

Maximilian H.K. Hesselbarth

COMPUTATIONAL ECOLOGIST

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Personal information

Name: Maximilian Hans Klaus Hesselbarth

Born: 25.12.1990 in Ravensburg (Germany)

Nationality: German

Education

- 2011 - 2014 | B.Sc. *Forestry*, University of Applied Sciences and Arts, Göttingen (Germany)
- 2014 - 2016 | M.Sc. *Ecosystem Analysis and Modelling*, University of Göttingen (Germany)
- 2016 - 2020 | Ph.D. *Department of Ecosystem Modelling*, University of Göttingen (Germany)

Internships, Research visits

- 31/08/2009 - 11/09/2009 | *State forestry department Heuberg*, Messstetten (Germany)
- 02/08/2010 - 27/08/2010 | *State forestry department Heuberg*, Messstetten (Germany)
- 02/06/2011 - 01/08/2011 | *Wise Batten Inc*, Timber management, Estill, SC (USA)
- 04/11/2013 - 30/03/2014 | *SilvaTerra Ltd*, Forestry consulting and research, Lilongwe (Malawi)
- 01/09/2015 - 01/10/2015 | *Northwest German Forestry Research Institute*, Department of growth modeling, Göttingen (Germany)
- 07/03/2016 - 01/08/2016 | *Land degradation and restoration ecology*, North-West University, Potchefstroom (South Africa)
- 07/03/2016 - 01/08/2016 | *School of Life Sciences*, University of KwaZulu-Natal, Pietermaritzburg (South Africa)
- 18/10/2017 - 21/12/2017 | *Department of Ecology, Evolution, and Organismal Biology*, Iowa State University, Ames (USA)

Workshops

- 07/09/2013 – 22/09/2013 | *Fire protection and management*, Cyprus Forestry College, Podromos (Cyprus)
- 02/04/2017 – 07/04/2017 | *Advances in spatial analysis of multivariate ecological data: Theory and practice*, Port Talbot (UK)
- 18/01/2018 – 19/01/2018 | *Deep learning with Keras and TensorFlow*, Solingen (Germany)
- 26/03/2018 – 30/03/2018 | *Spatial modelling in labru*, St. Andrews (GB)

Conferences

- 29/04/2017 – 05/05/2017 | *Young Modellers in Ecology*, Freiburg (Germany)
- 10/09/2018 – 14/09/2018 | *48th Annual Meeting of the Ecological Society of Germany, Austria and Switzerland*, Vienna (Austria)
- 01/07/2019 - 05/07/2019 | *10th World Congress International Association of Landscape Ecology*, Milano (Italy)

Publications

Articles

- **Hesselbarth, M.H.K.**; Wiegand, K.; Dreber, N.; Kellner, K.; Esser, D.; Tsvuura, Z. (2018). *Density-dependent spatial patterning of woody plants differs between a semi-arid and a mesic savanna in South Africa*. *Journal of Arid Environments* 157, 103-112. <https://doi.org/10.1016/j.jaridenv.2018.06.002>
- **Hesselbarth, M.H.K.**; Sciaini, M.; With, K.A.; Wiegand, K.; Nowosad, J (2019). *landscapemetrics: an open-source R tool to calculate landscape metrics*. *Ecography* 42:10, 1648-1657. <https://doi.org/10.1111/ecog.04617>
- Borthwick, R.; de Flamingh, A.; **Hesselbarth, M.H.K.**; Parandhaman, A.; Wagner, H.H.; Abdel Moniem, H.E. (2020). *Alternative quantifications of landscape complementarity to model gene flow in banded longhorn beetles [Typocerus v. velutinus (Olivier)]*. *Frontiers in Genetics* 11, 307. <https://doi.org/10.3389/fgene.2020.00307>

Poster / Talks

- **Hesselbarth, M.H.K.**; Wiegand K. (2018). *A simulation study comparing methods to analyze species-habitat associations of forest trees*. 48th Annual Meeting of the Ecological Society of Germany, Austria and Switzerland. Vienna (Austria). Conference poster.
- **Hesselbarth, M.H.K.**; Sciaini, M.; Nowosad, J.; Hanss, S. (2019). *landscapemetrics: introducing a new R tool to characterise landscapes*. 10th World Congress International Association of Landscape Ecology. Milano (Italy) Conference poster.
- Nowosad, J.; **Hesselbarth, M.H.K.** (2020). *Introduction to landscape ecology with R*. Annual Meeting International Association of Landscape Ecology North America. Toronto (Canada). Workshop

Software

- *landscapemetrics*: Landscape Metrics for Categorical Map Patterns. (click for more information)
- *shar*: Species-Habitat Associations. (click for more information)

Peer reviewer for scientific journals:

- Journal of Tropical Ecology
- Plant and Soil
- Perspective in Plant Ecology, Evolution and Systematics
- Journal of Vegetation Science