

Ayman A. Abed

Curriculum Vitae

Chalmers University of Technology
Department of Architecture and Civil Engineering, Division of Geology and Geotechnics
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PERSONAL INFORMATION

- Date of Birth: 6th June 1976
- Nationality: Syrian
- Marital status: Married
Children: Jürgen (born 2017) and Oleg (born 2023)



WORK EXPERIENCE

2020-Now	Chalmers University of Technology, Gothenburg, Sweden Senior Lecturer, Geotechnical Engineering
2015-2020	Aalto University, Espoo, Finland Postdoctoral Researcher
2013-2015	WESI Geotecnica Srl, Genoa, Italy Researcher & Lead Numerical Analyst
2011-2013	Wadi International University, Homs, Syria Lecturer, Civil/Geotechnical Engineering
2004-2008	Stuttgart University, Germany Scientific Assistant, Geotechnical Engineering
1999-2003	Al-Baath University, Homs, Syria Scientific Assistant, Geotechnical Engineering

INTERNATIONAL EXCHANGE

January 2017	Polytechnic University of Catalonia, Barcelona, Spain Guest Researcher, Geotechnical Engineering
January 2016	Polytechnic University of Catalonia, Barcelona, Spain Guest Researcher, Geotechnical Engineering

EDUCATIONAL QUALIFICATIONS

2004-2008	Stuttgart University, Stuttgart, Germany Doctoral degree in Geotechnical Engineering Supervisor: Pieter A. Vermeer Co-supervisor: Antonio Gens
2001-2003	Al-Baath University, Homs, Syria MSc. in Geotechnical Engineering
1999-2001	Al-Baath University, Homs, Syria Diploma in Geotechnical Engineering
1993-1998	Al-Baath University, Homs, Syria BSc. in Civil Engineering

RESEARCH GRANTS

Funder	Grant No.	Duration	Total budget	PI	Role	Project title
Formas	2024-02432	2025-2029	5 999 kSEK	Minna Karstunen	Co-PI, researcher, PhD supervision	Impact of extreme weather events on the erosion and failure of natural slopes
VR	2024-04672	2025-2028	4 000 kSEK	Minna Karstunen	Co-PI, researcher and PhD supervision	Creeping to failure – triggering of shallow landslides in sensitive clays
Trafikverket	2024/27461	2024-2026	2 500 kSEK	Minna Karstunen	Co-PI, research and PhD supervision	System response of lime-cement columns
Trafikverket	2020/54637	2023-2025	3 638 kSEK	Minna Karstunen	Co-PI, research and PhD supervision	Modellering av tidsberoende grundvattensänkning, markdeformationer och dess skaderisker – del 2
Formas	2021-02400	2021-2025	7 997 kSEK	Minna Karstunen	Co-PI, researcher, PhD and PostDoc supervision	Quantification of the impact of climate change on the built environment at regional scale
Trafikverket	2022/69758	2022–2024	1 000 kSEK	Hjördis Löfroth	Co-PI, researcher	Långsamma skred i silt (Slow landslides in layered silty soil: Preliminary study)
Trafikverket	2303-0388	2024-2026	2 000 kSEK	Jonas Sundell	Co-PI, researcher	Landslide risk assessment with hydrogeological and geotechnical modelling
Euroatom		2019-2024	44,000€ (ca. 500 kSEK)	Wojciech Sołowski	Co-PI, researcher	EURAD project. Gas working package, subproject related to simulation of generic waste repository

RESEARCH & DEVELOPMENT PROJECTS WITH MAJOR CONTRIBUTION

- **After joining Chalmers University of Technology**

Funder	Duration	Role	Project title
Vinnova	2025-2029	Researcher	Digital Twin Cities Centre (DTCC)- Part 2
Vinnova	2020-2025	Researcher	Digital Twin Cities Centre (DTCC)- Part 1
Trafikverket	2021-2024	Researcher	Rate-dependent response of excavations and permanent underground structures
Trafikverket	2020-2023	Researcher and PhD supervision	Modellering av tidsberoende grundvattensänkning, markdeformationer och dess skaderisker
Trafikverket	2020-2023	Researcher and PhD supervision	BIG A2020-09 Förenklade stabilitetsanalyser i ett förändrat klimat
Trafikverket	2020-2023	Researcher and PhD supervision	Djupstabilisering i stadsmiljö
Formas	2020-2023	Researcher and PhD supervision	Efficient computational modelling for sustainable use of deep mixing in urban environment

- **Before joining Chalmers University of Technology**

Funder	Duration	Role	Project title
EU	2019-2024	Co-PI, researcher and PhD supervision	<u>EURAD: European Joint Research Programme on Radioactive Waste Management</u>
Finnish Research Programme on Nuclear Waste Management (KYT)	2015-2018	Research and PhD supervision	<u>THEBES: THMC Behaviour of the Swelling Clay Barriers (bentonite)</u>
Opera della Primaziale Pisana - Italy	2013-2015	Researcher	<u>THE LEANING TOWER OF PISA</u>

EU	2013-2015	Researcher	<u>COGAN</u> : Competency in Geotechnical ANalysis
EU	2013-2015	Researcher	<u>DAS-NAG</u> : Data Acquisition System and Numerical Analysis for Geotechnics

SUPERVISION EXPERIENCE

- **Postdoc**
 1. 2023 – Now, Chalmers (Sweden) Dr. Xiaoyang Cheng My role: Main supervisor
- **Doctoral theses**
 1. 2022-Now, Chalmers (Sweden) Muratova, Kseniia My role: Co-supervisor
 2. 2022-2023, Chalmers (Sweden) Sellin, Carolina My role: Main supervisor
Title: On modelling of slope stability in sensitive clay.
 3. 2020-Now, Chalmers (Sweden) Bozkurt, Sinem My role: Co-supervisor
 4. 2020-Now, Chalmers (Sweden) Wikby, Pierre My role: Co-supervisor
 5. 2020-Now, Aalto University (Finland) Gupta, Abhishek My role: Co-supervisor
 6. 2020-2022, Chalmers (Sweden) Sellin, Carolina My role: Co-supervisor
 7. 2017-2019, Aalto University (Finland) Ghobakhlou, Mojtaba My role: Co-supervisor
- **Master's degree projects**
 1. 2024, Chalmers (Sweden), Paulsson, Måns; Trapp, Marcus: Land subsidence caused by pore pressure reduction due to a local groundwater extraction: A study on modelling approaches to predict and describe land subsidence caused by a local groundwater extraction.
 2. 2024, Chalmers (Sweden), Einarsdóttir Björk, Jóna: Evaluating the safety factor for slope stability under freeze-thawing cycles.
 3. 2024, Chalmers (Sweden), Shanka, Akshaya: Effect of the soil water characteristic curve on the stability of partially saturated slopes.
2024, Chalmers (Sweden), Alzaki, Zaki; Asad, Muhammad: Effect of cyclic loading on stiffness degradation of Lime cement mixed clays for railway embankment.
 4. 2023, Chalmers (Sweden), Sjöbeck, Gustav: On the Feasibility of Slope Stability Analysis during Freezing and Thawing.
 5. 2022, Chalmers (Sweden), Ghaffarian Mahdoodi, Mostafa; Mathew, Sion: Analysis of force and strain distribution in soil and concrete tunnel due to a planar rock movement.
 6. 2022, Chalmers (Sweden), Alasfar, Iyas: A numerical study on the thermo-mechanical behaviour of Gothenburg clay.
 7. 2022, Chalmers (Sweden), Brandell, Tobias; Sellén, Albin: The Effects of Severe Rainfall on the Stability of Natural Slopes A numerical analysis of a slope in Hjärtum – Lilla Edet.
 8. 2022, Chalmers (Sweden), Olofsson Hoffmann, Kristin; Höjer, Elin: Effects of Lime-Cement Column Characteristics on the Performance of an Embankment on Soft Clay - An Analysis Using Volume Averaging Technique in Plaxis 2D.
 9. 2021, Chalmers (Sweden), Wahlgren, Leo; Prahl Blackby, Viktoria: Settlement analysis and environmental assessment of deep mixing binders: A Plaxis 2D study with Volume Averaging Technique.
 10. 2021, Chalmers (Sweden), Ögger, Frida; Johansson, Linnea: Comparison of Modelling Strategies for Ground Settlements due to Groundwater Drawdown Multi-criteria analysis for comparison of three software packages.
 11. 2021, Chalmers (Sweden), Kindberg, Alfred: On Settlements in Urban Areas with Soft Clay - As a result of leakage to deep excavations via an underlying permeable layer.
 12. 2019, Aalto University (Finland), Mikko Tuohino: Application of the NTNU Frozen and Unfrozen Soil model to modelling effects of freeze-thaw on low traffic volume roads.
 13. 2019, Aalto University (Finland) and Universiteit Gent (Belgium), Jonas van Damme: Numerical studies of a high-cycle accumulation model for sand.
 14. 2017, Aalto University (Finland) and Politecnico di Torino (Italy), Richard Porte: Calibration of parameters for constitutive modelling of MX-80 bentonite.
- **Bachelor's degree projects**
 1. 2024, Examensarbete, Chalmers (Sweden), Ella Sjöberg; Bao Kha Tran: Analys av sättningar vid vattenutvinning ur slutna akvifer: Modellering med geostudio

2. 2024, Bachelor thesis, Chalmers (Sweden), Carrin, Albin; Kollberg, Simon; Persson, Linus; Nematollah, Shahrani; Öhgren, Gabriel: *Vad orsakar skred i kvicklera?*
3. 2024, Bachelor thesis, Chalmers (Sweden), Farmanesh, Kiana; Gummesson, Emma; Ryberg, William; Sandberg, Arvid: *Evaluation of quick clay failures and the impact of climate change on slope stability.*
4. 2025, Bachelor thesis, Chalmers (Sweden), Emma Hvidberg, Linnéa Lagerlöf, Cornelia Råsbäck, Ludvig Wahlquist: Klimatförändringars inverkan på släntstabilitet: En analys av slänter vid Göta älv och Ångermanälven.
5. 2025, Bachelor thesis, Chalmers (Sweden), Oskar Ahlgren, Sofia Björkman, Alexandros Pardali Moustakas, Filippa Stridsman: Klimatförändringar och dess effekter på stabiliteten för naturliga slänter: En analys av klimatförändringarnas potentiella påverkan på två slänter längs Göta älv.
6. 2025, Bachelor thesis, Chalmers (Sweden), HJALMAR FRISELL, OSKAR KARLSSON, KLARA KLIPPINGER, OMRAN SHATOU: Sättningsprognos för framtida testbank i norra Göteborg: En klass-A prediktion.
7. 2025, Bachelor thesis, Chalmers (Sweden), Mustafa Amira, Ahmad Dawood, Nada Jarbou: Sättningsberäkningar i lös lera: En jämförelse mellan handberäkningar och numeriska modeller.

TEACHING EXPERIENCE

Lecturing (Examiner)

- 2022-Now Chalmers University of Technology, Gothenburg, Sweden
- *Contemporary topics in Geomechanics* (ACE230 – 40 Doctoral & Master level students)
- 2020-Now Chalmers University of Technology, Gothenburg, Sweden
- *Hydrogeology and Geotechnics* (BOM325 & BOM370 – 70 Bachelor students)
- 2011-2013 Wadi International University, Homs, Syria
- *Soil Mechanics* (30 Bachelor students)
 - *Foundation Engineering* (20 Bachelor students)
 - *Geotechnical Engineering Problems* (30 Bachelor students)
 - *Building Materials* (30 Bachelor students)
 - *Descriptive Geometry* (20 Bachelor students)

Lecturing (Teacher)

- 2021-Now Chalmers University of Technology, Gothenburg, Sweden
- *Soil modelling and numerical analyses* (ACE150 – 40 Doctoral & Master level students)

Exercises

- 2017-2020 Aalto University, Espoo, Finland
- *Finite Element Method* (GEO-E1050 - 25 Master level students)
 - *Numerical Methods in Geotechnics* (GEO-E2020 - 15 Doctoral & Master level students)
- 2005-2007 Stuttgart University, Stuttgart, Germany
- *Engineering Materials: Soils* (25 Doctoral & Master level students)
 - *Numerical Modelling of Soils* (10 Doctoral & Master level students)
- 1999-2003 Al-Baath University, Homs, Syria
- *Soil Mechanics* (100 Bachelor students)
 - *Foundation Engineering* (25 Bachelor students)

PEDAGOGICAL COURSES

- 2022 Chalmers University of Technology, Gothenburg, Sweden
Supervising research students (3cr)
- 2021 Chalmers University of Technology, Gothenburg, Sweden
Diversity and inclusion for learning in higher education (2cr)
- 2019 Aalto University, Espoo, Finland
Course Design (5cr)
- 2019 Aalto University, Espoo, Finland
Learning and teaching in higher education (5cr)

MEMBERSHIPS

- Member of the *Sweden's Engineers Union* (2021-Now).
- Member of the *Swedish Geotechnical Society* (2022-Now)
- Member of the *Finnish Geotechnical Society* (2017-2020)
- Member of the *Finnish Union of University Researchers and Teachers* (2017-2019)
- Member of the *Syrian Engineers Association* (1998-Now)

AWARDS

- Student's Pedagogical Prize 'Teacher of the year 23/24' (ÅRETS LÄRARE 23/24) at Civil and Environmental Engineering - Chalmers University of Technology.
- Scott Sloan Best Paper Award 2022 by Computers and Geotechnics.
- Nominated by the students at Chalmers University of Technology - Civil and Environmental Engineering for the Pedagogical Prize 2021/2022.
- Best Student Award (Geotechnical Engineering Division) – Al-Baath University (1997)

PUBLICATIONS LISTS

- **Doctoral thesis**

Abed, A. (2008). *Numerical Modeling of Expansive Soil Behavior*, Institute of Geotechnical Engineering, Stuttgart, Germany.

- **Peer-reviewed journal papers**

1. Carolina Sellin, **Ayman Abed (corresponding author)**, Mats Karlsson, Jelke Dijkstra and Colin C. Smith (2025). Anisotropic strength in discontinuity layout for undrained slope stability analysis. *Canadian Geotechnical Journal*. DOI:[10.1139/cgj-2024-0541](https://doi.org/10.1139/cgj-2024-0541).
2. Sinem Bozkurt, **Ayman Abed**, Minna Karstunen (2025). Homogenisation method for braced excavations with deep-mix columns. *Computers and Geotechnics*. DOI:[10.1016/j.compgeo.2025.107095](https://doi.org/10.1016/j.compgeo.2025.107095).
3. Ezra Haaf, Pierre Wikby, **Ayman Abed**, Jonas Sundell, Eric McGivney, Lars Rosén, and Minna Karstunen (2024). A metamodel for estimating time-dependent groundwater-induced subsidence at large scales. *Engineering Geology*. DOI:[10.1016/j.enggeo.2024.107705](https://doi.org/10.1016/j.enggeo.2024.107705).
4. Pierre Wikby, Ezra Haaf, **Ayman Abed**, Lars Rosén, Jonas Sundell, Minna Karstunen (2024). A grid-based methodology for the assessment of time-dependent building damage at large scale. *Tunnelling and Underground Space Technology*. DOI:[10.1016/j.tust.2024.105788](https://doi.org/10.1016/j.tust.2024.105788).
5. S. Bozkurt, **A. Abed**, M. Karstunen (2023). Finite element analysis for a deep excavation in soft clay supported by lime-cement columns. *Computers and Geotechnics*. DOI: [10.1016/j.compgeo.2023.105687](https://doi.org/10.1016/j.compgeo.2023.105687).
6. A. Gupta, **A. Abed**, W.T. Solowski (2023). Identification of key thermal couplings affecting the bentonite behaviour in a deep geological nuclear waste repository. *Engineering Geology*. DOI: [10.1016/j.enggeo.2023.107251](https://doi.org/10.1016/j.enggeo.2023.107251).
7. X. Pintado, S. Kumpulainen, E. Romero, A. Lloret, R.C. Weber, A. Ferrari, M.V. Villar, **A. Abed**, W. Solowski, V. Heino (2023). Shear strength and shear stiffness analysis of compacted Wyoming-type bentonite. *Geomechanics for Energy and the Environment*, Volume 34. DOI: [10.1016/j.gete.2023.100468](https://doi.org/10.1016/j.gete.2023.100468).
8. Scelsia G., **Abed A.**, Della Vecchia G., Musso G., Solowski W. (2021). Modelling the behaviour of unsaturated non-active clays in saline environment. *Engineering Geology*. DOI:[10.1016/j.enggeo.2021.106441](https://doi.org/10.1016/j.enggeo.2021.106441).
9. Xiaoqin Lei, Siming He, **Ayman Abed**, Xiaoqing Chen, Zongji Yang, Yong Wu. (2021). A generalized interpolation material point method for modelling coupled thermo-hydro-mechanical problems. *Computer Methods in Applied Mechanics and Engineering*. DOI: [10.1016/j.cma.2021.114080](https://doi.org/10.1016/j.cma.2021.114080).
10. **Abed A.**, Korkiala-Tanttu L., Forsman J. and Koivisto K. (2021). 3D Simulations of Deep Mixed Columns under Road Embankment. *Rakenteiden Mekaniikka (Journal of Structural Mechanics)*. DOI: [10.23998/rm.84590](https://doi.org/10.23998/rm.84590)
11. **Abed, A.** & Solowski, W.T. (2020). Finite element method algorithm for geotechnical applications based on Runge-Kutta scheme with automatic error control. *Computers and Geotechnics*. DOI: [10.1016/j.compgeo.2020.103841](https://doi.org/10.1016/j.compgeo.2020.103841).
12. **Abed A.** & Solowski WT (2020). Estimation of water retention behaviour of bentonite based on mineralogy and mercury intrusion porosimetry tests. *Géotechnique*. DOI: [10.1680/jgeot.18.P.220](https://doi.org/10.1680/jgeot.18.P.220).
13. **Abed, A.** & Solowski, W.T. (2019). Applications of the new thermo-hydro-mechanical-chemical coupled code 'Thebes'. *Environmental Geotechnics*. DOI:[10.1680/jenge.18.00083](https://doi.org/10.1680/jenge.18.00083).

14. Squeglia, N., Stacula, S., **Abed, A.**, Benz, T., Leoni, M. (2018). m-PISE A novel numerical procedure for pile installation and soil extraction. Application to the case of Leaning Tower of Pisa. *Computers and Geotechnics* 102, 206-215. DOI: 10.1016/j.compgeo.2018.06.005.
15. **Abed, A.** & Sołowski, W.T. (2017). A study on how to couple thermo-hydro-mechanical behaviour of unsaturated soils: Physical equations, numerical implementation and examples. *Computers and Geotechnics* 92, 132-155. DOI: 10.1016/j.compgeo.2017.07.021.
16. **Abed, A.** & Vermeer, P.A. (2009). Numerical Simulation of Unsaturated Soil Behaviour. *International Journal of Computer Applications in Technology*, 2-12. DOI:10.1504/IJCAT.2009.022697

- **Conference publications**

1. **Ayman Abed** and Minna Karstunen (2025). Integrating soil suction in geotechnical education: a case study on partially saturated slope stability analysis in Sweden. In GEE 2025 - Geotechnical Engineering Education 2025 - International Conference "Charting the path toward the future" organized by TC306 - ISSMGE, Nancy, France.
1. Sinem Bozkurt, **Ayman Abed**, and Minna Karstunen (2024). Alternative ways of modelling stabilised excavations. In *the 19th Nordic Geotechnical Meeting (NGM2024)*, Gothenburg, Sweden.
2. X. Cheng, Y. Li, and M. Karstunen, J. Dijkstra, **A. Abed** (2024). Implementation of a new thermo-viscoplastic soil model using FEniCS platform. In *the 19th Nordic Geotechnical Meeting (NGM2024)*, Gothenburg, Sweden.
3. K. Muratova, **A. Abed**, and M. Karstunen (2024). FEniCS simulation of artesian conditions in clay slope. In *the 19th Nordic Geotechnical Meeting (NGM2024)*, Gothenburg, Sweden.
4. Tornborg, J., Karlsson, M., Kullingsjö, A., **Abed, A.** and Karstunen, M (2024). Generalisation of effective heave pressure considering the effect of small-strain stiffness. In *the 19th Nordic Geotechnical Meeting (NGM2024)*, Gothenburg, Sweden.
5. **A. Abed**, E. Gerolymatou, M. Karstunen (2023). FEniCS simulation of a partially saturated slope under varying environmental loads. 10th European Conference on Numerical Methods in Geotechnical Engineering, London. DOI: 10.53243/NUMGE2023-269
6. A. Gupta, E. Jacobs, **A. Abed**, W.T. Solowski (2023). Finite element modelling of multi-gas flow in expansive clay. 10th European Conference on Numerical Methods in Geotechnical Engineering, London. DOI: 10.53243/NUMGE2023-71
7. S. Bozkurt, **A. Abed**, M. Karstunen (2023). 2D & 3D numerical analyses of a deep excavation supported by LC columns. 10th European Conference on Numerical Methods in Geotechnical Engineering, London. DOI: 10.53243/NUMGE2023-188
8. P. Wikby, **A. Abed**, M. Karlsson, J. Sundell, M. Karstunen (2023). The influence of parameter variability on subsidence. 10th European Conference on Numerical Methods in Geotechnical Engineering, London. DOI: 10.53243/NUMGE2023-325
9. Gramegna, L., **Abed, A.A.**, Sołowski, W.T., Musso, G., Della Vecchia, G. (2023). An Elastoplastic Framework Accounting for Changes in Matric and Osmotic Suction in Unsaturated Non-expansive Clays. In: Ferrari, A., Rosone, M., Ziccarelli, M., Gottardi, G. (eds) *Geotechnical Engineering in the Digital and Technological Innovation Era. CNRIG 2023.* Springer Series in Geomechanics and Geoenvironmental Engineering. Springer, Cham. DOI:10.1007/978-3-031-34761-0_38
10. **Ayman Abed** & Minna Karstunen (2023). Using volume averaging technique for modelling of deep mixing. *NUMERICAL ANALYSIS OF GEOMATERIALS Symposium dedicated to the memory of Prof. G.N. Pande*, Assisi, Italy.
11. Liliana Gramegna, **Ayman A. Abed**, Wojciech T. Sołowski, Guido Musso, Gabriele Della Vecchia (2023). A constitutive framework for the chemo-mechanical behaviour of unsaturated non-expansive clays. *8th International Conference on Unsaturated Soils (UNSAT 2023)*. Greece. E3S Web of Conf. 382 02005 (2023). DOI: 10.1051/e3sconf/202338215004
12. Abhishek Gupta, **Ayman Abed**, Wojciech T. Sołowski (2023). Implementation and validation of pressure-dependent gas permeability model for bentonite in FEM code Thebes. *8th International Conference on Unsaturated Soils (UNSAT 2023)*. Greece. E3S Web of Conf. 382 02005 (2023). DOI: 10.1051/e3sconf/202338202005
13. Gupta, A., **Abed, A.**, Sołowski, W. (2021). Analysis of key thermal coupled factors in modelling of bentonite barriers. *Third International Symposium on Coupled Phenomena in Environmental.* Japan. DOI: 10.3208/jgssp.v09.cpeg148.
14. Tuohino, M., Sołowski, W., **Abed, A.**, Koivisto, K. and Lei, X. (2021) Application of the Frozen and Unfrozen Soil model to modelling effects of freeze-thaw on low-volume roads. *NGM 2020*, Helsinki, Finland. DOI:10.1088/1755-1315/710/1/012067.
15. **Abed, A.** & Sołowski, WT (2020). Modelling of unsaturated gas flow by Thebes code: Validation tests. *E-Unsat 2020*, Lisbon, Portugal. DOI: 10.1051/e3sconf/202019502005

16. **Abed, A.** & Solowski, WT (2019). Simulation of swelling pressure evolution during infiltration in a bentonite block-pellet laboratory scale test. *7th Asia-Pacific Conference on Unsaturated Soils*, Japanese Geotechnical Society (JGS), Nagoya, Japan. DOI:10.3208/jgssp.v07.052.
 17. **Abed, A.**, Solowski, T., Romero, E., Gens, A. (2018). Inclusion of chemical effect in a fully coupled THM finite element code. *UNSAT2018 (The 7th International Conference on Unsaturated Soils)*, Hong Kong.
 18. **Abed, A.** & Solowski, W.T. (2017). Validation of a Fully Coupled THM Finite Element Code: Simulation of CIEMAT Mock-Up Test. *The 15th International Conference of the International Association for Computer Methods and Advances in Geomechanics*, Wuhan, China.
 19. **Abed, A.** & Solowski, W.T. (2017). Material Microstructure effects in Thermo-Hydro-Mechanical Modelling of Bentonite. *PanAM 2017*, Dallas, Texas, USA. DOI: 10.1061/9780784481684.034.
 20. **Abed, A.**, Laitinen, M., Lämsä, J., Harjupatana, T., Solowski, W., Kataja M. (2016): Hydro-mechanical modelling of MX-80 bentonite: one dimensional study. *E-Unsat 2016*, Paris. DOI: 10.1051/e3sconf/20160918005.
 21. Leoni, L., **Abed A.**, Leoni, M., d'Attoli, M., Occhi, M., Siano, P. (2015). Finite Element Modelling of Resin Improved Swelling Soil Based on ERT. *Near Surface Geoscience 2015 - 21st European Meeting of Environmental and Engineering Geophysics*. Turino, Italy. DOI: 10.3997/2214-4609.201413791.
 22. **Abed, A.**, Carbonella, R., Cenni, G., Franceschini, M., Leoni, M., Leoni, L., Pancaldi, D. (2015). Stabilizzazione di terreni argillosi in regime parzialmente saturo: analisi numerica del sistema di consolidamento HBC 2015 in 5° IAGIG Incontro Annuale dei Giovani Ingegneri Geotecnici (COMITATO ORGANIZZATORE IAGIG). Rome, Italy.
 23. **Abed, A.** & Vermeer, P. A. (2006). Foundation analyses with unsaturated soil model for different suction profiles. *Proc. NUMGE 06*, Graz, Austria.
 24. **Abed, A.** & Vermeer, P. A. (2006). Numerical Simulation of Unsaturated Soil Behaviour. *First Euro Mediterranean Symposium on Advances in Geomaterials and Structures*, Tunisia.
- **Bulletins**
 1. **Abed, A.** (2007). Numerical simulation of a trial wall on expansive soil in Sudan. *Plaxis Bulletin No.21*, 14-18.
 - **Technical reports**
 1. Långsamma skred i skiktad siltig jord (2024). Förstudie – BIG A2022-01.
 2. Väyläviraston ohjeita 35/2020 (2020) Tie- ja rataleikkausten suunnitteluohje. Finnish Transport Agency.
 3. **Abed, A.**, Korkiala-Tanttu, L. (2018). Stability analysis for road-cutting Review, recommendations and examples. Finnish Transport Agency, Engineering and Environment. Helsinki 2018. Research reports of the Finnish Transport Agency 49/2018. 59 pages and 2 appendices. ISSN-L 1798-6656, ISSN 1798-6664, ISBN 978-952-317-608-9.
 4. **Abed, A.**, Korkiala-Tanttu, L., Forsman, J. (2018). 3D Stress distribution modelling of deep mixing columns-Part II. Internal report, Aalto University. DOI: 10.13140/RG.2.2.35120.38400
 5. **Abed, A.**, Korkiala-Tanttu, L., Forsman, J. (2017). 3D Stress distribution modelling of deep mixing columns-Part I. Internal report, Aalto University. DOI: 10.13140/RG.2.2.31764.94084
 6. Statibi, S., Leoni, M., **Abed, A.**, & Vermeer, P.A. (2007). FE Simulation of Installation and Loading of a Tube-Installed Pile, Institute of Geotechnical Engineering, Stuttgart.

SUMMARY OF BIBLIOMETRIC INFORMATION

- Total number of citations of the peer-reviewed original articles: 235 (June 26, 2025)
- H index: 7
- The database used for the above citation data: **Scopus**
- It should be emphasized that databases frequently fall behind real-time performance. For example, as of June 26, 2025, the **Google Scholar** database reported 399 citations for publications I co-authored, with H index of 10.

Attachments

Pedagogiska Priset

23/24

Ayman Abed

Ayman consistently creates a welcoming and inclusive environment where questions are not just encouraged but embraced. His patience in explaining concepts ensures that every student comprehends the material, fostering a supportive learning atmosphere.

Ayman's enthusiasm and expertise shine through in every lecture and exercise. He is dedicated to ensure that no one is left behind during lectures, especially in exercises. Ayman's ability to strike a balance between inspiring lectures and ensuring understanding is truly remarkable.

ELSEVIER

Computers and Geotechnics

Scott Sloan Best Paper Award 2022

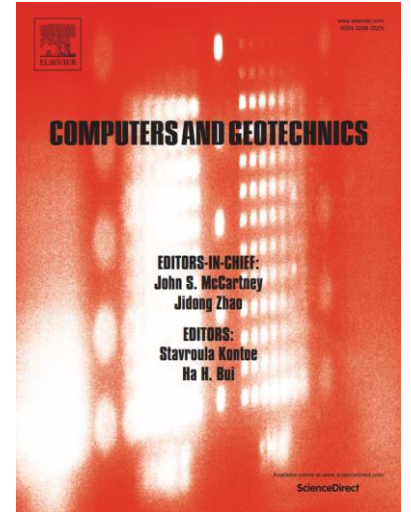
Awarded to:

Ayman A. Abed and Wojciech T. Sołowski

For the paper:

A study on how to couple thermo-hydro-mechanical behaviour of unsaturated soils: Physical equations, numerical implementation and examples

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