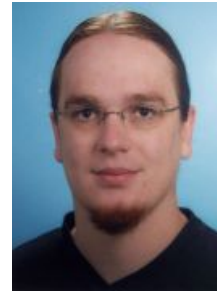


# Michael de Paly



## Background

- -1998 Gymnasium Klotzsche (high school) in Dresden
- 1998 - 2005 studies of computer science at TU Dresden
- 02/2005 external diploma thesis at the Institut of Hydrology and Meteorology Dresden
- 2005 internship in Melbourne (Australia)
- 11/2005-11/2006 research assistant at the Institut of Hydrology and Meteorology Dresden
- since 12/2006 research assistant at the Department of Cognitive Systems (former Dept. of Computer Architecture) , Eberhard-Karls-University Tübingen

## Research Interests

- Evolutionary Algorithms
- GeoScience/Hydrology

## Current Projects

- Soft Computing in GeoScience
- Optimization of Excavators

## Publications

- [1] Markus Beck, Peter Bayer, Michael de Paly, Jozsef Hecht-Mendez, and Andreas Zell. Geometric arrangement and operation mode adjustment in low enthalpy geothermal borehole fields for heating. *Energy*, 49:434--443, 2013.
- [2] Jozsef Hecht-Mendez, Michael de Paly, Markus Beck, and Peter Bayer. Optimization of energy extraction for vertical closed-loop geothermal systems considering groundwater flow. *Energy Conversion and Management*, 66:1--10, 2013.
- [3] Markus Beck, Michael de Paly, Jozsef Hecht-Mendez, Peter Bayer, and Andreas Zell. Evaluation of the Performance of Evolutionary Algorithms for Optimization of Low-Enthalpy Geothermal Heating Plants. In *Genetic and Evolutionary Computation Conference, GECCO-2012*, pages 1047--1054, Philadelphia, USA, July 2012.
- [4] Jozsef Hecht-Mendez, Michael de Paly, Markus Beck, Phillip Blum, and Peter Bayer. Strategic optimization of large-scale vertical closed-loop shallow geothermal systems. In *Geophysical Research Abstracts, EGU12079*, volume 14, Vienna, apr 2012. EGU General Assembly 2012.
- [5] Michael de Paly, Jozsef Hecht-Mendez, Markus Beck, Philipp Blum, Andreas Zell, and Peter Bayer. Optimization of energy extraction for closed shallow geothermal systems using linear programming. *Geothermics*, 43:57--65, 2012. [ [DOI](#) ]
- [6] Markus Beck, Jozsef Hecht-Mendez, Michael de Paly, Peter Bayer, Philipp Blum, and Andreas Zell. Optimization of the energy extraction of a shallow geothermal system. In *Proceedings of the IEEE Congress on Evolutionary Computation (CEC)*, pages 3622--3628, Barcelona, Spain, July 2010. [ [DOI](#) ]
- [7] Michael de Paly, Niels Schuetze, and Andreas Zell. Determining crop-production functions using multi-objective evolutionary algorithms. In *Proceedings of the IEEE Congress on Evolutionary Computation (CEC)*, pages 1870 -- 1877, Barcelona, Spain, July 2010. [ [DOI](#) ]
- [8] Peter Bayer, Michael de Paly, and Claudius N. Bürger. Optimization of high-reliability-based hydrological design problems by robust automatic sampling of critical model realizations. *Water Resources Research*, 46(5):W05504, May 2010. [ [DOI](#) | [link](#) ]
- [9] Niels Schuetze, Michael de Paly, and Uri Shamir. Novel simulation-based algorithms for optimal open-loop and closed-loop. *Journal of Hydroinformatics*, 2010. [ [DOI](#) | [link](#) ]
- [10] Michael de Paly and Andreas Zell. Optimal irrigation scheduling with evolutionary algorithms. In *Lecture Notes in Computer Science (EvoWorkshops 2009)*, volume 5484, pages 142--151, Tübingen, Germany, 2009. Springer-Verlag Berlin Heidelberg. [ [link](#) ]

- [11] Volker Gundelach, Michael de Paly, and Dieter Eisenburger. Recognition of patterns from geological structures in radar signals with the neuronal network simulator jnns. In *Ultra-Wideband, 2008. ICUWB 2008. IEEE International Conference on*, volume 3, pages 167--170, September 2008. [ [DOI](#) ]
- [12] Tim Häring, Michael de Paly, Carsten Hennekes, and Volker Hochschild. Modelling tsunami vulnerability. the development of a tsunami inundation model with machine learning tools. In *Digital Earth Summit on Geoinformatics 2008: Tools for Global Change Research*, pages 182--187, Heidelberg, Germany, 2008. Wichmann.
- [13] Gerd H. Schmitz, Thomas Wöhling, Michael de Paly, and Niels Schütze. Gain-p: A new strategy to increase furrow irrigation efficiency. *Arabian Journal for Science and Engineering*, 32(1):103--116, 2007.
- [14] Niels Schütze, Thomas Wöhling, Michael de Paly, and Gerd Schmitz. Global optimization of deficit irrigation systems using evolutionary algorithms. In *Proceedings of the XVI International Conference on Computational Methods in Water Resources*, Copenhagen, Denmark, 2006.
- [15] Niels Schütze, Michael de Paly, Thomas Wöhling, and Gerd Schmitz. Global optimisation of deficit irrigation systems using evolutionary algorithms and neural networks. In *Proceedings of the ICID 21st European Regional Conference 2005, Integrated Land and Water Resources Management Towards Sustainable Rural Development*, Frankfurt (Oder), Germany and Slubice, Poland, 2005.
- [16] Niels Schütze, Thomas Wöhling, Michael de Paly, and Gerd Schmitz. Meeting challenges of the blue revolution: increasing irrigation efficiency with soft-computing optimisation methods. In *Workshop on Integrated Water Research and Water Management*, pages 92--95, Altmorschen (Kassel), Germany, 2004.

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