James Waterman – Curriculum Vitae

CONTACT INFORMATION	Institute for Mathematical Sciences, Stony Brook University, Stony Brook, NY 11794-3660, USA	*Website:* sites.google.com/view/jwaterman/ *Email:* james.waterman@stonybrook.edu *Phone:* available on request

RESEARCH

Dynamical Systems, Complex analysis, iteration of transcendental entire and meromorphic functions, and quasiregular maps.

EMPLOYMENT

Milnor Lecturer   August 2021 – present
Stony Brook University, Stony Brook, NY, United States

Research Associate   October 2019 – August 2021
The University of Liverpool, Liverpool, United Kingdom

EDUCATION

Ph.D.   awarded April 2020
The Open University, Milton Keynes, United Kingdom,
Supervisors: Prof. Phil Rippon and Prof. Gwyneth Stallard
Thesis title: Iteration in tracts

Bachelor of Science   May 2016
Northern Illinois University, Dekalb, IL, United States,
Major: General Mathematics
Minor: Statistics
Summa cum laude

PREPRINTS

1. D. Martí-Pete, L. Rempe, J. Waterman, Eremenko's conjecture, Wandering Lakes of Wada, and Maverick Points, submitted, arXiv:2108.10256

2. D. Martí-Pete, L. Rempe, J. Waterman, Bounded Fatou and Julia components of meromorphic functions, to appear in Math. Annalen, arXiv:2204.11781

PUBLICATIONS

1. J. Waterman, Wiman–Valiron discs and the dimension of Julia sets, *Int. Math. Res. Not. IMRN*, Volume 2021, Issue 12 (2021), 9545-9566. doi:10.1093/imrn/rnaa029

2. J. Waterman, Identifying logarithmic tracts, *Ann. Acad. Sci. Fenn.* , 45 (2020), 739-749. doi:10.5186/aasfm.2020.4543

3. J. Waterman, Slow escape in tracts, *Proc. Amer. Math. Soc.*, 147 (2019), 3087-3101. doi:10.1090/proc/14509

4. A. Fletcher, D. Macclure, J. Waterman, S. Wesley, The infinitesimal space of uqr mappings, *Journal of Analysis*, Volume 24, Issue 1 (2016), 67-81. [doi:10.1007/s41478-016-0003-8](doi:10.1007/s41478-016-0003-8)

TEACHING AND ADVISING

- Second Ph.D. advisor to Tania Gricel Benitez Lopez, together with Lasse Rempe, defended in August 2022.
- Lead a twelve month undergraduate research program, Enhanced Research Experience for Undergraduates, at Stony Brook University in 2023.
- Teaching in Fall 2021: MATH200-1 Logic, Language, and Proof with approximately 40 students, Stony Brook University.
- Teaching in Spring 2022: MATH351-1 Dynamical Systems with approximately 20 students, Stony Brook University.
- Teaching in Fall 2022: MATH342-1 Applied Complex Analysis with approximately 60 students, Stony Brook University.
- Teaching in Spring 2023: MATH319-1 Foundations of Analysis with approximately 40 students, Stony Brook University.
- Teaching in Fall 2023: MATH331-1 Computer-Assisted Mathematical Problem Solving with approximately 35 students, Stony Brook University.
- Assisted in teaching in Spring 2021: MATH345 Undergraduate complex dynamics with approximately 20 students, University of Liverpool.

CONFERENCE & SEMINAR PRESENTATIONS

Talks

- Topics in Complex Dynamics, Universitat de Barcelona, Spain, 19–23 June 2023.
- University of North Texas Dynamics seminar, Denton Texas, USA, 9 December 2022.
- CAVID, London, UK, (via Zoom) 20 September 2022.
- Scheme 3 meeting on Holomorphic Dynamics, Liverpool, UK, 22 June 2022.
- On Geometric Complexity of Julia Sets - III, Bedlewo, Poland, (via Zoom) 28 September 2021.
- Advancing Bridges in Complex Dynamics, CIRM, Luminy, France, 20 September 2021.
- Stony Brook Dynamical Systems Seminar, Stony Brook University, USA, 8 September 2021.
- Topics in Complex Dynamics 2021, Universitat de Barcelona, Spain, (via Zoom) 19–23 April 2021.
- Dynamical Systems Seminar at the Open University, UK, (via Microsoft Teams) 10 March 2021.

- Dynamical Systems Seminar at the Institute of Mathematics, Warsaw University, Poland, (via Google meet) 15 May 2020.
- Imperial College London Dynamical Systems Seminar, London, UK, 11 February 2020.
- University of Nottingham Algebra and Analysis Seminar, Nottingham, UK, 22 May 2019.
- Topics in Complex Dynamics, Universitat de Barcelona, Spain, 25 – 29 March 2019.
- Northern Illinois University Mathematics Colloquium, Dekalb, USA, 18 January 2019.
- One Day Function Theory Meeting, London, UK, 3 September 2018.
- New Developments in Complex Analysis and Function Theory, Heraklion, Greece, 2 – 6 July 2018.
- Topics in Complex Dynamics, Universitat de Barcelona, Spain, 2 – 6 October 2017.

Posters
- Analysis, Dynamics, Geometry, and Probability – in honor of the 60th birthday of Professor Chris Bishop, Stony Brook, USA, March 2 – 6, 2020.
- Low-dimensional and Complex Dynamics, EPFL, Lausanne, Switzerland, 2 – 6 December 2019.
- Dynamics, Measures and Dimensions – in honor of the 60th birthday of Professor Mariusz Urbański, Bedlewo, Poland, 7 – 12 April 2019.
- Resonances of Complex Dynamics – in honor of the 60th birthday of Professor Walter Bergweiler, Edinburgh, UK, 9 – 13 July 2018.

CONFERENCES ATTENDED
- Quasiworld Workshop – in honor of the 60th birthday of Mario Bonk, University of Helsinki, Finland, 14–18 August 2023.
- Around the Mandelbrot set: in honor of the 60th birthday of Mitsuhiro Shishikura, Kyoto University, Japan, 29 May – 2 June 2023.
- LMS Scheme 3 meeting in Holomorphic Dynamics, Liverpool, UK, 8 July 2019.
- Analysis Aspects of Dynamics, Imperial College, UK, 16 – 18 May 2018.
- On Geometric Complexity of Julia Sets, Bedlewo, Poland, 18 – 23 March, 2018.
- Complex Dynamics and Quasi-conformal Geometry, Université d'Angers, France, 23 – 25 October 2017.
- One Day Function Theory Meeting, London, UK, 4 September 2017.
- LMS Graduate Student and Society Meeting, London, UK, 30 June 2017.

- LMS Scheme 3 meeting in Holomorphic Dynamics, Imperial College, UK, 22 March 2017.

- LMS Scheme 3 meeting in Holomorphic Dynamics, The Open University, UK, 11 Oct 2016.

- One Day Function Theory Meeting, London, UK, 12 September 2016.

SERVICE

- Organizer of the Stony Brook Dynamical systems seminar, Fall 2022 – present.

- Organizer of the Liverpool Dynamical Systems Seminar, Spring 2020 – Summer 2021.

- Co-organizer of the conference 'Postgraduate Conference in Complex Dynamics 2019', London, UK, 27 February – 1 March 2019. Funded by The Open University and an LMS Scheme 8 grant of £3,458.

- Reviewer for Mathematische Zeitschrift and Revista Matematica Iberoamericana, and quick opinions for the Journal of the LMS.

AWARDS

- Early career poster prize at the conference 'Resonances of Complex Dynamics' – in honor of the 60th birthday of Professor Walter Bergweiler, Edinburgh, UK, 9-13 July 2018.

- Northern Illinois University, Department of Mathematical Sciences, Chairman's award, 2016.

- Northern Illinois University, Stelford prize, 2016.