of Oxford (September 2023, September 2024).
- 2020-2021 I was the president of the [Invariants](#), Oxford's student maths society.

---

## Invited talks

- July 2025 Seminar Darstellungstheorie, U. Wuppertal
- June 2025 ETHZ-UZh-Sbg Arithmetic and Geometry Research Group Alpbach 2025 workshop
- May 2025 Algebra seminar, U. Oxford
- March 2025 GLNT seminar, U. Michigan

March 2025 Geometry seminar, UT Austin  
January 2025 BIMS Algebraic Geometry seminar (online)  
June 2024 Seminario de Geometría No Conmutativa del Atlántico Sur (online)  
May 2021 SIAM MS21 conference (online)

---

## Seminars organised

2023-2025 **Junior Number Theory Seminar**, *co-organizer*, University of Oxford.

[Learning seminars](#)

Hilary 2025 **Diamonds learning seminar**, *co-organizer*.

Trinity 2023 **Geometric Langlands Learning Seminar**, *co-organizer*.

Hilary 2023 **Rapoport-Zink Spaces Learning Seminar**, *co-organizer*.

Michaelmas 2022 **Fargues-Fontaine Curve Learning Seminar**, *co-organizer*.

★ You can see a list of learning seminar talks I have given, with some notes, on my [website](#).