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Plant Biomechanics Group (PBG)
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Employments

Since 2015 PhD candidate at the Plant Biomechanics Group Freiburg / Botanic Garden (University of Freiburg)

Thesis: "Kinematics of planar, curved and corrugated plant surfaces as concept generators for deployable systems in architecture", Collaborative Research Center CRC-TRR 141 "Biological Design and Integrative Structures – Analysis, Simulation and Implementation in Architecture" project A04 - funded by the German Research Foundation (DFG), (Supervision: Dr. Simon Poppinga, Prof. Thomas Speck)

2014-2015 Scientific researcher for 'Trap diversity and evolution in carnivorous bladderworts (*Utricularia*)', funded by the Innovation fond of the University Freiburg (Supervision: Dr. Simon Poppinga)

Studies

2013 - 2015 Studies in Biology (Master of Science), University of Freiburg

Master thesis: Trap movement and fluid dynamics in Lentibulariaceae (Supervision: Dr. Simon Poppinga, Prof. Thomas Speck)

2012 Scientific Internship, Smithsonian Tropical Research Institute, Barro Colorado Island, Panama. Field assistant for PhD thesis "Emerging infectious diseases: Impact of anthropogenic change on the prevalence of blood parasites in Neotropical bats in Panama" (Supervision: Dr. Veronika Cottontail, University of Ulm)

2009 – 2013 Studies in Biology (Bachelor of Science), University of Freiburg

Bachelor thesis: 'Biomechanics and functional morphology of selected, non-aquatic bladderwort species (*Utricularia* spp.)' (Supervision: Dr. Simon Poppinga, Dr. Tom Masselter, Prof. Thomas Speck)

2008 Abitur, Dante-Gymnasium, Munich

Scholarships

2017 Company of Biologists Travel Grant (SEB Annual Meeting, Gothenburg 2017)

2016 SEB Travel Grant (SEB Annual Meeting Brighton 2016)

2012 PROMOS scholarship for internship at the STRI, Panama

(Co-) Supervision of theses

Supervisor/first examiner in all cases (unless specified otherwise) Prof. Thomas Speck

- 2017 Bachelorthesis by Jassir Smajj: "Prey capture analysis in the carnivorous plant species *Aldrovanda vesiculosa*" (together with Dr. Simon Poppinga)
- Bachelorthesis by Lennart Hoppe: "Biomechanical analyses of the narrowing movement of *Aldrovanda vesiculosa* traps" (together with Dr. Simon Poppinga)
- Masterthesis by Laura-Sophie Lehmann: "Analysis of leaf growth, biomechanics and anatomy during leaf ontogeny in *Syngonium auritum* (Araceae)" (together with Dr. Simon Poppinga)
- Masterthesis by Max Mylo: "Establishment of a methodology for 3D plant deformation analyses" (together with Dr. Simon Poppinga, first examiner: Prof. Jörn Munzert (University of Gießen), second examiner Prof. Thomas Speck)
- "Zulassungsarbeit" by Cora Carmesin: „On the capture mechanism of carnivorous eel traps as in *Genlisea hispidula*" (together with Dr. Simon Poppinga, first examiner: Prof. Steven Jansen (University of Ulm), second examiner Prof. Thomas Speck)
- 2016 Bachelor thesis by Nils Vasic: 'Functional morphology, kinematics and biomechanics of the snap-traps of *Dionaea muscipula* Sol. Ex. J. Ellis' (together with Dr. Simon Poppinga, first examiner: Prof. Heike Beismann (HS Bocholt), second examiner Prof. Thomas Speck)
- Bachelor thesis by Philipp Vögele: 'Kinematics and functional morphology of *Aldrovanda vesiculosa* (waterwheel plant)' (together with Dr. Simon Poppinga)
- Bachelor thesis by Lars Erik Daber: 'Prey capture in *Utricularia australis*: Prey capture analyses and functional morphological investigations' (together with Dr. Simon Poppinga)

Teaching

- 2017 Supervision RISE Intern Joey Nadasdi (Canada)
- 2016 Advanced practical student course "Funktionelle Morphologie, Biomechanik und Bionik für Studierende des höheren Lehramts". Supervision and support of course experiments "Gelenkfreie Bewegungen und wandelbarer Leichtbau" (University of Freiburg)
- 2014-2017 Advanced practical bachelor student course "Vertiefungsmodul: Funktionelle Morphologie, Biomechanik und Bionik". Supervision and support of course experiments (University of Freiburg)

Prizes and Awards

- 2017 Third place of the Innovationspreis 2017 (category: "Forschung/Wissenschaft") awarded by the AVK (Industrievereinigung Verstärkte Kunststoffe e. V. und AVK-TV GmbH) for the development of the biomimetic façade shading element Flectofold, together with colleagues from Freiburg (PBG), Stuttgart (ITKE, IBB, ITFT) and Tübingen (EvE) Universities and the Deutsche Institute für Textil- und Faserforschung (DITF)

Reviewer activities

Reviews for journals: Journal of the Royal Society Interface

Other activities

- Since 2018 Member of PhD-Representatives Committee for the Faculty of Biology
- Since 2017 Hobby Beekeeper

2013-2016 Tutoring and supervision of pupils with deprived backgrounds on a voluntary basis
(Waisenhausstiftung Freiburg)

Since 2014 Guide for the Botanic Garden Freiburg