

Curriculum Vitae

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Personal

Name: Dr. rer. nat. Axel Gerhard Rossberg
Citizenship: Germany
Current Position: Reader in Aquatic Ecology
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Education

January '98 Doktor der Naturwissenschaften (Ph.D., physics), "summa cum laude" (beyond best regular grade)
Dissertation Title: *The Amplitude Formalism for Pattern-Forming Systems with Spontaneously Broken Isotropy and some Applications*
10/1994 – 09/1998 Universität Bayreuth, doctoral student, Supervisor: L. Kramer
08/1994 Master of Arts, Supervisor: J. Swift
10/1993 – 09/1994 University of Texas at Austin, 2 semesters, Major: Physics, Minor: Mathematics
08/1992 Vordiplom (pre-diploma), "sehr gut" (best regular grade)
10/1990 – 09/1993 Universität Würzburg, 6 semesters, Major: Physics, Minor: Computer Science

Appointments

09/2015 – Reader, School of Biological and Chemical Sciences, Queen Mary University London
01/2013 – 08/2015 Honorary Lecturer, School of Environmental Sciences, University of East Anglia, UK
01/2012 – 08/2015 Principal Scientist at Centre for Environment, Fisheries & Aquaculture Science, UK
08/2010 – 08/2015 Senior Researcher Fellow (later part time) at School of Biological Sciences, Queen's University Belfast, UK
08/2008 – 07/2010 Research Fellow at School of Biological Sciences, Queen's University Belfast, UK
04/2007 – 08/2008 Research Scholar at IIASA (International Institute for Applied Systems Analysis), Austria
04/2005 – 03/2006 Part-Time Lecturer at Sophia University, Tokyo, Japan
10/2003 – 03/2007 Visiting Associate Professor at Center of Excellence "Environmental Risk Management for Bio/Eco-Systems", Yokohama National University, Japan
04/2001 – 09/2003 Researcher at Center for Data Analysis and Modeling, Universität Freiburg, Germany
10/2000 – 03/2001 Visiting Scholar at Department of Philosophy, Columbia University, New York, NY, U.S.A.
10/1998 – 09/2000 Postdoctoral Researcher at Nonlinear Dynamics Group, Kyoto University, Kyoto, Japan
10/1996 – 09/1998 Research Assistant at Department of Physics, Universität Bayreuth, Germany
10/1995 – 09/1996 Teaching Assistant at Department of Physics, Universität Bayreuth, Germany

Teaching Experience

Post Graduate	07/2014	DEVOTES Summer School at AZTI-Tecnalia, <i>Understanding the mechanics of marine food webs</i> and <i>Applying food-web theory for management and the Marine Strategy Framework Directive</i> (guest lectures)
Post Graduate	11/2013	School of Mathematics, University of East Anglia, <i>Why food webs are hard to model</i> (guest lecture)
Undergraduate	10/2010 – 12/2010	School of Biological Sciences, Queen's University Belfast, <i>Biochemical Methods, Experimental Design and Statistics</i> (lectures and practicals)
Undergraduate	04/2005 – 03/2006	Faculty of Comparative Cultural Studies, Sophia University, Tokyo, <i>Environmental Issues I&II</i> (two full-semester lectures)
Post Graduate	04/2004 – 03/2007	Graduate School of Environment and Information Sciences, Yokohama National University, <i>Basic Methods of Theoretical Ecology and their Application</i> (three full-semester lectures, in Japanese)
Post Graduate	10/2001 – 02/2002	Fakultät für Physik, Universität Freiburg, <i>Concepts of Nonlinear Dynamics</i> (full semester lecture, co-tought with Jens Timmer, in German)
High-School	11/2001	Freiburg Seminar, City of Freiburg <i>The Four Capital Sins of Modeling</i> (in German)
Undergraduate	10/1995 – 09/1996	Department of Physics, University of Bayreuth, <i>Electrodynamics</i> (two full semester problem-solving classes, in German)

(Co-)Supervision and Tutoring

2014	Guest Student	Nao Takashina, <i>Maximum sustainable yield in size-structured populations</i>
2012	Summer Student	Rebecca Reid, <i>Total reproductive value as an index for stock size of commercial fish</i>
2009 – 2013	PhD	Tak Fung, <i>Sustainable fisheries and the diversity of marine communities: A theoretical investigation</i> , co-supervised with Keith Farnsworth
2009 – 2013	PhD	Jennifer Houle, <i>Size-structured modelling tools for an Ecosystem Approach to Fisheries Management</i> , co-supervised with Keith Farnsworth
2005 – 2007	PhD	Hiroshi Serizawa, <i>Mathematical analyses of spatiotemporal dynamics of colonial cyanobacteria in lake ecosystems</i> , co-supervised with Takashi Amemiya
2005 – 2006	Bachelor	Kaori Yanagi (Statistics of trophic interaction strengths), co-supervised with Takashi Amemiya
2004 – 2005	Bachelor	Takuo Yumura (Analysis of food-web topology), co-supervised with Takashi Amemiya
2002 – 2003	Diploma	Kilian Bartholomé, <i>Non-linear data analysis for vortex flow-meters</i> , co-supervised with Jens Timmer
1997 – 1998	Diploma	Anke Lindner, <i>Three-dimensional Pattern formation in liquid crystals</i> , co-supervised with Lorenz Kramer

Grants, Awards and Scholarships

- 2014 – 2017 Co-I and WP leader in NERC/Defra-funded *Marine Ecosystems Research Program*, £300,000
- 2013 – 2017 Co-I of OCEAN-CERTAIN EU-FP7 collaboration to investigate marine impacts of climate change, €220,000
- 2013 The book *Food Webs and Biodiversity: Foundations, Models, Data* wins PROSE Award in the category “Biological Sciences”
- 2012 – 2018 Co-I for FizzyFish Defra project to develop management options for fisheries and climate-change impacts, £1.25M
- 2012 – 2017 Co-PI for MYFISH EU-FP7 collaboration to operationalise Maximum Sustainable Yield, €219,540
- 1998 – 2000 JSPS/Alexander von Humboldt Foundation, research fellowship, ¥7,200,000 (≈£40,000)
- 1998 City of Bayreuth: “Best dissertation of the year”
- 1994 – 1996 Deutsche Forschungsgemeinschaft: research fellowship
- 1993 – 1994 Studienstiftung des Deutschen Volkes (German National Merit Foundation): regular fellow

Editorial Work

- 2008 – Associate Editor, *The American Naturalist*
- 2007 – Host of the *foodwebs* mailing list (<http://foodwebs.info>)
- 2007 Guest editor, Special Section on Current Food-Web Theory in *Ecological Complexity* 5(2), 2008 (together with Katsuhiko Yoshida)

Reviewing

Journals in Physical Sciences

Physical Review Letters
Europhysics Letters
Journal of Theoretical Physics
Physical Review E
Physica A
Physica D
Flow Measurement and Instrumentation
Mathematical Models of Natural Phenomena
International Journal of Bifurcations and Chaos

Journals in Life Sciences

PNAS
American Naturalist
eLife
Proceeding of the Royal Society B
Marine Ecology Progress Series
Fish and Fisheries
Marine Biology
Journal of Theoretical Biology
Mathematical Biosciences
Oikos
Ecology Letters
Ecological Complexity
Ecological Modelling
Methods in Ecology and Evolution
Global Ecology and Biogeography
Pest Management Science
Biological Conservation
Paleontological Research

Society Memberships

06/2010 –	British Ecological Society
08/2010 –	International Union for Conservation of Nature
04/2008 –	The American Society of Naturalists
11/2005 – 01/2007	Ecological Society of Japan
08/2005 –	Ecological Society of America
04/2005 – 01/2007	Society of Evolutionary Studies (Japan)
08/2004 – 08/2008	Japanese Society of Mathematical Biology
09/2000 – 10/2008	American Physical Society
02/1999 – 01/2007	Physical Society of Japan
10/1994 – 08/2008	Deutsche Physikalische Gesellschaft

Other Responsibilities

2012 –	UK delegate to the expert group on Food Webs at OSPAR
2012 –	Cefas representative at the Healthy and Biologically Diverse Seas Evidence Group, advising UK governmental agencies
2009 –	UK delegate to the International Council for the Exploration of the Sea (ICES), contributing to numerous working groups and workshops related to marine biodiversity.
2001 – 2003	Guest-speaker program at Center for Data Analysis and Modeling, Freiburg
1996 – 1998	Administration of computing facilities at Department for Theoretical Physics, U Bayreuth

Programming Experience

C, C++, FORTRAN, R, Mathematica, Matlab, Sage, AWK, Perl, Lisp, FOURTH, Assembler.
Contributions to the X.org touchpad driver contained in all major Linux distributions.

Language Skills

German (native), English, Japanese, Portuguese, Italian

Publications

As of June 2015, 61 peer-reviewed publications, including contributions to *Trends in Ecology and Evolution* (impact factor 15.3), *Nature Communications* (10.7), *Physical Review Letters* (7.7), *Advances in Ecological Research* (6.3), *Proceedings of the Royal Society B* (5.3), *Ecology* (5.0), and *The American Naturalist* (4.5). ISI number of citations: over 800; h-index: 17. See Academic Track Record for details.