

# EAVAN FITZGERALD

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DOB: 16/02/1999 | Nationality: Irish

## RESEARCH INTERESTS

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Experimental probing of polar active matter systems, currently working with magnetic active rollers to design dynamically reconfigurable collective states, to explore the existence of topological phenomena in active fluids.

## EDUCATION

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- Sep 2022-present PhD candidate at the Institute of Science & Technology Austria, AT  
Supervised by Assistant Prof. Scott Waitukaitis
- Sep 2017-May 2021 First Class Honors, B.A. (Mod) Experimental Physics in Trinity College Dublin, IRL  
Thesis supervised by Prof. J.M.D. Coey

## AWARDS & SCHOLARSHIPS

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- Aug 2025 EUROMECH Young Scientist Award, 2<sup>nd</sup> European Fluid Dynamics Conference, IRL
- Oct 2021 Gold Medal for Academic Excellence awarded upon conferral by Trinity College Dublin, IRL
- Jun-Aug 2020 SURE internship, Trinity College Dublin, IRL
- Mar 2019 Bursary to attend Conference for Undergraduate Women in Physics at Oxford University, UK

## PUBLICATIONS

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- Fitzgerald, E.**, Clavaud, C., Das, D., Lenton, I. C., & Waitukaitis, S. R. (2025). Rolling at right angles: Magnetic anisotropy enables dual-anisotropic active matter. *Physical Review E*, 112(6), 065418.
- Fitzgerald, E.**, Kumar, A., Poulose, S., & Coey, J. M. D. (2024). Interaction and Stability of Nanobubbles and Prenucleation Calcium Clusters during Ultrasonic Treatment of Hard Water. *ACS Omega*, 9(2), 2547-2558.

## ORAL PRESENTATIONS

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- Nov 2025 Vienna Soft Matter Day, BOKU, Austria
- Oct 2025 International Soft Matter Conference 2025, Greece
- Sep 2025 Self-Organizing and Evolving Active Matter, MPI-PKS, Germany
- Aug 2025 2<sup>nd</sup> European Fluid Dynamics Conference, UCD, Ireland
- Mar 2025 Charged Matter, ISTA, Austria
- Mar 2025 APS Global Summit, CA, USA
- Dec 2024 Southern Workshop on Granular Materials, Puerto Varas, Chile
- Nov 2024 Vienna Soft Matter Day, TU Wien, Austria
- Mar 2024 APS March Meeting, MN, USA
- Nov 2023 Vienna Soft Matter Day, University of Vienna, Austria

## SCIENCE EDUCATION

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- Sep 24-Nov 25 Member of the organising committee for the Young Scientist Symposium at ISTA, an interdisciplinary symposium organised by early career researchers
- Oct 23-Jan 24 Teaching Assistant leading a small class of incoming graduate students, focuses on improving interdisciplinary communication and presentation skills
- Oct 19-May 22 Private tutoring for second level students (ages 14-18) in mathematics, biology