

Curriculum Vitae Dr. Olga Speck

Contact

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Dr. Olga Speck

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Research Fields

- Functional anatomy and biomechanics of plants
- Bioinspired materials research: self-repairing materials, adaptive materials, composite materials
- Biomimetics and sustainable technology development
- Education and training in the field of biomimetics

Postgraduate professional career

since 2014 Scientific Coordinator of the Freiburg Center for Interactive Materials and Bioinspired Technologies

since 2003 Research Scientist and Group Leader, Plant Biomechanics Group Freiburg

since 2002 Manager of the Competence Network Biomimetics and scientific employee in the Plant Biomechanics Group Freiburg

Academic qualification and education

1998 - 2003 Dr. rer. nat. Biology, University of Freiburg, Germany

Oscillation damping and transfer of dynamic loads from stem to rhizome in the Giant Reed *Arundo donax*. (Schwingungsdämpfung und Transfer dynamischer Lasten vom Halm auf das Rhizom beim Pfahlrohr *Arundo donax*)

1987 Degree Assistant Medical Technician

1985 University degree in Biology and Sports, University of Freiburg, Germany

Honors and awards

2011 Award for the „Bionik-Vitrine“ as a contribution to the United Nations World Decade "Education for Sustainable Development (2005-2014)

2010 „Sonja-Bernadotte-Preis für Wege zur Naturerziehung“ – Award of the ‚Deutsche Gartenbau-Gesellschaft 1822 e. V.‘ for the engagement in biomimetics for education and training

- 2009 „Dr. Heinrich Netheler-Gedenkmünze“ – Award of the ‚Netheler-Stiftung‘ for the idea and conception of a biomimetic laboratory in a box to be used in education and training
- 2007 “techtexil innovationsprize.2007 – New Materials” for the development of the ‘technical plant stem’
- 2007 Laureate of the “Ideenwettbewerb Bionik – Innovationen aus der Natur” (Federal Ministry of Education and Research, Germany) for the research project ‚from biological templates to biomimetic products: wound healing in plants as concept generators for self-repairing technical materials‘
- 2007 “ExpoNaTe 2007”-Award of the ‚Landesstiftung Baden-Württemberg‘ (together with colleagues of the Plant Biomechanics Group Freiburg for didactic experiments on biophysics of water conduction in plants)

Scientific Boards, Honorary Posts

- since 2021 Member of the editorial board of *biomimetics*
- 2021 Guest Editor for *biomimetics* (Special Issue: "Bridging the Gap: From Biomechanics and Functional Morphology of Plants to Biomimetic Developments")
- since 014 Member of the Steering Committee ICSHM
- since 2009 Chairperson Working group „Aus- u. Weiterbildung“ of BIODON e.V.
- 2009–2015 Vice chairperson Working Group “Education & Training” of BIODON international
- 2007–2014 Member of „Fachbeirat Bionik“ of The Association of German Engineers
- 2011 Member of ISO/TC 266 BIOMIMETICS, Deutsches Institut für Normung e. V., Normenausschuss Materialprüfung (NMP)

Publications

[Google Scholar](#)

Activity as a reviewer for the following journals

American Journal of Botany, animals, biomimetics, Beilstein Journal of Nanotechnology, Botany, Creativity and Innovation Management Journal, Journal of Experimental Botany, Flora, Proceedings of the Royal Society B