# Mateusz Kluczek

## Personal details

I am self-motivated, committed and determined in achieving my goals. I have a clear, logical mind with a practical approach to problem solving. I also have a firm sense of responsibility and capacity to work under pressure with experience in working for international financial institutions.

Nationality: Polish
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## Education

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| October 2015 - now | Funded PhD in Applied Mathematics, University College Cork<br>Cork, Ireland<br>Supervisor: Dr David Henry<br>Member of the SFI project "Nonlinear Wave-Current Interactions in the Nearshore". |
| October 2013 - July 2015 | Master degree in Financial Mathematics<br>Siedlce University of Natural Science and Humanities<br>Siedlce, Poland |
| October 2010 - June 2013 | Bachelor degree in Financial and Actuarial Mathematics<br>Siedlce University of Natural Sciences and Humanities<br>Siedlce, Poland |

## Business sector experience

Despite the PhD degree in applied mathematics I show strong interest in financial mathematics and its applications in the business sector. This is supported by my experience gained in the national and international financial banking institution additionally supported by the professional training in the stock market at Siedlce University of Natural Sciences and Humanities.

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| March 2015 - September 2015 | ING BANK ŚLĄSKI, Warsaw, Poland<br>Auditor in the Internal Audit Department |
| June 2012 - August 2012 | BANK BGŻ PNB PARIBAS, Siedlce, Poland<br>Student placement job |

## Teaching and research experience

During my time in UCC I have successfully completed postgraduate pedagogy module entitled "Teaching and Learning Module for Graduate Studies", supplemented by pedagogy course in Siedlce University of Natural Sciences and Humanities.

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| October 2015 - now | Member of a project "Nonlinear Wave-Current Interaction in the Nearshore" under the supervision of dr David Henry supported by Scientific Foundation Ireland<br>University College Cork<br>Cork, Ireland |
| October 2016 - now | AM2021 Engineering Mechanics with Transform Methods<br>Tutor, University College Cork<br>Cork, Ireland |

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| January 2018 - May 2018 | AM3063 Partial Differential Equations with Applications I<br>Lecturer, University College Cork<br>Cork, Ireland |
| January 2016 - May 2016 | MA1001 Calculus for Science I & II<br>Tutor, University College Cork<br>Cork, Ireland |
| October 2014 - July 2015 | Member of a research team in "Accurate And Approximate Algorithms For Large-Scale Stochastic Simulation"<br>supported by National Science Centre, Poland<br>under the supervision of dr Anna Wawrzyńczak-Szaban<br>Siedlce University of Natural Sciences and Humanities<br>Siedlce, Poland |

## Research publications

International Research Journals

1. M. Kluczek and S. Raphael. Physical properties for Pollard-like surface waves. *in preparation*

2. M. Kluczek. Nonhydrostatic Pollard-like internal geophysical waves. *submitted*

3. M. Kluczek and C.-I. Martin. Dispersion relations for fixed mean-depth flows with two discontinuities in vorticity. *Nonlinear Analysis, accepted*

4. M. Kluczek. Physical flow properties for Pollard-like internal water waves. *Journal of Mathematical Physics, accepted*

5. M. Kluczek. Exact Pollard-like internal water waves. *Journal of Nonlinear Mathematical Physics, accepted*

6. M. Kluczek. Equatorial water waves with underlying currents in the $f$-plane approximation. *Applicable Analysis*, 97:1867–1880, 2018

7. A. Rodríguez-Sanjurjo and M. Kluczek. Mean flow properties for equatorially trapped internal water wave–current interactions. *Applicable Analysis*, 96:2333–2345, 2017

8. M. Kluczek. Exact and explicit internal equatorial water waves with underlying currents. *Journal of Mathematical Fluid Mechanics*, 19:305–314, 2017

Book chapter

1. M. Kluczek and A. Rodríguez-Sanjurjo. Global diffeomorphism of the Lagrangian flow-map for a Pollard-like internal water wave. Birkhäuser, 2018

Refereed Conference Proceeding

1. A. Szaban, R. Modzelewska, and M. Kluczek. Numerical methods for solution of the stochastic differential equations equivalent to the non-stationary Parker's transport equation. *Journal of Physics: Conference Series*, 633:1–5, 2015

### Invited Seminars

Applied Mathematics Seminar. University College Cork, Cork, Ireland, 2019.

Applied Mathematics Seminar. University of Plymouth, Plymouth, UK, 2018.

WIT Seminar series in mathematics & physics. Waterford Institute of Technology, Waterford, Ireland, 2017.

### Invited International Workshops

Mathematical Aspects of Physical Oceanography. Erwin Schrödinger International Institute for Mathematics and Physics. 26 February-4 March 2018, University of Vienna, Vienna, Austria.

Nonlinear Water Waves - an Interdisciplinary Interface. Erwin Schrödinger International Institute for Mathematics and Physics. 3-7 December 2017, University of Vienna, Vienna, Austria.

Nonlinear Water Waves. Isaac Newton Institute for Mathematical Sciences. 13-18 August 2017, Cambridge University, Cambridge, UK.

### Attended Workshops

Smoothed Particle Hydrodynamics (SPH) CPD Course. A two-day continuing professional development course. 10-11 April 2018, University of Manchester, Manchester, UK.