

# CURRICULUM VITAE: Ruža F. Ivanović

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**EXPERTISE:** General circulation modelling & isotope geochemistry  
**RESEARCH AIM:** To reach an integrated understanding of climate-ocean interactions

## RESEARCH EXPERIENCE

2012-; Postdoctoral Research Assistant in climate modelling; the Pliocene Gateways Project (*PlioGate*); School of Geographical Sciences, University of Bristol

## ACADEMIC QUALIFICATIONS

PhD in [palaeo]climate modelling and isotope geochemistry, University of Bristol, UK (2009-2012). Awarded with *Special Commendation* from the Faculty of Science and nominated for the *Faculty of Science Prize for Best PhD Thesis 2012/13*; outcome pending.  
B.Sc. with 1st Class (Hons) and highest mark in Physical Geography, Univ. Bristol, UK (2006-2009).

## PUBLICATIONS

**Ivanovic, RF**; Flecker, R; Gutjahr, M; Valdes, PJ (2013) First Nd isotope record of Mediterranean-Atlantic water exchange through the Moroccan Rifian Corridor during the Messinian Salinity Crisis. *Earth and Planetary Science Letters*. **368**, 163-174. doi:10.1016/j.epsl.2013.03.010.  
**Ivanovic, RF**; Valdes, PJ; Gregoire, LJ; Flecker, R; Gutjahr, M (2013) Sensitivity of modern climate to the presence, strength and salinity of Mediterranean-Atlantic exchange in a global General Circulation Model. *Climate Dynamics*, available 'Online First'. doi:10.1007/s00382-013-1680-5.  
**Ivanovic, RF**; Valdes, PJ; Flecker, R; Gregoire, LJ; Gutjahr, M (2013) The parameterisation of Mediterranean-Atlantic water exchange in the Hadley Centre model HadCM3, and its effect on modelled North Atlantic climate. *Ocean Modelling* **62**: 11-16. doi: 10.1016/j.ocemod.2012.11.002.  
Dunkley-Jones, T; **Ivanović, RF**; Ridgwell, A; Lunt, D; Maslin, MA; Valdes, PJ; Flecker, R (2010) Methane Hydrate Instability: A View from the Palaeogene. In McGuire, B & Maslin, MA (eds) (2013), *Climate Forcing of Geol. Hazards*. Wiley-Blackwell. doi:10.1002/9781118482698.ch12.  
**Ivanović, RF** and Freer, J (2009). Science versus politics: truth and uncertainty in predictive modelling. *Hydrological Processes* **23**(17): 2549–2554. doi:10.1002/hyp.7406.  
**Ivanovic, RF**; Valdes, PJ; Flecker, R; Gutjahr, M (accepted pending revisions, resubmitted). Modeling global-scale climate impacts of the late Miocene Messinian Salinity Crisis. *Paleoceanography*.

## FUNDING AWARDED (£127.5K total, 2009-2012)

*PlioGate*; **NERC Small Grant** of £62.3K; for 7 months of postdoctoral research (2012).  
University of **Bristol Centenary Scholarship**; for PhD research (2009-12).  
British Geological Society Daniel Pidgeon Memorial Fund; for PhD fieldwork in Morocco (2010-11).  
University of Bristol Phyllis Mary Morris Fund; for PhD sample collection and lab. analyses (2009-11).  
European Space Agency Scholarship (2011). ECORD Scholarship (2010). Geochemistry Group Travel Grant (2012). Bristol Alumni Travel Grant (2011).

## SELECTED PRESENTATIONS AND INVITED SEMINARS

*Is  $\delta^{18}O$  variability correlated with ENSO?* Poster at the PAGES OSM, Goa, India (Feb, 2013).  
*Did Mediterranean Outflow Water affect global climate during the Messinian?* **Invited seminars** at the NASA Goddard Institute for Space Studies, New York, USA (Dec, 2012) and the University of Leeds, Leeds, UK (Nov, 2012).  
*Can Nd tell us about Mediterranean Outflow Water?* Oral presentation at the **Goldschmidt** Geochemistry Conference 2012, Montréal, Canada (June, 2012).  
*How sensitive is the North Atlantic to Mediterranean Outflow Water?* Oral presentation at the Paleoclimate Modelling Intercomparison Project (PMIP) 3 meeting, Crewe, UK (May, 2012).  
*Did closure of the Mediterranean affect global climate?* Oral presentation at the **AGU Fall Meeting**, San Francisco, USA (Dec, 2011).  
*How important is the Mediterranean-Atlantic gateway for global climate?* **Invited seminar** at the Japanese Agency for Marine-Earth Science and Technology, Yokohama, Japan (Oct, 2011).  
*Late Miocene Mediterranean-Atlantic exchange and the influence of Mediterranean gateway dynamics on global climate.* **Invited seminar** at the National Oceanography Centre, So'ton, UK (Sept, 2011).  
*Can Nd isotopes tell us about the Messinian Salinity Crisis?* Oral presentation at the Joint RCMNS-RCANS Interim Colloquium, Salamanca, Spain (Sept, 2011).

*Did the Messinian Salinity Crisis affect global climate?* Oral presentation at the General Assembly of the **European Geosciences Union**, Vienna, Austria (Apr, 2011).

*Reconstructing Mediterranean-Atlantic exchange: Can Nd isotopes tell us about the Messinian Salinity Crisis?* Poster at the EGU General Assembly, Vienna, Austria (Apr, 2011).

*Reconstructing Mediterranean-Atlantic water exchange and global thermohaline circulation during the Messinian Salinity Crisis.* Poster at the Cioppino Conference, Urbino, Italy (July, 2010).

## RESEARCH SKILLS

Numerical modelling and coding (2009-): Use of HadCM3 (fully coupled Ocean-Atmosphere General Circulation Model) and GENIE (Earth System Model of Intermediate Complexity); including code development (Fortran 77 and Fortran 90), scripting and programming (NCL, R, Ferret, Matlab, html and others), output processing and data analysis techniques.

Laboratory work in isotope geochemistry and micropalaeontology (2009-2012): Foraminifera species identification, picking and crushing. Chemistry to clean and prep. samples for mass-spectral analysis in a *Clean Laboratory*, and mass-spectroscopy on Element II, Neptune I and Neptune II machines.

Fieldwork (2008-2011): Stratigraphic logging<sup>1</sup>, glacial reconstruction<sup>2</sup>, cyclostratigraphy<sup>3</sup> and sample collection<sup>4</sup> in: <sup>1</sup>Devon (UK), <sup>1,2</sup>Snowdonia (UK), <sup>1,3</sup>Umbria (Italy) and <sup>1,4</sup>Northern Morocco.

## TEACHING AND OUTREACH

Teaching a postgraduate MRes course on climate modelling, Complexity Sci., Univ. Bristol (2011-12).

Supervising a lab-based MRes dissertation thesis, Dept. Earth Sciences, Univ. Bristol (2010-11).

Teaching undergraduates: lecturing, leading practicals, field-training, taking tutorial groups (pastoral and academic), demonstrating and exam invigilation for 1st, 2nd, 3rd and 4th year undergraduates taking Geography (B.Sc and M.Sci), Geographical Sciences, Univ. Bristol (2009-).

*Planet Earth* podcast for NERC on modelling Pliocene climate (June 2012).

'*Access to Higher Education: Solving Climate Change*' and '*Climate change: challenging the way we think*': Coordinated and led talks and activities for 16-18 yr old students (Nov, 2010 to July, 2012).

'*Discover!*'; participated in activities for school children and members of the general public for the Univ. Bristol's 3-day public engagement event held in Bristol City Centre (Mar, 2010 and Mar, 2012).

'*Science at Key Stage II*'; '*Rocks and Soils*'; '*the Science of Climate Change*'; '*Mapping Biodiversity*'; '*Co<sub>2</sub>, ice sheets and Sea Level Rise*' and '*Geo-engineering: inventing our way out of trouble!*'; Coordinated/led talks and activities for 6-11 yr olds at local primary schools (Feb-Apr, 2010).

## OTHER ROLES AND RESPONSIBILITIES

Organiser and chair of the BRIDGE research group seminars, workshops and socials (2010-11).

Founder, chair and organiser of fortnightly departmental interdisciplinary seminars (2010-11).

Organiser of the weekly departmental social (2010).

President of Univ. Bristol performing arts society and producer of full-scale theatre production (2007-08).

Member of the Univ. Bristol Students' Union Stage Managers Sub-Committee (2007-08).

Student representative on Undergraduate- Graduate- School- and Faculty-based Boards (2006-11).

Assistant Coach of a Primary School football team (2003-2005).

## RESEARCH MEETINGS ATTENDED

*Past Isotopic Events and Future Ecologies*, Geological Society, London, UK (Oct 2010). *Urbino Summer School in Paleoclimatology*, Urbino, Italy (July 2010). *Governing Through Uncertainty*, Univ. Bristol, UK (May 2010). *Interdisciplinarity in postgraduate research*, Univ. Bristol, UK (May 2010). *Introduction to the UM*, National Centre for Atmospheric Sciences, Univ. Reading, UK (Nov. 2009).

## OTHER

Languages: English, basic French and Serbian. Postgraduate Fellow of the UK Geological Soc. (2010-) and European Assoc. Geochemists (2012-). Trained to provide first aid in the field. *Audi Young Designer of the Year* Runner-up with working micro-hydroelectric generator (2005). Full, clean UK driving licence (2004-). I also enjoy the performing arts; playing bass guitar, football and squash; and power-kiting.

## REFEREES

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