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Address (work): Civil Engineering Department, Aalto University, Rakentajanaukio 4, Espoo, Finland

Education: PhD (Durham), MEng (Silesian University of Technology)

Languages: English (fluent), German (Zentrale Mittelstufe Prüfung, ZMP), French (B2/B1 level), Finnish (B1/B2), basic Russian

Research interests: Material point method (development, validation, use in geomechanics), constitutive modelling of soils, unsaturated soils – in particular in application for nuclear waste disposal sites, links between soil microstructure and its macroscopic behaviour, stress integration algorithms, computational algorithms, cyclic loading, soil improvement methods, soil dynamics

Other Interests: computers, technology, programming, artificial intelligence, economics, badminton, tennis, bridge, tai-chi.

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<https://solowski.info>



Affiliations

2017 – current Assistant Professor (2), Aalto University, Finland

2014 – 2017 Assistant Professor (1), Aalto University, Finland

2009 – 2014 Research Associate, University of Newcastle, Australia

2005 – 2008 Marie – Curie Early Stage Research Fellow, Durham University, UK.
Research area: constitutive modelling of unsaturated soils, implementation of unsaturated soil models into Finite Element code, stress integration algorithms. Partially responsible for the MUSE project (see <http://muse.dur.ac.uk>) research at Durham University.

- 2005 – 2008 Ph.D student at Durham University, UK. Graduated in 2008, thesis: *Unsaturated Soils: constitutive modelling and explicit stress integration* prepared under supervision of Prof. R.S. Crouch and Dr D. Gallipoli.
- 2002 – 2005 Ph.D. student / Research Assistant, Silesian University of Technology, Gliwice, Poland, Faculty of Civil and Structure Engineering, Group of Geotechnics, supervised by Prof. zw. dr hab. inż. M. Gryczmański. The studies have been suspended because of undertaking Marie-Curie Fellowship at Durham University.

Funding Received

- 2019 – 2024 Euroatom EURAD project. Gas working package, subproject related to simulation of generic waste repository. Total value of the project at least 44,000€, the consortium agreement with final amount (due to some participants dropping out) is being negotiated
- 2015-2019 Finnish Academy project dealing with modelling of landslides with Generalized Interpolation Material Point Method. Total cost approximately 590,000 €, from which the Finnish Academy funds approximately 413,000 €. Project involves cooperation with Prof. Minna Karstunen from Chalmers University of Technology, Sweden.
- 2015 – 2018 THEBES project, funded by KYT2018 framework (Finnish Research Programme on Nuclear Waste Management). Total cost in 2015 is 418,000 €, Aalto part is 126,000 €. The currently scheduled funding for Aalto is 428,000 € over the 4 year period, though the budget may be cut each year. KYT2018 use full cost funding, meaning that 70% of the amount is funded by the program.
Project involves 4 participants from Finland (Aalto University, Jyväskylä University, VTT and Numerola Oy), as well as number of international institutions with whom cooperation is likely (UPC BarcelonaTech, Ecole des Ponts ParisTech, Université de Pau et des pays de l'Adour, Georgia Institute of Technology & Texas A&M University)
- 2014 New Professor grant / tenure track grant (Aalto University internal grant).
- 2013 Granted 40,000 computing hours at National Computing Facility in Canberra (INTERSECT SCHEME). Grant title: “Application of the Material Point Method in solving geotechnical engineering problems”

Supervision – doctoral students

At Aalto University the doctoral thesis is scheduled over a period of four years. Typically Aalto doctoral thesis is based on publications. Three quality journal papers are required to start the process related to defending the thesis. The process leading to the formal defence takes usually around 6 months.

2015-2019	Quoc Anh TRAN – Thesis title: “Material Point Method: algorithm development and application to landslide modelling” (defence date 29th Nov 2019)
2017 onwards	SeyedMohammadJavad SEYEDAN. Area: simulation of granular flows with the Material Point Method
2018 onwards	Tito ADIBASKORO (co-supervisor). Area: simulation of wood behaviour under high temperature, including cracking, with the Material Point Method

Supervision – Master degree students

2019	Mikko TUOHINO. Thesis title: “Application of the NTNU Frozen and Unfrozen Soil model to modelling effects of freeze-thaw on low-traffic-volume roads”
2019	Jonas VAN DAMME. Thesis title: “Numerical studies of a high-cycle accumulation model for sand” (final project, visiting student from Ghent University)
2018	Michael SANDELIN “Evaluation of dynamic compaction method and rapid impact compaction method for soil improvement”
2018	Maria CONTI “Development and validation of the pore pressure oedometer device” (final project, visiting student from Politecnico di Milano)
2017	Richard PORTE. Thesis title: “Calibration of parameters for constitutive modelling of MX-80 bentonite” (final project, visiting student from Politecnico di Milano)

Teaching

Responsible teacher:

Responsible teacher is given overall responsibility for the course design, lectures and exercises.

2016 onwards	Finite Element Method GEO-E1050, MSc level course
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2015 onwards	Numerical Methods in Geotechnics L GEO-E2020, MSc and doctoral level course
2014 onwards	Advanced Soil Mechanics L GEO-E2010, MSc and doctoral level course
2015	Numerical Methods in Geomechanics Rak-50.3150, replaced by Numerical Methods in Geotechnics L GEO-E2020

Lectures:

2015 onwards	Geology & Geomechanics (single lecture)
2014 – 2015	European Mining Course (EMC), geotechnical part (~ 9h lectures, 3h exercises)

Exercises:

2014-2015	Selected exercises in EMC course
2009 – 2011	Tutoring: CIVL 3280 Geomechanics II (group size 120+).
2009	Tutoring: CIVL 2280 Geomechanics I
2005 – 2007	Demonstrating: Light Mechanics Laboratory
2003 & 2005	Design exercises: Design of piles.
2002 – 2004	Design exercises: Design of foundation
2002 – 2005	Laboratory: ‘Soil Testing’. Two or three groups of students each year. Teaching shared with Dr K. Sternik and Dr M. Łupieżowiec.

Pedagogical Training

25cr (full module) of Aalto University pedagogical training finished:

2016 – 2017	Providing and Utilizing Feedback (5cr)
2015 – 2016	Teaching Practice (5cr)
2015	Course Design (5cr)
2014 – 2015	Learning and Teaching in Higher Education (5cr)
2014	A! Peda Intro Pedagogic course (5cr)

Silesian University of Technology Pedagogical Training:

2003 – 2004	Pedagogic course for academic teachers (full module)
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Other training

I have received many additional training, too many to list every session and course attended. For example, more recent experiences including Aalto leadership programme training, as well as number of courses related to writing grant proposals and writing and presenting research to expert and non-expert audiences. I have also attended great many training sessions and courses related to various subjects ranging from cultural sensitivity to communication with industry to psychology of deal making to fostering entrepreneurship.

Research visits and research cooperation

- 2019 - ongoing Cooperation / co-authorship of a journal review paper with Berzins, Guilkey (University of Utah), Coombs (Durham University), Möller (Delft University), Soga (University of California, Berkeley).
- 2017 (ongoing) Cooperation related to EU grant proposal writing with UPC BarcelonaTech (Alonso and Pinyol), Deltares (Rohe and Martinelli), University of Padova (Ceccato and Simonini), TUHH (Grabe and Chmelnizkij), TU Delft (Hicks and Vardon), Gdańsk University of Technology (Tejchman and Wójcik).
- 2017 (ongoing) Cooperation with the University of Utah, with Martin Berzins and James Guilkey related to research and grant proposal writing
- 2015 (ongoing) Cooperation with Prof. Minna Karstunen, Chalmers, Sweden within the framework of the Finnish Academy project dealing with landslides (2015-2019). Cooperation related to further proposal writing and ongoing research
- 2012 (ongoing) Research visits at Silesian University of Technology in Gliwice, Poland. Cooperation on modelling dynamic soil exchange problems with material point method.
- 2017 Teaching and research visit of Dr Nuria Pinyol from UPC BarcelonaTech. Joint course at Aalto University
- 2016 – 2017 Research Visit of Dr Xiu-juan Yang, from Northwest A&F University, China. Cooperation on testing of bentonite and publications.
- 2016 - 2018 Cooperation with Delft University related to improvement of Material Point Method algorithms and convergence
- 2016 Cooperation with Prof. Vikas Thakur, NTNU, sensitive clay landslides
- 2014 - 2018 Coordinator for the THEBES project. Project involves 4 participants from Finland (Aalto University, Jyväskylän University, VTT and Numerola Oy), as well as number of international institutions with whom cooperation is likely (UPC BarcelonaTech, Ecole des Ponts ParisTech, Université de Pau et des pays de l'Adour, Georgia Institute of Technology & Texas A&M University)
- 2014-2015 Cooperation with Prof. Scott Sloan, Newcastle University, Newcastle, Australia
- 2011 – 2014 Cooperation with the University of Western Australia on the Material Point Method and the Uintah code development.

- December 2008 Research visit at the Innsbruck University. Collaboration with Dr M. Hofmann and Prof. G. Hofstetter on comparison of implicit and explicit stress integration algorithms for Barcelona Basic Model. 3-17 December 2008, Innsbruck, Austria.
- April 2008 Research visit at Trento University. Collaboration with Dr A. Tarantino (constitutive modelling) and Mr M. Hofmann (implicit and explicit stress integration). 8-23 April 2008, Trento, Italy.

International recognition (selected)

- 2019 plenary lecture at 32nd Nordic Seminar on Computational Mechanics
“Material Point Method: past and the future”
- 2019 keynote / plenary lecture at the International Conference on the Material
Point Method for Modelling Soil-Water-Structure Interaction
“Accuracy, errors and convergence of MPM”
- 2019 Commissioned review paper at Advances in Applied Mechanics on the
Material Point Method. Arranged co-authorship with leading researchers
in the field.
- continuing Regular reviewer for many international journals including: Computers
& Geotechnics, Geotechnique, Computers & Structures and Canadian
Geotechnical Journal.
- 2015 onwards Member of International Society for Soil Mechanics and Geotechnical
Engineering Technical Committee 106 on Unsaturated Soils
- 2013 Invited paper – UNSAT 2014 conference in Sydney
- 2012 Invited paper – International Journal of Geomechanics

Selected Organizational tasks

- 2019 onwards Director of the Geoengineering MSc programme at Aalto University
- 2017 onwards Member of the Research Ethics Committee at Aalto University
- 2015 onwards Deputy director of the European Mining Programme at Aalto University
- 2019 - 2020 Member of organising committee of the 14th Baltic Sea Geotechnical
Conference 2020 in Helsinki
- 2018 Member of the task group designing the curriculum of “Computational
Engineering” BSc programme at Aalto University

Publications

It must be noted that the databases are always lagging behind the real performance and for such a relatively new person in research like me are not fully objective as a comparison tool. As for 30th Dec 2019, Scopus database registered 167 citations of papers I co-authored giving approximately 5 citations per registered document. Of course, the oldest papers attracted most citations, mostly because in civil engineering it takes a long time to apply new development in research and publish. Those highest cited paper were published in 2010 and attracted 41, while the second highest cited was published in 2015 and attracted 30 citations (Scopus data).

The most recent database of my publications can be found here:

https://people.aalto.fi/en/wojciech_solowski#publications

Peer-reviewed journal papers:

1. Tran, QA & Sołowski, WT 2019, 'Temporal and Null-space filter for the Material Point Method' International Journal for Numerical Methods in Engineering. <https://doi.org/10.1002/nme.6138>
2. Seyedan, S & Sołowski, WT 2019, 'Enhancing Constitutive Models for Soils: Adding the Capability to Model Nonlinear Small Strain in Shear' Advances in Civil Engineering, vol. 2019, 6016350. <https://doi.org/10.1155/2019/6016350>
3. Tran, Q & Sołowski, WT 2019, 'Generalized Interpolation Material Point Method modelling of large deformation problems including strain-rate effects – Application to penetration and progressive failure problems' Computers and Geotechnics, vol. 106, pp. 249-265. <https://doi.org/10.1016/j.compgeo.2018.10.020>
4. Abed, A & Sołowski, WT 2019, 'Applications of a New THMC Coupled Code “Thebes”' Environmental Geotechnics . <https://doi.org/10.1680/jenge.18.00083>
5. Abed, AA & Sołowski, WT 2017, 'A study on how to couple thermo-hydro-mechanical behaviour of unsaturated soils: Physical equations, numerical implementation and examples' Computers and Geotechnics, vol. 92, pp. 132-155. <https://doi.org/10.1016/j.compgeo.2017.07.021>
6. Sołowski W.T., Sloan S.W. (2016) Explicit stress integration with streamlined drift reduction. Advances in Engineering Software. 99, p. 189-198 10 p.
7. D’Onza F., Wheeler S.J., Gallipoli D., Barrera Bucio M., Hofmann M., Lloret Cabot M., Mancuso C., Pereira J.-M., Sánchez M., Solowski W., Tarantino A., Toll D.G., Vassallo R. (2015) Benchmarking selection of parameter values for the Barcelona Basic Model. ENGINEERING GEOLOGY. 196, p. 99-118 20 p.
8. Sołowski W.T., Sloan S.W. (2015) Evaluation of Material Point Method for use in geotechnics. International Journal of Numerical and Analytical Methods in Geomechanics, 39 (7).

9. Sołowski W.T., Sloan S.W. (2015) Equivalent stress approach in creation of elasto-plastic constitutive models for unsaturated soils, *International Journal of Geomechanics*, 15(2), 04014041.
10. Sołowski W.T., Sloan S.W. (2014). Material point method modelling of granular flow in inclined channels. *Applied Mechanics and Materials*, Vol. 553, pp. 501-506.
11. Sołowski W.T., Hofmann M., Hofstetter G., Sheng D., Sloan S.W. (2012). A comparative study of stress integration methods for the Barcelona Basic Model, *Computers & Geotechnics* 44:22-33. *Computers and Geotechnics*, 37(1-2), 59-67.
12. Solowski W.T., Sloan S.W. (2012). Equivalent stress approach in modelling unsaturated soils. *International Journal for Numerical and Analytical Methods in Geomechanics*. 36:1667–1681 DOI:10.1002/nag.1077
13. Sołowski WT, Gallipoli D. (2010). Explicit stress integration with error control for the Barcelona Basic Model Part I: Algorithms formulations. *Computers and Geotechnics*, 37(1-2), 59-67.
14. Sołowski WT, Gallipoli D. (2010). Explicit stress integration with error control for the Barcelona Basic Model Part II: Algorithms efficiency and accuracy. *Computers and Geotechnics*, 37(1-2), 68-81.

Other peer-reviewed publications:

1. Tran, Q, Berzins, M & Sołowski, WT 2019, An improved moving least squares method for the Material Point Method. in D Liang, K Kumar & A Rohe (eds), *Proceedings of the 2nd International Conference on the Material Point Method for Modelling Soil-Water-Structure Interaction (MPM 2019)*., mpm2019.06, International Conference on the Material Point Method for Modelling Soil-Water-Structure Interaction, Cambridge, United Kingdom, 08/01/2019.
2. Seyedan, S & Sołowski, WT 2019, Continuum modelling of the granular flows in gaseous states using material point method. in D Liang, K Kumar & A Rohe (eds), *Proceedings of the 2nd International Conference on the Material Point Method for Modelling Soil-Water-Structure Interaction (MPM 2019)*., mpm2019.25, International Conference on the Material Point Method for Modelling Soil-Water-Structure Interaction, Cambridge, United Kingdom, 08/01/2019.
3. Lei, X & Sołowski, WT 2019, MPM Simulation of fine particle migration process within unsaturated soils. in D Liang, K Kumar & A Rohe (eds), *Proceedings of the 2nd International Conference on the Material Point Method for Modelling Soil-Water-Structure Interaction (MPM 2019)*., mpm2019.21, International Conference on the Material Point Method for Modelling Soil-Water-Structure Interaction, Cambridge, United Kingdom, 08/01/2019.
4. Tran, Q, Wobbes, E, Sołowski, WT, Möller, M & Vuik, C 2019, Moving least squares reconstruction for B-spline Material Point Method. in D Liang, K Kumar & A Rohe (eds), *Proceedings of the 2nd International Conference on the Material Point Method for Modelling Soil-Water-Structure Interaction*., mpm2019.07, International Conference

on the Material Point Method for Modelling Soil-Water-Structure Interaction, Cambridge, United Kingdom, 08/01/2019.

5. Seyedan, S & Sołowski, WT 2018, A coupled constitutive model for modelling small strain behaviour of soils. in Numerical Methods in Geotechnical Engineering IX. vol. 1, pp. 637-642, European Conference on Numerical Methods in Geotechnical Engineering, Porto, Portugal, 25/06/2018.
6. Yang, X, Sołowski, WT, Fan, H & Dang, J 2018, Experimental Study on Effects of NaCl Solutions on Soil-Water Characteristic Curves of Expansive Soil. in Proceedings of China-Europe Conference on Geotechnical Engineering: Volume 2. vol. 2, Springer Series in Geomechanics and Geoengineering, pp. 1328-1331, China-Europe Conference on Geotechnical Engineering, Vienna, Austria, 13/08/2018. https://doi.org/10.1007/978-3-319-97115-5_94
7. Abed, A, Sołowski, WT, Romero, E & Gens, A 2018, Inclusion of chemical effect in a fully coupled THM finite element code. in C Ng, A Leung, A Chiu & C Zhou (eds), Unsaturated Soils. vol. 2, The Hong Kong University of Science and Technology, Hong Kong, pp. 827-832, International Conference on Unsaturated Soils, Hong Kong, Hong Kong, 03/08/2018.
8. Abed, AA & Solowski, WT 2018, Material Microstructure Effects in Thermo-Hydro-Mechanical Modelling of Bentonite. in LR Hoyos, JS McCartney, SL Houston & WJ Likos (eds), PANAM UNSATURATED SOILS 2017: FUNDAMENTALS. Geotechnical Special Publication, no. 301, pp. 330-339, Pan-American Conference on Unsaturated Soils, Dallas, United States, 12/11/2017. <https://doi.org/10.1061/9780784481684.034>
9. Tran, Q, Sołowski, WT & Cummings, E 2017, HYDRO-MECHANICAL COUPLED DUAL DOMAIN MATERIAL POINT METHOD STABILIZED WITH A NULL-SPACE FILTER. in P Wriggers, M Bischoff, E Onate, DRJ Owen & T Zohdi (eds), 5th International Conference on Particle-Based Methods - Fundamentals and Applications, PARTICLES 2017. International Center for Numerical Methods in Engineering (CIMNE), pp. 659-669, International Conference on Particle-Based Methods, Hannover, Germany, 26/09/2017.
10. Seyedan, S & Sołowski, WT 2017, ESTIMATION OF GRANULAR FLOW IMPACT FORCE ON RIGID WALL USING MATERIAL POINT METHOD. in P Wriggers, M Bischoff, E Oñate, DRJ Owen & T Zohdi (eds), 5th International Conference on Particle-Based Methods - Fundamentals and Applications, PARTICLES 2017. International Center for Numerical Methods in Engineering (CIMNE), pp. 648-658, International Conference on Particle-Based Methods, Hannover, Germany, 26/09/2017.
11. Tran, Q, Sołowski, WT, Thakur, V & Karstunen, M 2017, Modelling of the quickness test of sensitive clays using the generalized interpolation material point method. in V Thakur, J-S L'Heureux & A Locat (eds), Landslides in sensitive clays: from research to implementation. Advances in Natural and Technological Hazards Research, vol. 46, pp. 323-336, International Workshop on Landslides in Sensitive Clays, Trondheim, Norway, 12/06/2017. https://doi.org/10.1007/978-3-319-56487-6_29

12. Tran, Q, Sołowski, WT, Karstunen, M & Korkiala-Tanttu, L 2017, 'Modelling of fall-cone tests with strain-rate effects' *Procedia Engineering*, vol. 175, pp. 293-301. <https://doi.org/10.1016/j.proeng.2017.01.029>
13. Kuusela-Lahtinen A, Sinnathamby G, Mendez J, Sołowski WT, Gallipoli D, Pintado X, Korkiala-Tanttu LK. (2016) Estimation of water retention behaviour of MX-80 bentonite partially saturated with saline solution *E3S Web Conf.* 9 11006. DOI: 10.1051/e3sconf/20160911006
14. Abed AA, Laitinen M, Lämsä J, Harjupatana T, Sołowski WT, Kataja M. (2016). Hydro-mechanical modelling of MX-80 bentonite: one dimensional study. *E3S Web Conf.* 9 18005. DOI: 10.1051/e3sconf/20160918005
15. Sołowski W.T., Baroudi D, Ghobakhlou M, Korkiala-Tanttu L.K. (2015) Simulations of Dense Snow Avalanches with Generalized Interpolation Material Point Method: Preliminary Outcomes. *PARTICLES 2015*. CIMNE International Center for Numerical Methods in Engineering, p. 646-656 11 p.
16. Sołowski W.T., Sloan S.W., Wang D. (2015) Material point method simulation of a triaxial shear tests. *IACMAG 2014 - Computer Methods and Recent Advances in Geomechanics*, Oka et al. Eds (Taylor & Francis) ISBN: 978-1-138-00148-0
17. Sołowski W.T., Sloan S.W. Stress integration schemes for unsaturated soils. Invited lecture , *UNSAT 2014 conference in Sydney. Unsaturated Soils: Research & Application*, Khalili et al. Eds (Taylor & Francis), Vol. 1, p. 463-469 7 p. ISBN: 978-1-138-00150-3
18. Sołowski W.T., Sloan S.W., Kanty P.T., Kwiecień S. (2013). Numerical simulation of a small scale dynamic replacement stone column creation experiment. *III International Conference on Particle-based Methods – Fundamentals and Applications PARTICLES 2013* M. Bischoff, E. Oñate, D.R.J. Owen, E. Ramm & P. Wriggers (Eds), 522-533.
19. Sołowski W.T., Sloan S.W. (2013) Modelling of sand column collapse with material point method. Published at *Computational Geomechanics COMGEO 2013 conference in Krakow, Poland* (Pietruszczak & Pande Eds).
20. Sołowski W.T., Sloan S.W. (2012) Elastic or elasto-plastic: examination of certain strain increments in the Barcelona Basic Model. *Second European Conference on Unsaturated Soils E-UNSAT 2012*. in Naples, *Unsaturated Soils: Research and Applications*, Mancuso, Jommi & D'Onza Eds, Vol 2:85-91.
21. Sołowski W.T., Sloan S.W. (2012). Definition of stress in constitutive modelling of partially saturated soils and granular media. In *ESMC-2012 - 8th European Soil Mechanics Conference Graz, Austria, July 9-13 2012. Book of Abstracts*. (Holzapfel & Ogden Eds). ISBN 978-3-85125-223-1.
22. Sołowski, W.T., Sloan S.W. (2011) An equivalent stress implementation of Barcelona Basic Model. *Proceedings of IACMAG 2011 conference in Melbourne, 9-11 May 2011*, Khalili & Oeser (Eds), 638-642.

23. Sołowski W.T., Sheng D., Sloan S.W. (2011) Explicit stress integration with reduced drift for Barcelona Basic Model. Proceedings of the Fifth International conference on unsaturated soils UNSAT 2010 in Barcelona, Unsaturated Soils – Alonso & Gens (Eds.), 1075-1080.
24. Sołowski W.T., Sheng D. (2010). A simple time stepping algorithm for material point method. *Proceedings of the Numerical Methods in Geotechnical Engineering NUMGE 2010 (Benz & Nordal Eds)*. 157-162.
25. Sołowski W.T., Hoffman M., Hofstetter G. (2010). Comparison of explicit and implicit integration schemes for the Barcelona Basic Model. *Proceedings of the 4th Asia – Pacific Conference on Unsaturated Soils (Buzzi, Fityus & Sheng Eds)*, Taylor & Francis: 705-710.
26. Sołowski WT (2008) *Unsaturated Soils: constitutive modelling and explicit stress integration*. PhD Thesis, Durham University, UK
27. Sołowski W.T., Crouch R.S., Gallipoli D. (2008) A multi-cell extension to the Barcelona Basic Model. *Unsaturated Soils: Advances in Geo-Engineering Proceedings of First European Conference on Unsaturated Soils E-UNSAT 2008 (Toll et al. Eds)*, Taylor & Francis:727- 733.
28. Sołowski W.T., Gallipoli D. (2007) Numerical integration of elasto-plastic constitutive models using the extrapolation method. In: *Proceedings of the NUMOG X conference. Rhodes. Greece, 25-27 April 2007*, Taylor & Francis:211-217.
29. Sołowski W.T., Gallipoli D. (2006) A stress-strain integration algorithm for unsaturated soil elastoplasticity with automatic error control. In: *Numerical Methods in Geotechnical Engineering – Schweiger (ed.)*. *Proceedings of the 6th European conference on numerical methods in geotechnical engineering, Graz, Austria, 6–8 September 2006*. Taylor & Francis:113-119.
30. Sołowski, W, Gallipoli, D. (2006) Development of finite element code for unsaturated soils. In: *proceedings from the 19th Workshop of Marie Curie Fellows: Research Training in Progress. Making Europe more Attractive for Researchers. Pisa/Livorno (Italy), 28-30 September, 2005. Edited by European Commission - Directorate-General for Research*. EUR 22022. ISSN 1018-5593.
31. Sołowski W.T. (2004) Influence of soil nonlinearity in small strain range on the behaviour of concrete floor slabs (in Polish). *Materiały V Konferencji Naukowej Doktorantów Wydziałów Budownictwa, Zeszyty Naukowe Politechniki Śląskiej, z.102*, Gliwice, Poland.
32. Gryczmański M., Sołowski W.T. (2004) Soil – concrete floor system under moving loads (in Polish). *Materiały II Problemowej Konferencji Geotechniki „Współpraca Budowli z Podłożem”, t. 1*, Białowieża, Poland.

33. Sołowski W.T. (2003) Numerical Modelling of the nonlinear soil – concrete floor interaction (in Polish). *Materiały IV Konferencji Naukowej Doktorantów Wydziałów Budownictwa, Zeszyty Naukowe Politechniki Śląskiej, z. 101*, Gliwice, Poland.
34. Sołowski W.T. (2003) Analysis of a soil – slab-column structure interaction. (in Polish). *Materiały II Ogólnopolskiej Konferencji Młodych Geotechników, Zeszyty Naukowe Politechniki Śląskiej, z. 98*, Gliwice, Poland.

Presentations, posters and non-peer reviewed contributions

1. Sołowski, WT, Tran, Q & Seyedan, S 2018, AN OVERVIEW OF THE MATERIAL POINT METHOD. in C Augarde (ed.), ECCOMAS Newsletter: June 2018. ECCOMAS (The European Community on Computational Methods in Applied Sciences, pp. 16-19.
2. Tran, Q & Sołowski, WT 2017, 'Large strain consolidation modelling using Dual Domain Material Point Method' Paper presented at International Conference of the International Association for Computer Methods and Advances in Geomechanics, Wuhan, China, 19/10/2017 - 23/10/2017, .
3. Abed, A & Sołowski, WT 2017, 'Validation of a Fully Coupled THM Finite Element Code: Simulation of CIEMAT Mock-Up Test' Paper presented at International Conference of the International Association for Computer Methods and Advances in Geomechanics, Wuhan, China, 19/10/2017 - 23/10/2017, .
4. Sołowski W.T. (2011- 2014) – presentations at annual ARC Centre of Excellence meetings. Presentations describe advances in the Material Point Method and its use for moving boundary problems (one of the core task of the Centre)
5. Sołowski W.T., Sloan S.W. (2011). Accuracy comparison of Material Point Method with Gimp and cpdi interpolation with known numerical and analytical solutions for geotechnical problems. Abstract only. Particles 2011, II International Conference on Particle-based Methods, Fundamentals and Applications, Barcelona, Spain, 26-28 Oct 2011.
6. Sołowski W.T. (2011) Comparison of various modelling techniques in the Material Point Method. Presentation at the Centre of Excellence meeting, February 2011, University of Newcastle, Australia
7. Sołowski W.T., Sheng D. (2010) Material point method algorithm with automatic time stepping and error control for elastic problems. 9th World Congress on Computational Mechanics and 4th Asian-Pacific Congress on Computational Mechanics WCCM 2010, 19-23 July 2010, Sydney, Australian.
8. Sołowski W.T., Crouch R.S., Gallipoli D. (2007) A simple constitutive model for unsaturated soil with respect to fabric microstructure. Poster on the ALERT geomaterials workshop in Aussois, France.
9. Sołowski W.T., Crouch R.S., Gallipoli D. (2007) Explicit stresss integration algorithms. Research Day poster and presentation. 25 June 2007, Durham, UK.

10. Sołowski W.T., Gallipoli D. (2007) Explicit Runge-Kutta stress integration of the BBM. Presentation during MUSE Workshop, 17-18 May 2007, Naples, Italy
11. Sołowski W.T., Gallipoli D. (2006) A stress-strain integration algorithm for unsaturated soil elastoplasticity with automatic error control. Research Day poster and presentation. 26 June 2006, Durham, UK.
12. Sołowski W.T., Gallipoli D. (2006) An integration algorithm for the BBM with automatic error control. Presentation during MUSE Workshop, 15-16 May 2006, Paris, France.
13. Sołowski W.T., Gallipoli D. (2005) Outline of development of finite element code for unsaturated soils. Research Day presentation. 24 June 2006, Durham, UK.
14. Sołowski W.T., Gryczmanski M. (2005) An outline of a simple critical state soil model with compaction and small strain capabilities. Presentation during MUSE Workshop, 28-29 June 2005, Barcelona, Spain.