

CURRICULUM VITAE – JONATHAN FRIEDEMANN DONGES

LAST UPDATE	November 9, 2010
CONTACT INFORMATION	<p>Potsdam Institute for Climate Impact Research Research Domain IV—Transdisciplinary Concepts & Methods</p> <p>P.O. Box 60 12 03 D-14412 Potsdam Germany</p> <p><i>Voice:</i> +49 (331) 288-2468 <i>Fax:</i> +49 (331) 288-2640 <i>E-mail:</i> donges@pik-potsdam.de <i>WWW:</i> www.pik-potsdam.de/members/donges</p>
BORN	April 22, 1983—Engelskirchen, Germany
NATIONALITY	German
RESEARCH INTERESTS	Complex network theory, nonlinear dynamics, time series analysis, climate science, earth system analysis
EDUCATION	<p>Humboldt University, Berlin, Germany Since 5/2009</p> <p>PhD student at Potsdam Institute for Climate Impact Research</p> <ul style="list-style-type: none">• Research Topic: Complex Networks in Earth System Analysis• Advisor: Prof. Dr. Dr. h.c. Jürgen Kurths• Area of Study: Theoretical physics <p>University of Potsdam, Germany 10/2005 to 4/2009</p> <p>Diplom-Physiker (advanced degree in physics)</p> <ul style="list-style-type: none">• Final Grade: 1.0 (<i>with distinction</i>)• Thesis Title: “Complex Networks in the Climate System”• Advisor: Prof. Dr. Dr. h.c. Jürgen Kurths• Area of Study: Physics, environmental science <p>University of California San Diego, USA 9/2006 to 6/2007</p> <p>Education Abroad Program</p> <ul style="list-style-type: none">• Research Project: Synchronization based parameter estimation• Advisor: Prof. Dr. Henry D.I. Abarbanel• Area of Study: Physics, geophysics, oceanography <p>University of Bonn, Germany 10/2003 to 9/2005</p> <p>Vordiplom Physik (intermediate examination in physics)</p> <ul style="list-style-type: none">• Final grade: 1.0• Area of Study: Physics, mathematics• Specialization: Astrophysics <p>Wültenweber Gymnasium, Bergneustadt, Germany 8/1993 to 6/2002</p> <p>Abitur (german university entrance qualification)</p> <ul style="list-style-type: none">• Final grade: 1.4• Intensive courses: Mathematics, german literature

	Apalachicola High School , Apalachicola, Florida, USA	8 to 12/1999
	High school exchange program	
CIVIL SERVICE	Diakoniestation Bergneustadt, Germany	8/2002 to 5/2003
AWARDS & SCHOLARSHIPS	PhD Scholarship awarded by the German National Academic Foundation (Studienstiftung des deutschen Volkes)	Since 10/2010
	Award for outstanding graduates in Physics (Physik-Studienpreis) of the Physical Society of Berlin and the WE-Heraeus Foundation	5/2010
	Scholarship awarded by the German National Academic Foundation	9/2005 to 4/2009
	Year of study at University of California San Diego	8/2006 to 6/2007
	<ul style="list-style-type: none"> • Scholarship awarded by the Education Abroad Program of the University of California • Fulbright scholarship • Hölderlin scholarship awarded by the German National Academic Foundation and Siemens Management Consulting 	
	Jugend Forscht and Schüler Experimentieren	1995 to 2001
	<ul style="list-style-type: none"> • Six state level awards • Presentation of science projects in astronomy, physics and computer science 	
ACADEMIC EXPERIENCE	Potsdam Institute for Climate Impact Research , Germany	
	<i>Research assistant</i>	Since 5/2009
	<ul style="list-style-type: none"> • Analysis and theory of climate and recurrence networks • Support and supervision of various student research projects on complex network theory 	
	Potsdam Institute for Climate Impact Research , Germany	
	<i>Student assistant</i>	2008 to 2009
	<ul style="list-style-type: none"> • Numerical analysis of complex networks • Support and supervision of various student research projects on complex network theory 	
	University of Potsdam , Germany	
	<i>Student assistant in the Applied Nonlinear Dynamics Group</i>	2007 to 2008
	<ul style="list-style-type: none"> • Data analysis 	
	<i>Student assistant at the Institute of Physics and Astronomy</i>	2005 to 2006
	<ul style="list-style-type: none"> • Supervision of tutorials on undergraduate physics (classical mechanics and electrodynamics) and mathematics (calculus and linear algebra) 	
PUBLICATIONS	(P7) S.F.M. Breitenbach, J.F. Donges, B. Kharpran Daly, T. Kohn, T. Kohn, <i>Two sandstone caves on the southern edge of the Meghalaya Plateau, India</i> , Cave and Karst Science 37 (2) (2010), in press.	
	(P6) R.V. Donner, M. Small, J.F. Donges, N. Marwan, Y. Zou, R. Xiang, J. Kurths, <i>Recurrence-based time series analysis by means of complex network methods</i> , International Journal of Bifurcation and Chaos, in press, arXiv:1010.6032.	

(P5) R.V. Donner, Y. Zou, J.F. Donges, N. Marwan, J. Kurths, *Ambiguities in recurrence-based complex network representations of time series*, Phys. Rev. E **81**, 015101(R) (2010), DOI: 10.1103/PhysRevE.81.015101.

(P4) R.V. Donner, Y. Zou, J.F. Donges, N. Marwan, J. Kurths, *Recurrence networks – A novel paradigm for nonlinear time series analysis*, New J. Phys. **12**, 033025 (2010), DOI: 10.1088/1367-2630/12/3/033025.

(P3) N. Marwan, J.F. Donges, Y. Zou, R.V. Donner, J. Kurths, *Complex network approach for recurrence analysis of time series*, Phys. Lett. A **373**, 4246–4254 (2009), DOI: 10.1016/j.physleta.2009.09.042.

(P2) J.F. Donges, Y. Zou, N. Marwan, J. Kurths, *The backbone of the climate network* (2009), Europhys. Lett. **87**, 48007 (2009), DOI: 10.1209/0295-5075/87/4800.

(P1) J.F. Donges, Y. Zou, N. Marwan, J. Kurths, *Complex networks in climate dynamics. Comparing linear and nonlinear network construction methods*, Eur. Phys. J. ST **174**, 157–179 (2009), DOI: 10.1140/epjst/e2009-01098-2.

REFEREEING

Chaos, European Physical Journal Special Topics, Geophysical Research Letters, International Journal of Bifurcation and Chaos, Nonlinear Processes in Geophysics, Statistical Analysis and Data Mining

CONFERENCES & COLLOQUIA

WE-Heraeus-Seminar – Synchronization in complex networks **5/2010**
(SYNCLINE 2010), Bad Honnef, Germany
• Talk: “On the backbone of climate networks”

European Geosciences Union General Assembly, Vienna, Austria **4/2010**
• Talk: “On the backbone of climate networks”
• Poster: “Statistical significance tests for spatially embedded complex networks”

Symposium – Frontiers in network science, **9/2009**
Volkswagenstiftung and University of Oldenburg, Berlin, Germany
• Invited talk: “The backbone of the climate network”

Dynamics and Statistics in Weather and Climate (DSWC09) Workshop, **7/2009**
Max Planck Institute for the Physics of Complex Systems, Dresden, Germany
• Talk: “Complex network approach for recurrence analysis of time series”
• Poster: “Significance tests for climate networks”

Chaotic Modeling and Simulation International Conference, Chania, Greece **6/2009**
• Invited talk: “Complex networks in climate dynamics”

European Geosciences Union General Assembly, Vienna, Austria **4/2009**
• Poster: “The backbone of the climate network”

Colloquium, Indian Institute of Tropical Meteorology, Pune, India **4/2009**
• Invited talk: “Information flow in complex climate networks”

International Workshop on Data Analysis and Modelling in Earth Sciences **9/2008**
(DAMES 2008), Potsdam Institute for Climate Impact Research, Germany
• Talk: “Complex networks in climate data analysis and model evaluation”

Bio-inspired Complex Networks in Science and Technology, **5/2008**
International seminar (BioNet 2008),
Max Planck Institute for the Physics of Complex Systems, Dresden, Germany
• Poster: “Parameter estimation by balanced synchronization as an optimal control problem”

LANGUAGE SKILLS *German*
First language

English
Fluent in written and spoken

French
Good in written and spoken