

List of publications

Articles in impact journals:

- T. Ligurský, Z. Michalec: *On thermodynamically consistent coupling of the Barcelona Basic Model with a hydraulic model for unsaturated soils*. Computers and Structures 285, September 2023, 107082. DOI: [10.1016/j.compstruc.2023.107082](https://doi.org/10.1016/j.compstruc.2023.107082)
- S. Sysala, F. Tschuchnigg, E. Hruběšová, Z. Michalec: [Optimization variant of the shear strength reduction method and its usage for stability of embankments with unconfined seepage](#). Computers and Structures 281, 2023, 107033.
- S. Sysala, E. Hruběšová, Z. Michalec, F. Tschuchnigg: [Optimization and variational principles for the shear strength reduction method](#). International Journal for Numerical and Analytical Methods in Geomechanics 45, 2021, pages 2388-2407.
- Z. Michalec, R. Blaheta, M. Hasal, T. Ligurský: *Fully coupled thermo-hydro-mechanical model with oversaturation and its validation to experimental data from FEBEX experiment*. International Journal of Rock Mechanics and Mining Sciences 139, 2021, 104567. DOI: [10.1016/j.ijrmms.2020.104567](https://doi.org/10.1016/j.ijrmms.2020.104567) .
- A. Gens, J. Alcoverro, R. Blaheta, M. Hasal, Z. Michalec, Y. Takayama, C. Lee, J. Lee, G. Y. Kim, C.-W. Kuo, W.-J. Kuo, C.-Y. Lin, *HM and THM interactions in bentonite engineered barriers for nuclear waste disposal*. International Journal of Rock Mechanics and Mining Sciences 137, 2021, pages 2388-2407. DOI: [10.1016/j.ijrmms.2020.104572](https://doi.org/10.1016/j.ijrmms.2020.104572)
- A. Millard; N. Mokni, J. Dominique Barnichon, K. Thatcher, A. Bond, A. Fraser-Harris, Ch. Mac Dermott, R. Blaheta, Z. Michalec, M. Hasal, T. S. Nguyen, O. Nasir, R. Fedors, H.Yi, O. Kolditz: *Comparative modelling of laboratory experiments for the hydro-mechanical behaviour of a compacted bentonite-sand mixture*. Environmental Earth Sciences 75, 2016. DOI: [10.1007/s12665-016-6118-z](https://doi.org/10.1007/s12665-016-6118-z)
- A. Millard; N. Mokni, J. Dominique Barnichon, K. Thatcher, A. Bond, A. Fraser-Harris, Ch. Mac Dermott, R. Blaheta, Z. Michalec, M. Hasal, T. S. Nguyen, O. Nasir, R. Fedors, H.Yi, O. Kolditz. *Comparative modelling approaches of hydro-mechanical processes in sealing experiments at the Tournemire*. Environmental Earth Sciences 75, 2016. DOI: [10.1007/s12665-016-6324-8](https://doi.org/10.1007/s12665-016-6324-8)
- B. Taraba, Z. Michalec, V. Michalcová, T. Blejchař, M. Bojko, M. Kozubková.: *CFD simulations of the effect of wind on the spontaneous heating of coal stockpiles*. Fuel 118, 2014, pages 107-112. DOI: [10.1016/j.fuel.2013.10.064](https://doi.org/10.1016/j.fuel.2013.10.064)
- B. Taraba, Z. Michalec: *Effect of longwall face advance rate on spontaneous heating process in the gob area - CFD modeling*. Fuel 90, 2011, pages 2790-2797. DOI: [10.1016/j.fuel.2011.03.033](https://doi.org/10.1016/j.fuel.2011.03.033)

- B. Taraba, V. Slovák, Z. Michalec, J. Chura, A. Taufer: *Development of oxidation heat of the coal left in the mined-out area of a longwall face- modelling using the Fluent software*. Journal of mining and metallurgy44 (1), 2008, pp. 73-81. DOI: [10.2298/JMMB0801073T](https://doi.org/10.2298/JMMB0801073T)

Final reports of international projects:

- A. Millard; N. Mokni, J. Dominique Barnichon, K. Thatcher, A. Bond, A. Fraser-Harris, Ch. Mac Dermott, R. Blaheta, Z. Michalec, M. Hasal, T. S. Nguyen, O. Nasir, R. Fedors, H.Yi, O. Kolditz.*DECOVALEX-2015 Project, Task A, Final Report* .Decovalex 2015.
- A. Gens, J. Alcoverr, R. Blaheta, M. Hasal, Z. Michalec, Y. Takayama, C. Lee, J. Lee, G. Y. Kim, C.-W. Kuo, W.-J. Kuo, C.-Y. Lin, *DECOVALEX-2019. Task D: INBEB*. Final Report. LBNL-2001267, Lawrence National Berkeley Laboratory (2020)
https://drive.google.com/file/d/1LI8vKz_3D7TuINQu9t6HyAWhLxBLx_ug/view
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