

### Dr. Ralf Wieland

**Position:** Head of WG Simulation Methods



### Academic education and scientific degrees

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| 1985 – 1988 | Dr.-Ing. Expert systems for process control, University of Technology Leipzig     |
| 1981 – 1985 | Dipl.-Ing. Technical cybernetics and automation, University of Technology Leipzig |

### Professional experience

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|-------------|---|
| since 2018  | Head of WG "Simulation Methods" at the Research Data Platform, ZALF             |
| 2002 – 2018 | Senior Researcher at ZALF   |
| 1994 – 2002 | Scientific employee at ZALF in different projects                               |
| 1990 – 1994 | Scientific senior assistant, Hochschule für Technik and Wirtschaft Berlin (HTW) |
| 1988 – 1990 | Scientific employee Funkwerk Köpenick ZFTN                                      |

### Research Profile

#### Background

- development of, simulation methods including cluster computing
- Fuzzy modeling, machine learning
- Combination of dynamic modeling and artificial intelligence

#### Research Activities

- Landscape simulation, habitat modeling
- CuliFo1, CuliFo2 (CuliFo3 in preparation)
- Use of deep learning for structural analysis of computer tomography images of soil samples
- Cooling effects in landscapes (DAKIS-Projects)

### Functions and memberships

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| Since 2018 | Member of the Advisory Board of the Section Simulation in Environment and Geoscience of the German Informatics Society, Workshop of this group: Nov. 2022 at ZALF |
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### Other

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