

Kai Wünnemann

1) General information

- Wünnemann, Kai, Dr. rer. nat., date of birth: 09/12/1969, male.
- Museum für Naturkunde (MfN), Leibniz Institut für Evolutions- und Biodiversitätsforschung, Invalidenstr. 43, D-10115 Berlin, Tel.: +49 30 3093 8857, e-mail: kai.wuennemann@mfn-berlin.de.
- Current position: Senior Researcher, Head of Research Section "Global Catastrophes"

2) Academic education and degrees

- Geophysics (1991 – 1997), Diploma, Westfälische Wilhelms-Universität Münster (Prof. Dr. M. A. Lange)

3) Scientific degrees

- Doctoral degree: Dr. rer. nat., Westfälische Wilhelms-Universität Münster, Dr. rer. nat., 2001 (Prof. Dr. M. A. Lange)

4) Professional experience

- Since 2014 Head of research section Global Catastrophes at MfN
- 2010-2013 Spokesperson of Research Program "Impacts, Meteorites and Geological Processes" at MfN
- Since 2009 Senior Researcher at MfN
- 2005-2008 Head of DFG Junior Research Group at MfN
- 2005-2005 Research Associate, Lunar and Planetary Institute, University of Arizona, Tucson, USA
- 2004-02005 Fellow of German Research Foundation (DFG) at Lunar and Planetary Institute, University of Arizona, Tucson, USA
- 2003-2003 Fellow of German Research Foundation (DFG) at Department of Earth Science and Engineering, Imperial College London, UK
- 2001-2002 Research Associate, Institute of Geophysics, WWU, Germany
- 1998-2001 Ph.D-Fellow of German Research Foundation (DFG) at Institute of Geophysics, WWU, Germany

5) Professional activities

- Co-Convener of upcoming Annual Meeting of the Meteoritical Society 2016, Berlin
- Member of Editorial Board for GEOLOGY
- Convener of several sessions at international conferences and workshops (Ries Crater 2010; EGU 2010; AGU 2011, EPSC 2012, 2010; AGU-MOA 2013) and member of technical committees (HVIS 2010; AICAC II 2011; Large Meteorite Impact Conference 2013)
- Möbius-Award for distinct scientific achievements, Museum für Naturkunde, 2010
- Award for best contribution at DGG 2008, 2009, 2010, 2011
- Leading developer of the open-access software package iSALE to model hypervelocity impact and other highly dynamic rapid geological processes, www.isale-code.de, community: >100 users
- Reviewer for research councils of USA (NASA), Norway, Estonia, Portugal and several top ISI journals

6) Publications

Published or accepted peer-reviewed publications, book chapters, etc.

- Marchi S., Bottke W. F., Elkins-Tanton L. T., Bierhaus M., Wünnemann K., Morbidelli A., Kring D. A. (2014), Widespread mixing and burial of Earth's Hadean crust by asteroid impacts, *Nature* 511, 578-582.
- Fritz J., Bitsch B., Kührt E., Morbidelli A., Tornow C., Wünnemann K., Fernandes V.A., Grenfell J.L., Rauer H., Wagner R., Werner S.C. (2014), Earth-like habitats in planetary systems. *Planetary and Space Science*, 98, 254-267.
- Marchi S., Bottke W.F., Cohen B.A., Wünnemann K., Kring D.A., McSween H.Y., De Sanctis M.C., O'Brien D.P., Schenk P., Raymond C.A., Russell C.T. (2013), High-velocity collisions from the lunar cataclysm recorded in asteroidal meteorites, *Nature Geoscience*, DOI: 10.1038/NNGEO1769.
- Artemieva, N. A., Wünnemann, K., Krien, F., Reimold, W. U., Stöffler, D. (2013), Ries crater and suevite revisited- Observations and modeling Part II: Modeling. *Meteoritics and Planetary Science* 48(4), 590-627.
- Elbeshhausen, D., Wünnemann, K., Collins, G.S. (2013), The transition from circular to elliptical impact craters. *Journal of Geophysical Research: Planets* 118 (11), 2295-2309.
- Collins G.S., Wünnemann, K., Artemieva N., Pierazzo B. (2013), The modification stage of crater formation. In: Osinski, G. R. & Pierazzo, E.(eds.): *Impact Cratering. Processes and Products*3. Wiley & Sons, 254-268.
- Wünnemann K., Collins G.S., Weiss R. (2010), The impact of a cosmic body in Earth's ocean and the generation of large tsunami waves - insight from numerical modeling, *Reviews of Geophysics*, 48, doi:10.1029/2009RG000308
- Elbeshhausen D., Wünnemann K., Collins G.S. (2009), Scaling of oblique impacts in frictional targets: Implications for crater size and formation mechanisms, *Icarus* doi:10.1016/j.icarus.2009.07.018.

Wünneman K., Collins G.S., Osinski G.R. (2008), Numerical modelling of impact melt production in porous rocks, *Earth and Planetary Science Letters* 269, 529-538.

Wünnemann K., Collins G. S., Melosh H. J. (2006), A strain-based porosity model for use in hydrocode simulations of impacts and implications for transient-crater growth in porous targets, *Icarus* 180, 514-527.