Marton Mester

Department of Mathematics
University College London
Gower Street, London WC1E 6BT
marton.mester.16@ucl.ac.uk

RESEARCH INTERESTS

Atmospheric dynamics, circulation and mixing
Geophysical Fluid Dynamics
Planetary atmospheres
Stratospheric Sudden Warmings

EDUCATION

University College London, London, UK
Ph.D. in Applied Mathematics 2016-
Advisors: Gavin Esler (principal), Robb McDonald (secondary)

University of Cambridge, Trinity Hall, Cambridge, UK
B.A. in Mathematics 2012-2015 (Class I)
MMath 2015-2016 (Honours)

Radnoti Miklos Experimental High School, Szeged, Hungary
Special class in Mathematics 2007-12
Silver medal, Middle European Mathematics Olympiad (2011)

NATIONALITY

Hungarian

TECHNICAL SKILLS

MATLAB, Fortran

RESEARCH EXPERIENCE

University College London, London, UK
Research Assistant (Ph.D.), Program in Applied Mathematics 2016-
Title: Stochastic and Dynamical Models of Sudden Stratospheric Warmings

University of Cambridge, Cambridge, UK
Cambridge Summer Research in Mathematics (CSRIM) Programme Summer 2015
Title: Optimal Vortex States for Planetary-scale Rossby-wave Amplification
Advisor: Peter Hitchcock

SZTE Bolyai Institute, Szeged, Hungary
Polygon Prize for High School Students Springs 2010, 2011
Combinatorics (2010), Geometry (2011)

TEACHING EXPERIENCE

University College London, London, UK
Undergraduate courses: Fluid mechanics (Problem Class and tutorials)

PROFESSIONAL ACTIVITIES

University College London, London, UK
Organiser of the UCL Postgraduate Fluid Dynamics Seminar series 2017-2019

TALKS

22nd Conference on Atmospheric and Oceanic Fluid Dynamics, Portland, ME
Dynamical Elliptical Diagnostics of the Antarctic Polar Vortex 24/06/19

Dynamics of Rotating Fluids meeting, University of Oxford, Oxford
Noise-induced split-type stratospheric sudden warmings 21/09/18

UCL-ICL postgraduate mathematics conference, University College London, London
The polar vortex and the stochastically forced Kida-model 27/04/18

UCL Mathematics Postgraduate Seminar, University College London, London
The polar vortex and the Kida-model in a slowly changing stochastic background flow 23/11/17

Summer Undergraduate Research Presentations, University of Cambridge, Cambridge
Optimal vortex states for planetary-scale Rossby wave amplification 12/10/15

PUBLICATIONS

1. J. G. Esler, M. Mester: **Noise-induced vortex-splitting stratospheric sudden warmings**
   Quart. J. Roy. Meteor. Soc. 2019; 145: 476-494. https://doi.org/10.1002/qj.3443

2. M. Mester, J. G. Esler: **Dynamical Elliptical Diagnostics of the Antarctic Polar Vortex**
   J. Atmos. Sci., 77, 1167-1180, https://doi.org/10.1175/JAS-D-19-0232.1