Leon van Paassen –Curiculum vitae

Affiliation
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Biosketch
Leon van Paassen is Associate Professor at Arizona State University (ASU) and Senior Investigator at the NSF Engineering Research Centre for Bio-mediated and Bio-inspired Geotechnics (CBBG). He received an MSc in Applied Earth Sciences in 2002 from Delft University of Technology with a specialisation in Engineering Geology. During and after his graduation he worked several years as a geotechnical engineering consultant at IFCO Foundation Expertise and at research institute Deltares. In 2009 he obtained his PhD from the Department of Biotechnology of Delft University of Technology. His PhD research on 'Biogrout, Microbially induced carbonate precipitation as ground improvement method' resulted in several publications, patents and was awarded with several national and international awards. In his current research he integrates the fields of environmental biotechnology and geotechnical engineering, investigating how natural or human-induced biochemical processes naturally affect soil behaviour and can be used to develop sustainable ground improvement methodologies, which improve efficient use of resources and energy and reduce the environmental impact of civil and mining engineering industry.

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Contents

Education

2005-2009	PhD Applied Sciences, Environmental Biotechnology, Delft University of Technology, The Netherlands.
1994-2002	MSc Applied Earth Sciences, Engineering Geology, Delft University of Technology, The Netherlands.

Academic experience

2017-present	Associate Professor, School for Sustainable Engineering and the Built Environment (SSEBE), Center for Bio-mediated and Bio-inspired Geotechnics (CBBG), Arizona State University.
2009-2016	Assistant Professor, Geo-Engineering, Department of Geotechnology, Delft University of Technology .
2005-2009	PhD researcher/Teaching assistant Flow and Transport Phenomena, Applied Sciences, Department of Biotechnology, Delft University of Technology.
1998-2000	Teaching Assistant: Site Investigation. Delft University of Technology, Applied Earth Sciences, Engineering Geology Section
1996-1998	Teaching Assistant: Geological mapping and Geological Constructions. Delft University of Technology, Applied Earth Sciences, Geology Section

Industrial experience

2007-2009	Consultant/Researcher, SmartSoils®, Unit Geo-Engineering, Deltares.
2002-2007	Geotechnical Consultant, Department of Foundations and Underground Constructions, GeoDelft,
2001-2002	Junior Geotechnical Engineer, IFCO Foundation Expertise BV.

Areas of Expertise

Engineering Geology, Environmental Biotechnology, Geotechnical Engineering, Mining Engineering, Soil Physics and Chemistry, Biogeotechnical Engineering.

Honors and awards

2018	NSF I-Corps™ - Spring Cohort #4, Indianapolis (7 weeks, customer discovery for bio-based ground improvement technologies)
2015	Marie Curie Fellowship for 2 months research/industry collaboration at UMS-GMBh Munich (within FP7 MAGIC project).
2013-2014	JSPS Fellowship for Short term Research Visit to Japan (6 weeks), with Motohei Kanayama and Akiko Nakano at Kyushu University, Fukuoka, Japan.
2009	Young Member Award 2009 of International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE).
2008	Leo Petrus Innovation Trophy: From Sand to Sandstone with Waste as Cement (€100,000).
1994-2000	Royal Dutch Shell Scholarship.

A. PUBLICATIONS, INTELLECTUAL PROPERTY, AND PRESENTATIONS

SUMMARY OF PUBLICATIONS AND INTELLECTUAL PROPERTY
Abstracts published in conference proceedings: 45 (do not duplicate conference paper)
Books Co-Edited: **1**
Book Chapters Published: **4**
Invited Conference Papers: **3** (do not duplicate Abstract)
Refereed Conference Papers: **31** (do not duplicate Abstract)
Non-Refereed Conference Paper: **23** (do not duplicate Abstract)
Technical Reports or other Papers (non-refereed): **17**
Total Journal Publications (Published, In Press, and /or Accepted): **24**
Journal Publications (Published, In Press, and /or Accepted) from ASU: **15**
Journal Publications Prior to ASU (All Published): **9**
Manuscripts Submitted / In Revision from ASU: **3**
Manuscripts in Preparation from ASU (to be submitted before 08/01/2020): **3**
Intellectual Property prior to ASU: Patents **2**;

SUMMARY OF PRESENTATIONS
Invited Presentations – External: **38**
Invited Presentations – ASU Internal: **12**
Invited Conference Presentations, including students: **13**
Conference Presentations, including students: **44**

LEGEND (to be added at the beginning of the Publications section)
(*) Corresponding Author
Bold Font: ASU Ph.D. Student
Underline: ASU Master's Student
(#) ASU Undergraduate Student
(∞) Other/Visiting Undergraduate Student
(✕)ASU Postdoctoral Researcher
‡ High School Student
(+) Equal Contributions (if not equal include % of participation)
(~) Presenting author

Refereed Journal Publications

1) Mahabadi, N. (35%), van Paassen, L.A. (15%), Battiato, I. (5%), Yun, T.S. (5%), Choo, H. (5%) & Jang, J. (35%) (2020) Impact of Pore-Scale Characteristics on Immiscible Fluid Displacement, GeoFluids, Article ID 5759023
2) Wang, L.(*50%), van Paassen, L.A.(35%), Gao, Y.(1%), He, J (5%), Gao, Y.(2%) & **Kim, D.**(5%) (2020) Laboratory Tests on Mitigation of Soil Liquefaction with Microbial Induced Desaturation and Precipitation (MIDP), Geotechnical Testing Journal. Accepted April 27, 2020
3) Barciela-Rial, M.(*50%), Van Paassen, L.A.(10%), Griffioen, J.(10%), Van Kessel, T.(15%) & Winterwerp, J.C.(15%)(2020) The Effect of Solid Phase Composition on the Drying Behaviour of Markermeer Sediment, Vadose Zone Journal, accepted April 20 2020 DOI:10.1002/vzj2.20028
4) ***Edgar, M.***(*40%), ***Ray, H.***(10%), Grubb, D.G. (5%), van Paassen, L.A.(5%), Hamdan, N.(20%), & Boyer, T.H.(20%), (2020) Removal of Phosphate and Nitrate from Impacted Waters via Slag-Driven Precipitation and Microbial Transformation, Journal of Sustainable Water in the Built Environment, 6 (2), 04020007
5) **Kim, D.**(40%), Mahabadi, N.(10%), Jang, J.(10%), & van Paassen, L.A.(*40%) (2020). Assessing the kinetics and pore-scale characteristics of biological calcium carbonate

precipitation in porous media using a microfluidic chip experiment. Water Resources Research, 56, e2019WR025420. https://doi.org/10.1029/2019WR025420

6) Xiao, Y., Stuedlein, A. W., Ran, J., Evans, T. M., Cheng, L., Liu, H., Van Paassen, L.A. (5%) & Chu, J. (2019). Effect of Particle Shape on Strength and Stiffness of Biocemented Glass Beads. Journal of Geotechnical and Geoenvironmental Engineering, 145(11), 06019016.
7) Wu, C., Chu, J., Wu, S., Cheng, L., & van Paassen, L.A.(5%) (2019). Microbially induced calcite precipitation along a circular flow channel under a constant flow condition. Acta Geotechnica, 14(3), 673-683.
8) Pham, V.P. (*50%), van Paassen, L.A.(35%), van der Star, W.R.L.(10%), & Heimovaara, T.J. (5%) (2018). Evaluating Strategies to Improve Process Efficiency of Denitrification-Based MICP. Journal of Geotechnical and Geoenvironmental Engineering, 144(8), 04018049.
9) **Mahabadi, N.** (X 50%), Zheng, X. (10%), Yun, T.S. (5%), van Paassen, L. (5%), & Jang, J.(*30%) (2018). Gas Bubble Migration and Trapping in Porous Media: Pore-Scale Simulation. Journal of Geophysical Research: Solid Earth, 123(2), 1060-1071.
10) Oliveira, B. R. (*50%), Smit, M.P.(10%), Veld, H.(10%), van Paassen, L.A.(10%), Rijnaarts, H. H.(10%), & Grotenhuis, T.(10%) (2018). Subsidence of organic dredged sediments in an upland deposit in Wormer-en Jisperveld: North Holland, the Netherlands. Environmental Earth Sciences, 77(4), 131.
11) Kulshreshtha, Y. (*50%), Schlangen, E.(10%), Jonkers, H.M.(10%), Vardon, P.J.(10%), & Van Paassen, L.A.(20%) (2017) CoRncrete: A Corn Starch Based Building Material. Construction and Building Materials 154, 411-423.
12) Tollenaar, R.N. (*70%), van Paassen, L.A.(20%), Jommi, C.(10%) (2017) Small Scale Evaporation Tests on a Clay: Influence of Drying Rate on a Clayey Soil Layer, Canadian Geotechnical Journal, 55(3), 437-445.
13) Tollenaar, R.N. (*70%), van Paassen, L.A.(20%), Jommi, C.(10%) (2017) Observations on the Desiccation and Cracking of Clay Layers, Engineering Geology 230, 23-31.
14) Tollenaar, R.N. (*70%), van Paassen, L.A.(20%), Jommi, C.(10%) (2017) Experimental Evaluation of the Effects of Pull Rate on the Tensile Behavior of a Clay, Applied Clay Science 144, 131-140.
15) Oliveira, B.R.F.(*60%), Smit, M.P.J.(10%), van Paassen, L.A.(10%), Grotenhuis, T.C.(10%), Rijnaarts, H.H.M.(10%) (2017) Functional Properties of Soils Formed from Biochemical Ripening of Dredged Sediments—Subsidence Mitigation in Delta Areas, Journal of Soils and Sediments 17 (1), 286-298.
16) Pham, V.P. (*30%), Nakano, A.(30%), van der Star, W.R.L.(10%), Heimovaara, T.J.(10%), & van Paassen, L.A.(20%) (2016) Applying MICP by Denitrification in Soils: a Process Analysis, Environmental Geotechnics, 5, no. 2 (2016): 79-93
17) Van Wijngaarden, W.K. (*50%), van Paassen, L.A.(15%), Vermolen, F.J.(15%), van Meurs, G.A.M.(10%), Vuik, C.(10%) (2016) Simulation of Front Instabilities in Density-Driven Flow, Using a Reactive Transport Model for Biogrout Combined with a Randomly Distributed Permeability Field, Transport in Porous Media 112 (2), 333-359.
18) Van Wijngaarden, W.K. (*50%), van Paassen, L.A.(20%), Vermolen, F.J.(10%), van Meurs, G.A.M.(10%), Vuik, C.(10%) (2016) A Reactive Transport Model for Biogrout Compared to Experimental Data, Transport in Porous Media 111 (3), 627-648.
19) Kanayama, M. (*), Rohe, A. & van Paassen, L.A. (2014), Using and Improving Neural Network Models for Ground Settlement Prediction, Geotechnical and Geological Engineering 32 (3), 687-697.
20) DeJong, J.T. (*30%), Soga, K.S.(10%), Kavazanjian, E.(10%), Burns, S.(10%), van Paassen, L.A.(10%), Fragaszy, R., Al Qabany, A., Aydilek, A., Bang, S.S., Burbank, M., Caslake, L., Chen, C.Y., Cheng, X., Chu, J., Ciurli, S., Fauriel, S., Esnault-Filet, A., Hamdan, N., Hata, T., Inagaki, Y., Jefferis, S., Kuo, M., Larrahondo, J., Manning, D., Martinez, B., Mortensen, B., Nelson, D., Palomino, A., Renforth, P., Santamarina, J.C., Seagren, E.A., Tanyu, B.,

Tsesarsky, M., Weaver, T. (2013) Biogeochemical Processes and Geotechnical Applications: Progress, Opportunities, Geotechnique 63(4), 287-301.

21) Van Paassen, L.A. (*60%), Ghose, R.(10%), van der Linden, T.J.M.(10%), van der Star, W.R.L.(10%) and van Loosdrecht, M.C.M.(10%) (2010) Quantifying Bio-mediated Ground Improvement by Ureolysis: a Large Scale Biogrout Experiment, ASCE Journal of Geotechnical and Geoenvironmental Engineering 136(12), 1721–1728.
22) Van Paassen, L.A. (*40%), Daza, C.M.(20%), Staal, M.(10%), Sorokin, D.Y.(15%), van der Zon, W.(5%) and van Loosdrecht, M.C.M.(10%) (2010) Potential Soil Reinforcement by Microbial Denitrification, Ecological Engineering 36(2), 168-175.
23) Harkes, M.P.(35%), van Paassen, L.A.(35%) (*), Booster, J.L.(10%), Whiffin, V.S.(10%) and van Loosdrecht, M.C.M.(10%) (2010) Fixation and Distribution of Bacterial Activity in Sand to Induce Carbonate Precipitation for Ground Reinforcement, Ecological Engineering 36(2), 112-117.
24) Whiffin, V.S.(*40%), van Paassen, L.A.(30%), Harkes, M.P.(30%) (2007) Microbial Carbonate Precipitation as a Soil Improvement Technique, Geomicrobiology Journal 24 (5), 417-423.

Patents

1) Van Paassen, L.A. (*), Daza, C.M., van Loosdrecht, M.C.M., Kleerebezem, R., van der Star, W. and van der Zon, W. (2008) Microbially induced carbonate precipitation as ground improvement technique, patent applicant: Stichting Deltares, EP1798284-A1 (8 October 2008); WO2007069884-A1 (9 October 2008).
2) Van Paassen, L.A. (*), Whiffin, V.S. and Harkes, M.P. (2007) Immobilization of bacteria to a geological material, patent applicant: Stichting Deltares, EP1798284-A1 (20 Jun 2007); WO2007069884-A1 (21 Jun 2007); EP1974031-A1 (1 Oct 2008).

Book chapters

1) El Mountassir, G. (*), Minto, J. M., van Paassen, L. A., Salifu, E., & Lunn, R. J. (2018). Applications of Microbial Processes in Geotechnical Engineering. In Advances in Applied Microbiology.
2) Van Paassen, L.A. (*) & Kulshreshta, Y. (2017) Biopolymers: Cement Replacement, in Cultivated Building Materials, Industrialized Natural Resources for Architecture and Construction, Eds. Hebel, D.E. & Heisel, F.
3) Van Paassen, L.A. (*), Vardon, P.J., Jeffrey, P. (2015), Cargo Liquefaction in Bulk Carriers: a Review, 76e Jaarboek Mijnbouwkundige Vereeniging, TUDelft, 164-177.
4) Pham, V., van der Star, W.R.L., Ye, G. & van Paassen, L.A. (*) (2016) Rice husk ash with high carbon content proves favourable for soil stabilization, Jaarboek Mijnbouwkundige Vereeniging, 77e editie 2015-2016, TUDelft, 158-173.

Book Editor

1) Barends, F.B.J., Breedeveld, J., Brinkgreve, R.B.J., Korff, M. & van Paassen, L.A. (2011) Geotechnical Engineering: New Horizons, Proceedings of the European Young Geotechnical Engineering Conference 2011, IOS Press, 350pp.

Refereed Conference Publications

1) **Stallings-Young, E.G.** (*~), Zapata, C.E. & van Paassen, L.A. (2020) Unsaturated Fluid Flow through Granular Soils Treated with Microbial Induced Desaturation and Precipitation, Unsaturated Horizons, Proceedings of the 4th European Conference on unsaturated soils, June 24-26, 2020, Lisboa Portugal

2) Van Paassen, L.A.(*), Oliveira, B.R.F., Zain, N.H.M.(~) & Jommi, C. (2020) Subsidence of dredged organic sediments in cultivated peatlands, Unsaturated Horizons, Proceedings of the 4th European Conference on unsaturated soils, June 24-26, 2020, Lisboa Portugal
3) Wang, L.(*), van Paassen, L.A.(˜), & Kavazanjian, E. (2020) Feasibility Study on Liquefaction Mitigation of Fraser River Sediments by Microbial Induced Desaturation and Precipitation (MIDP) Geo-Congress 2020: Biogeotechnics, 121-131
4) **Woolley, M.A.(*˜)**, van Paassen, L.A. & Kavazanjian E. (2020) Impact on Surface Hydraulic Conductivity of EICP Treatment for Fugitive Dust Mitigation, Geo-Congress 2020: Biogeotechnics, 132-140
5) **Kim, D. (*)**, N. Mahabadi (˜), L.A. Van Paassen (2018), Pore-scale study on biomineral precipitation using a microfluidic chip: a quantitative analysis via image processing. B2G Conference, Atlanta, GA 2018 (oral presentation)
6) Mahabadi N. (X*~), L.A. Van Paassen (2018), Pore scale study of gas bubble nucleation and migration in porous media. B2G Conference, Atlanta, GA 2018 (oral presentation)
7) Pham, V.P. (*~) & Van Paassen, L.A., (2018), Soil Improvement Through a Biologically Based Method, International Conference VietGeo 2018 Geological and Geotechnical Engineering in Response to Climate Change and Sustainable Development of Infrastructure, September 26-28 2018 (oral presentation)
8) Pham, V.P. (*~), Nakano, A., van Paassen, L.A. & Van der Star, W.R.L. (2018) Using denitrification to microbially reduce water saturation for soil improvement, International Symposium for Lowland Technology, Hanoi, Vietnam, September 21-22 2018 (oral presentation)
9) Pham, V.P., Van Paassen, L.A. (*) & Van der Star, W.R.L. (2018) Quantifying the desaturation effect of biogenic gas formation in sandy soil, Proceedings of the 7th international conference on unsaturated soils, Hongkong, August 3-5, 2018 (oral presentation)
10) Van Paassen, L.A. (*), Tollenaar, R.N., Jommi, C.(~), Steins, A. & Von Unold, G. (2018) Investigating some irregularities observed during suction measurements using the Hyprop device, Proceedings of the 7th international conference on unsaturated soils, Hongkong, August 3-5, 2018 (oral presentation).
11) **Hall, C.A.** (*), Van Paassen L.A., Rittmann, B.E., Kavazanjian, E., DeJong, J.T. & Wilson, D.W. (2018) Predicting desaturation by biogenic gas formation via denitrification during centrifugal loading, Proceedings of the 7th International Conference on Unsaturated Soils, Hongkong, August 3-5, 2018 (oral presentation)
12) **Hall, C.A.** (*), Hernandez, G., Darby, K.M., Van Paassen L.A., Kavazanjian, E.(~), DeJong, J.T. & Wilson, D.W. (2018) Centrifuge Model Testing of Liquefaction Mitigation via Denitrification-Induced Desaturation, Geotechnical Earthquake Engineering and Soil Dynamics V : Liquefaction Triggering, Consequences, and Mitigation, GSP 290 (oral presentation)
13) Savenye, W. (*), Larson, J., Zapata, C., Kavazanjian, E., Elwood, K., Barnard, W., O'Donnell, M., Chandler, J., Saenz, D., **Woolley, M.** and Van Paassen, L., 2018, June. Building and Evaluating Education and Outreach Programs for an NSF Engineering Research Center, the Center for Bio-mediated and Bio-inspired Geotechnics (CBBG). In EdMedia+ Innovate Learning (pp. 960-965). Association for the Advancement of Computing in Education (AACE).
14) Van Paassen, L.A. (*), Pham, V., **Mahabadi, N.** (X), **Hall, C.A.**, **Stallings, E.** & Kavazanjian, E. (2017) Desaturation via Biogenic Gas Formation as a Ground Improvement Technique, Proceedings of the Pan-American conference on Unsaturated Soil Mechanics, Dallas.
15) **Mahabadi, N.**(X), BeGell, D., Zheng, X., van Paassen, L., Jang, J. (2017) The soil water characteristic curve for 3D Printed Soil Samples, Proceedings of the 2nd Pan-American Conference on Unsaturated Soil Mechanics, Dallas.

16) Khodadadi T. (*X), H., Kavazanjian, E., van Paassen, L., & DeJong, J. (2017) Bio-Grout Materials: A Review. In: Grouting 2017, 1-12.
17) Jommi, C. (*~), Valimberti, N., Tollenaar, R.N., Della Vecchia, G., van Paassen, L.A. (2016) Modelling desiccation cracking in a homogenous soil clay layer: Comparison between different hypotheses on constitutive behaviour, E3S Web of Conferences, 9, art. no. 08006.
18) Dijkstra, J.W. (*~), Laumen, T. and van Paassen, L.A. (2016) Optimizing the relationship between CDC compaction induced settlement data and the average CPT cone resistance after compaction, 19th Southeast Asian Geotechnical Conference & 2nd AGSSEA Conference (19SEAGC & 2AGSSEA) Kuala Lumpur 31 May – 3 June 2016.
19) Kanayama, M. (*~), Okamura, Y., Rohe, A., van Paassen, L.A. (2014) Examination for Predicting Ground Settlement Based on Measurement Records by Using a Neural Network Model, ISRM International Symposium-8th Asian Rock Mechanics Symposium.
20) Van Paassen, L.A., Vardon, P.J. (*~), Mulder, A., van de Weg, G. & Jeffrey, P. (2013) Investigating the susceptibility of iron ore to liquefaction, Proceedings of the 5th Biot conference on poromechanics, 10-12 June 2013, Vienna.
21) Van Paassen, L.A. (*~), van Hemert, W.J., van der Star, W.R.L., van Zwieten, G. and van Baalen, L. (2012) Direct Shear Strength of Biologically Cemented Gravel. In: Geocongress 2012 State of the art and practice in geotechnical Engineering, ed. R.D. Hryciw, A. Athanasopoulos-Zekkos and N. Yesiller (Oakland: American Society of Civil Engineers, 2012), 968-977.
22) Van Paassen, L.A. (*~) (2011) Bio-mediated ground improvement: From laboratory experiment to pilot applications, Geofrontiers, 2011, Advances in Geotechnical Engineering, Ed. J. Han Geotechnical Special Publication, (211 GSP), 4099-4108.
23) Van der Star, W.R.L. (*~), van Wijngaarden-van Rossum, W.K., van Paassen, L.A., van Baalen, L.R., van Zwieten, G. (2011) Stabilization of gravel deposits using microorganisms, Proceedings of the 15th European Conference on Soil Mechanics and Geotechnical Engineering, A. Anagnostopoulos et al. (Eds.), 12-17 Sep 2011, Athens, Greece, 85-90.
24) Van der Star, W.R.L. (*), Taher, E., Harkes, M.P., Blauw, M., van Loosdrecht, M.C.M., van Paassen, L.A. (2010) Use of waste streams and microbes for in situ transformation of sand into sandstone, Geotechnical Society of Singapore - International Symposium on Ground Improvement Technologies and Case Histories, ISGI'09, 177-182.
25) Harkes, M.P., van der Star, W.R.L., Rozing, A., van Paassen, L.A. and van Meurs, G.A.M. (*) (2010) Adapting soil properties by pore space engineering. In: M. Datta, R.K. Srivastava, G.V. Ramana & J.T. Shahu (Eds.), ICEG Environmental Geotechnics for sustainable development. New Delhi: Tata McGraw Hill Education Private Ltd, 1463-1468.
26) Van Paassen, L.A. (*), Harkes, M.P., van Zwieten, G.A., van der Zon, W.H., van der Star, W.R.L. & van Loosdrecht, M.C.M. (2009) Scale up of BioGrout: a biological ground reinforcement method, Proceedings of the 17th international conference on soil mechanics and geotechnical engineering, 5-9 october 2009, Alexandria, Egypt.
27) Van Paassen, L.A. (*), Pieron, M., Mulder, A., van der Linden, T.J.M., van Loosdrecht, M.C.M. & Ngan-Tillard, D.J.M. (2009) Strength and deformation of biologically cemented sandstone, Proceedings of the ISRM Regional conference EUROCK 2009 – Rock engineering in difficult ground conditions – Soft rocks and karst, 29-31 October 2009, Dubrovnik, Croatia.
28) Ngan-Tillard, D.J.M. (*), Verwaal, W., Maurenbrecher, P.M. & van Paassen, L.A. (2009) Microstructural degradation of Maastrichtian limestones. ISRM Regional conference EUROCK 2009 – Rock engineering in difficult ground conditions – Soft rocks and karst, Dubrovnik, Croatia.
29) Ghose, R. (*), van Paassen, L.A., van der Star, W.R.L., van der Linden, T.J.M. & Van Zwieten, G.A. (2009) Monitoring progressive cementation of sand by biogrouting through time-lapse shearwave seismics. Near Surface 2009 – 15th European Meeting of Environmental and Engineering Geophysics, Dublin, Ireland.

30) Van der Star, W.R.L. (*), Taher, E., Harkes, M.P., van Loosdrecht, M.C.M. & van Paassen, L.A. (2009) Use of waste streams and microbes for in situ transformation of sand into sandstone. International Symposium on Ground Improvement Technologies and Case Histories (ISGI2009), Singapore.
31) Van Paassen, L.A. (*) (2009) Microbes turning sand into sandstone, using waste as cement. Presented at 4th International Young Geotechnical Engineering Conference Alexandria, Egypt.

Non-refereed conference proceedings

1) Moug, D., Khosravifar, A., Preciado, M., Sorenson, K., Stokoe, K., Menq, F., Zhang, B., van Paassen, L., Kavazanjian, E., Stallings Young, E. & Wang, Y. (2020) Field evaluation of microbially induced desaturation for liquefaction mitigation of silty soils, 17th World Conference on Earthquake Engineering, 17WCEE, Sendai, Japan - September 13th to 18th 2020
2) Vardon, P. (*), Yao, Y., van Paassen, L., & van Tol, F. (2016) Consolidation and atmospheric drying of fine oil sand tailings: Comparison of blind simulations and field scale results. In: D.C. Sego, G.W. Wilson, & N.A. Beier (Eds.), Proceedings of IOSTC2016: Lake Louise, USA. University of Alberta, 396-407.
3) Yao, Y. (*), van Tol, F., van Paassen, L., & Vardon, P. (2016) Dewatering behavior of fine oil sands tailings: A summary of laboratory results. In: D.C. Sego, G.W. Wilson, & N.A. Beier (Eds.), Proceedings of IOSTC2016: Lake Louise, USA. University of Alberta, 23-31.
4) Vardon, P.J. (*), Yao, Y., van Paassen, L.A., & van Tol, A.F. (2015) The use of a large-strain consolidation model to optimise multilift tailing deposits. Proceedings of the Tailings and Mine Waste Management for the 21st century, Sydney (Australia), 27-28 July, 2015.
5) Ibanez, M. (*), Chassagne, C., van Paassen, L., Sittoni, L. (2015) Optimizing dewatering and soft tailings consolidation by enhancing tailings' composition. Tailings and Mine Waste Conference, 2015: Vancouver, B.C.
6) Vardon, P.J. (*), Yao, Y., van Paassen, L.A., van Tol, A.F. (2015) The Use of a Large-strain Drying and Consolidation Model to Optimise Multi-lift Tailing Deposits, Tailings and Mine Waste Management for the 21st Century 2015.
7) Ngan-Tillard, D.J.M. (*), van Paassen, L.A., Maurenbrecher, P.M., Concha, A. & Gonzalez, M. (2012) TU Delft Spain fieldwork and other outdoor activities. In: B. McCabe, M. Pantazidou & D. Philips (Eds.), Shaking the foundations of geo-engineering education. London: Taylor & Francis Group, 163-168.
8) Lietaert, B. (*), van der Wal, T., Kortekaas, S., Ngan-Tillard, D.J.M. & van Paassen, L.A. (2012) Early-screening hazard map for jack-up rigs in the Gulf of Suez. In: s.n. (Ed.), Offshore Site Investigation and Geotechnics - Integrated Geotechnologies - Present and Future. London, UK: Royal Geographical Society, 629-634.
9) Yao, Y. (*), van Tol, A.F. & van Paassen, L.A. (2012) The effect of flocculant on the geotechnical properties of mature fine tailings: an experimental study. In: D. Sego, G.W. Wilson & N. Beier (Eds.), Proceedings 3rd International Oil Sands Talling Conference (IOSTC'12). Edmonton: University of Alberta, 391-398.
10) Van der Meulen, J., van Tol, A.F. (*), van Paassen, L.A. & Heimovaara, T.J. (2012) Numerical modeling of drying and consolidation of fine sediments and tilings. In: D. Sego, G.W. Wilson & N. Beier (Eds.), Proceedings 3rd International Oil Sands Talling Conference (IOSTC'12). Edmonton: University of Alberta, 399-409.
11) Van Paassen, L.A. (*), Heimovaara, T.J. & Jonkers, H.M. (2011) Bio-based cement for ground improvement applications and self-healing concrete. In: R. McCaffrey (Ed.), Future cement conference & Exhibition 2011. Epsom, Surrey, UK: PRo Publications International Ltd. (TUD), 11-1-11-6.

12) Yao, Y. (*), van Paassen, L.A., van Tol, A.F., Everts, H.J. & Mulder, A. (2010) Experimental research on accelerated consolidation using filter jackets in oil sands tailings. In: D. Sego & N. Beier (Eds.), Second international oil sands tailings conference. Edmonton: University of Alberta Geotechnical Center, 77-85.
13) Yao, Y. (*), van Tol, A.F., van Paassen, L.A., Everts, H.J. & Mulder, A. (2010) Experimental research on mud farming of fine oil sands tailings. In: D. Sego & N. Beier (Eds.), Second international oil sands tailings conference. Edmonton: University of Alberta Geotechnical Center, 59-68.
14) Van Paassen, L.A. (*) (2010) Biomediated Ground Improvement, First International Conference on Frontiers in Shallow Subsurface Technology, 20-22 January, 2010, Delft, The Netherlands.
15) Van Zwieten, G. (*), van der Star, W., van Paassen, L.A., Meinhardt, G. (2010) Biogrout, großmassstäbliche Versuche und praktische Anwendungsmöglichkeiten. In: 31 Baugrundtagung. DGGT, 275-281.
16) Blauw, M. (*), Harkes, M., van Loosdrecht, M.C.M., van Paassen, L.A., Van, M.A. & van der Ruyt, M. (2008) Climate Change Resistant Coastline by biological In-situ reinforcement of Sand, In: Z. Mlynarek , Z. Sikora and E. Dembicki (Eds.), 11th Baltic Sea Geotechnical Conference, Geotechnics in Maritime Engineering, 15-18 september 2008, Gdansk, Poland, ISBN 978-83-602610-7-1, Vol 2, 585-589.
17) Booster, J.L. (*), van Meurs, G.A.M., Pruiksma, J.P., van Paassen, L.A., Harkes, M.P. & Whiffin, V.S. (2008) 1D-modelling of microbially induced calcite precipitation for geotechnical applications. In: Henk Jonkers, Jacco Booster, Leon van Paassen & Mark van Loodrecht (Eds.), BGCE 2008, 1st International conference BioGeoCivil Engineering, 23-25 June 2008, The Netherlands, Delft: TU Delft en Deltares, 19-28.
18) Harkes, M.P. (*), Booster, J.L., van Paassen, L.A., van Loosdrecht, M.C.M. & Whiffin, V.S. (2008) Microbial induced carbonate precipitation as ground improvement method - bacterial fixation and empirical correlation CaCO3 vs strength. In: Henk Jonkers, Jacco Booster, Leon van Paassen & Mark van Loosdrecht (Eds.), BGCE 2008, 1st International conference BioGeoCivil Engineering, 23-25 June 2008, The Netherlands. Delft: TU Delft en Deltares, 37-44.
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20) Van Paassen, L.A. (*), Daza, C.M., Staal, M.J., Sorokin, D.Y. & van Loosdrecht, M.C.M. (2008) In situ soil reinforcement by microbial denitrification. In: Henk Jonkers, Jacco Booster, Leon van Paassen & Mark van Loosdrecht (Eds.), BGCE 2008, 1st International conference BioGeoCivil Engineering, 23-25 June 2008, The Netherlands. Delft: TU Delft en Deltares, 124-133.
21) Van Paassen, L.A. (*), van Loosdrecht, M.C.M., van den Eijnden, A.P., Mulder, A., Verwaal, W., Ngan-Tillard, D.J.M., Harkes, M.P. & Bekendam, R.F. (2008) Reinforcement of calcarenite room and pillar mines by microbially induced carbonate precipitation. In: EuroEngeo 2008. Madrid: Escuela de Ingenieria de Obras Publicas Madrid, 1-6.
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Abstracts in conference proceedings

1) **Hall, C.A.**, Rittmann B., van Paassen, L.A. & Kavazanjian, E. (2020) Out of the Lab, Into the Frying Pan: Understanding the Effect of Natural Groundwater Conditions on Bio-Based Ground Improvement Strategies, D2489 EGU2020-11378
2) **Hall, C.A.**, Mahabadi, N., Kavazanjian, E., van Paassen, L.A., & Rittmann B. (2019) Biogeochemical Reactive Transport Model for Denitrification-Driven Ground Improvement. Geophysical Research Abstracts 21
3) Mahabadi, N., Zheng, X., Yun, T.S., van Paassen, L.A. & Jang, J. (2019) Gas bubble migration and trapping in porous media – Pore-scale simulation, Interpore 2019, Valencia
4) Khodadadi Tirkolaei, H., van Paassen, L.A., Kavazanjian, E. (2019) The effect of kinetics on the efficiency of biologically induced carbonate precipitation via urea hydrolysis for soil improvement applications, Interpore 2019, Valencia
5) **Kim, D.**, Mahabadi, N., Jang, J. & van Paassen, L.A. (2019) Pore-scale Characterization of Biogenic Gas Formation in Porous Media: The Effect of Gas Production Rate, Interpore 2019, Valencia
6) Mahabadi, N., **Kim, D.**, Jang, J. & van Paassen, L.A. (2019) Pore Network Simulation of Biogenic Gas Nucleation and Migration in Porous Media, Interpore 2019, Valencia
7) Wang, L. & van Paassen, L.A. (2019) Liquefaction mitigation of Fraser River sand with Microbial Induced Desaturation and Precipitation (MIDP), Interpore 2019, Valencia
8) **Woolley, M.**, Kavazanjian, E. & van Paassen, L.A. (2019) Hydrogel-Enhanced EICP Application to Fugitive Dust Mitigation:Impacts on Surface Permeability and Erosion Resistance, Interpore 2019, Valencia
9) Van Paassen, L.A.(~), Zeng, C. & Zheng, J, (2019) Numerical modelling of microbially induced calcite precipitation in field trials, Interpore 2019, Valencia
10) **Hall, C.A.**, Rittmann, B., Kavazanjian, E. & van Paassen, L.A. (2019) Multiphase Biogeochemical Model to Predict Microbially Induced Desaturation and Precipitation for Earthquake Hazard Mitigation, AGU Fall Meeting 2019
11) **Hall, C.A.** & van Paassen L.A. (2018) Multiphase Biogeochemical Model to Predict Microbially Induced Desaturation and Precipitation at Field-Scale, AGUFM 2018, H21N-1886
12) Van Paassen, L.A.(*) **Hall, C.A.**, **Stallings, E.**, **Kim, D.**, Wang, L. (∞), Mahabadi, N. (X), Zapata, C., Kavazanjian, E. (2018), A multiscale approach towards improved design and better understanding of bio-based ground improvement methods, 2018 World Congress on Advances in Civil, Environmental and Materials Research (ACEM18), Incheon, South Korea 27-29 August 2018 (invited lecture)
13) Van Paassen L.A. (2018), Scale up and field trials on bio-based soil improvement methods, Second China-US Workshop on Ground Improvement Technologies, Shanghai, May 26 2018 (invited lecture)
14) Borah, D. (*) & Van Paassen, L.A. (2018) Use of Biogenic Gas Production as a Pre-Treatment to improve the Efficiency of Dynamic Compaction, Interpore 2018, New Orleans, 589 (poster)
15) **Kim, D.** (*), Mahabadi, N. (X), Jang, J. & Van Paassen, L. (2018), Permeability Reduction Caused by Multiple Treatments of Biomineral Precipitation in Homogeneous Porous Media: Experimental Study and Pore Scale Modelling, Interpore 2018, New Orleans, 749 (oral presentation)
16) **Kim, D.** (*), Mahabadi, N. (X), Jang, J. & Van Paassen, L.A. (2018), Experimental Study and Modeling of Biogas Formation in Homogeneous Porous Media, Interpore 2018, New Orleans, 748 (poster)

17) Mahabadi, N.(*X) & Van Paassen, L.A. (2018) Pore Scale Simulation of Biogenic Gas Formation and Migration in Porous Media, Interpore 2018, New Orleans, 772 (oral presentation)
18) Mahabadi, N. (*X), Khodadadi Tirkolaei, H. (X), **Krishnan, V.** & Van Paassen, L. (2018), The Impact of Precipitation Scenarios on the Characteristics of Porous Media: Numerical Simulation vs Experiments, Interpore 2018, New Orleans, 773 (poster)
19) **Hall, C.A.** (*~), Van Paassen, L., Rittmann, B & Kavazanjian, E. (2018) Microbially Induced Desaturation and Precipitation (MIDP) via Denitrification during Centrifugal Loading, Interpore 2018, New Orleans
20) Mahabadi, N. (*X), **Kim, D.**, **Hall, C.**, van Paassen, L. (2017) Effect of carbonate precipitation on the hydrodynamics of porous media: Numerical Simulation, AGU Fall Meeting 2017, New Orleans.
21) **Kim, D.** (*), Mahabadi, N. (X), **Hall, C.**, van Paassen, L. (2017) Characterization of biogenic gas and mineral formation process by denitrification in porous media, AGU Fall Meeting 2017, New Orleans. (oral presentation)
22) **Kim, D.** (*~), Mahabadi, N. (X), **Hall, C.**, van Paassen, L. (2017) Characterization of calcite mineral precipitation process by EICP in porous media, AGU Fall Meeting 2017, New Orleans. (poster)
23) Van Paassen, L.A. (*) (2017) The kinetics of microbially induced calcium carbonate precipitation by urea hydrolysis, , AGU Fall Meeting 2017, New Orleans. (oral presentation)
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25) Chin a Moei, S., van Paassen, L.A. (*), Hazwani, N.M.Z., Chassagne, C., Jommi, C. (2017) The Effect of Organic Matter on Shrinkage and Water Retention Behaviour of Organic Dredged Sediments, Responsible Management of Peatlands, IPS, Aberdeen, Scotland. (oral presentation)
26) Van der Star, W.R.L. (*), Schenkeveld, F.M., Klessens, T.M.A., van Zwieten, G. (~) & van Paassen, L.A. (2017) Experiments to investigate the effectiveness of a new geochemical method to mitigate backward erosion piping. 25th Meeting European Working Group on Internal Erosion in Embankment Dams & their Foundations. (oral presentation)
27) Den Hamer, D.A. (*~), van Paassen, L., Bergwerff, L. & Pham, V. (2016) Impact of injection strategy on calcium carbonate distribution in porous media, Goldschmidt Conference Abstracts 646 (poster).
28) Pham, V.P. (*~), van Paassen, L.A., den Hamer, D. & van der Star, W. (2016) Soil Improvement Potential of Microbially Induced Gas Formation and Carbonate Precipitation. Goldschmidt Conference Abstracts 2496 (poster).
29) Bergwerff, L. (*~), Picioreanu, C., van Loosdrecht, M. & van Paassen, L. (2016) Considerations for Saturation Calculations of Concentrated Non-Equimolar Calcium Carbonate Precipitation, Goldschmidt Conference Abstracts 212 (poster).
30) Van Paassen, L.A. (*~) (2016) Applications of Biomineralization in Geotechnical and Geo-Environmental Engineering Goldschmidt Conference Abstracts 3263. (invited presentation).
31) Debuigne, T. (*~), Brakni, S., Sutton, G., El Fgaier, F., Harrington, J., Masson, E., van Paassen, L., Lemiere, B., van Dessel, J., Wijdeveld, A. (2015) Social, geographical, technical, environmental and economic approaches to strength marine sediment reuse options through CEAMaS project. SedNet Conference, Krakow 2015 (oral presentation).
32) Wijdeveld, A. (*~), van Paassen, L.A., Chassagne, C., Tollenaar, R., Oliveira, B. (2015) Lift up of lowlands, looking at the reuse of sediments on peat meadows by looking at the physical, chemical and biochemical properties in relation to the local situation Sednet, Krakow 2015 (oral presentation).

33) Afanasyev, M. (*~), Huisman, H., van Paassen, L.A. and Heimovaara, T.J. (2015) Studying the past, understanding the present, predicting the future - analysis of corrosion systems in soil surrounding buried ancient metal, BioGeoCivil Summit 2015 17-19 November The Art Centre, Delft, The Netherlands. (oral presentation)
34) Afanasyev, M. (*~), van Paassen, L.A. and Heimovaara, T.J. (2015) Quantification of soil heterogeneity induced by corroding metal objects, using X-ray computed micro tomography (CMT), BioGeoCivil Summit 2015 17-19 November The Art Centre, Delft, The Netherlands. (oral presentation+poster)
35) Kulshreshtha, Y.(*~), Schlangen, E., Jonkers, H.M., Vardon, P.J., van Paassen, L.A. (2015) CoRncrete: A bio-based construction material, BioGeoCivil Summit 2015 17-19 November The Art Centre, Delft, The Netherlands. (poster)
36) Nakano, A.(*~), van Paassen, L.A., van der Star, W.R.L. (2015) Microbially induced carbonate precipitation by nitrate reducing bacteria using pulsed flow injections, BioGeoCivil Summit 2015 17-19 November The Art Centre, Delft, The Netherlands. (oral presentation+poster)
37) Pham, V.P.(*~), Nakano, A., van Paassen, L.A., van der Star, W.R.L. & Heimovaara, T.J., (2015) Biological Denitrification – Calcium Carbonate Precipitation Combination in geotechnical engineering, BioGeoCivil Summit 2015 17-19 November The Art Centre, Delft, The Netherlands. (oral presentation+poster)
38) Tollenaar, R.(*~), van Paassen, L.A. & Jommi, C. (2015) New insights on dessication cracks in fine grained sediments, BioGeoCivil Summit 2015 17-19 November The Art Centre, Delft, The Netherlands. (oral presentation)
39) Zain, N.H.M., van Paassen, L.A., Jommi, C., Heimovaara, T.J. (2015) The Effect of Decomposition on Compression Behaviour of Organic Sediments from Wormer & Jisperveld, The Netherlands, BioGeoCivil Summit 2015 17-19 November The Art Centre, Delft, The Netherlands.
40) Afanasyev, M., Heimovaara, T., van Paassen, L. (2014) Examination for Predicting Ground Settlement Based on Measurement Records by Using a Neural Network Model, EGU General Assembly Conference Abstracts 16, 5122.
41) Afanasyev, M., van Paassen, L.A. & Heimovaara T. (2013) A numerical model of controlled bioinduced mineralization in a porous medium to prevent corrosion Geophysical Research Abstracts Vol. 15, EGU2013-12719, 2013 EGU General Assembly 2013.
42) Pham, V. (*~), van Paassen, L.A., Nakano, A., Kanayama, M. & Heimovaara, T.J. (2013) Microbially induced carbonate precipitation (MICP) by denitrification as ground improvement method - Process control in sand column experiments Geophysical Research Abstracts Vol. 15, EGU2013-12672, 2013 EGU General Assembly 2013. (oral presentation)
43) Bergwerff, L. (*~), van Paassen, L.A., Picioreanu, C. & van Loosdrecht, M.C.M. (2013) Investigation of Biogrout processes by numerical analysis at pore scale Geophysical Research Abstracts Vol. 15, EGU2013-8791, 2013 EGU General Assembly 2013. (poster)
44) Van Paassen, L.A. (*) (2009) Views of Young Geotechnical Engineers, ISSMGE bulletin 6(4).
45) Van Paassen, L.A. (*) (2007) Biogrout: microbial carbonate precipitation as soil improvement method. Abstract in Almanac 2007 Water Research Centre Delft, TU Delft, 88-89.

Technical reports

1) He, Jia et al (2018), G-I Soil Improvement Committee, China Scanning Tour on Ground improvement Technologies, Tour Report
2) Groundwater Technology (2018), Bench scale tests and field trial design Fraser River Dikes: Increasing Climate Change Resilience by reducing risk of earthquake induced liquefaction underneath embankments through Microbial Induced Desaturation and Precipitation, City of Richmond, British Columbia, Canada

3) Groundwater Technology (2018), Literature Review Fraser River Dikes: Increasing Climate Change Resilience through Microbial Induced Desaturation and Precipitation City of Richmond, British Columbia, Canada (co-author)
4) Groundwater Technology (2018), Report on Bench Scale testing & Proposal for Field Demonstration Project Soil Geotechnical Improvement Waterfront Toronto, Toronto, Ontario, Canada (scientific panel)
5) Van Paassen, L.A. (2015) Brief aan Van Traa Advocaten, regarding Sinkhole Winkelcentrum 't Loon in Heerlen. TA/IG/15.020.
6) Van Paassen, L.A., Mulder, A. (2015) Characterization of Bauxite ore from Guyana related to hopper flow and conveyor belt transfers. TA/IG/15.005, TU Delft (Report for Oldendorff Carriers GMbH).
7) Van Paassen, L.A., Mulder, A., Pham, V.P. & Greeuw, G. (2015) Cyclic Triaxial Loading and Hydraulic Conductivity tests on Rockwool. TA/IG/15.008, TU Delft (Report for Rockwool Core Solutions).
8) Vardon, P.J., van Paassen, L.A., van Tol, A.F. (2015) Sludge depot modelling for self-weight consolidation and atmospheric drying. GE/PJV/15.001 (Report for Boskalis).
9) Van Paassen, L.A., Mulder, A. (2013) Investigating the TML for two types of ore material. TA/IG/13.021, TU Delft (Report for Deltares).
10) Van Paassen, L.A., Vardon, P.J. (2013) Investigating the effect of water-absorbing polymers on the transportable moisture limit (TML) of iron ore. TA/IG/13.010a, TU Delft (Report for Arcelor Mittal).
11) Van Paassen, L.A., Vardon, P.J. (2013) Investigating the susceptibility for liquefaction of ore from Guatemala. TA/IG/13.012, TU Delft (Report for Oldendorff Carriers).
12) Van Paassen, L.A., Vardon, P.J. (2013) Investigating the durability of the effect of water-absorbing polymers on the transportable moisture limit (TML) of iron ore. TA/IG/13.010b, TU Delft (Report for Arcelor Mittal).
13) Van Paassen, L.A., Mulder, A. (2012) Investigating Susceptibility for liquefaction of Iron Ore – part 2. TA/IG/12.018, TU Delft (Report for Oldendorff Carriers GMbH).
14) Van Paassen, L.A., Mulder, A. (2012) Investigating Susceptibility for liquefaction of Iron Ore. TA/IG/12.005, TU Delft (Report for Oldendorff Carriers GMbH).
15) Mulder A. & van Paassen, L.A. (2012) Geotechnical and Geochemical characterization of rock samples from Scunthorpe Iron Quarry. TA/IG/12.004, TU Delft (Report for Tata Steel).
16) Van Paassen, L.A., Mulder, A. (2012) Investigating the susceptibility for liquefaction of iron ore TA/IG/12.003 TU Delft (Report for Deltares).
17) Van Paassen, L.A., Mulder, A. (2011) Report on liquefaction of iron ore. TA/IG/11.009 TU Delft (Report for Cofra B.V.).

Other output

1) Stone, M. (2019) These Scientists Are Changing Soil at a Molecular Level to Withstand Earthquakes, Vice, https://www.vice.com/en_us/article/a35kea/these-scientists-are-changing-soil-at-a-molecular-level-to-withstand-earthquakes, September 16 2019
2) Portland Tribune (2019) Prepping for the Big One, https://pamplinmedia.com/pt/9-news/440484-353329-prepping-for-the-big-one, October 10, 2019
3) Katu staff (2019) Researchers use 'fake quake' for tests that help prepare Portland for the Big One, https://katu.com/news/local/researchers-test-with-fake-quake-to-prepare-portland-for-the-big-one, September 12, 2019
4) KGW8 news staff (2019), PSU simulates earthquake to study soils, https://www.kgw.com/video/news/local/psu-simulates-earthquake-to-study-soils/283-0a958870-99e9-421b-bed2-209463a37b98, September 12, 2019

5) Haas, E., Koin 6 News Staff (2019), Making soil stronger: A new way to prep for The Big One, https://www.koin.com/news/making-soil-stronger-a-new-way-to-prep-for-the-big-one/, September 12, 2019
6) Fox12 Staff (2019), Researchers use fake earthquake, study soil to prepare Portland for the 'big one', https://www.kptv.com/news/researchers-use-fake-earthquake-study-soil-to-prepare-portland-for/article_2201cf68-d5de-11e9-9e11-2b49c1815c5a.html, September 12, 2019
7) NVDO (2019) Geotechniek cementeert zandkorrels door biologische processen in slappe bodem, after press release Yvo Veenis, Groundwater Technology
8) Cobouw (2019), Nederlandse biocementatie- techniek moet bodem Toronto versterken
9) GWWtotaal.nl (2019) Biologische bodemversteviging in havengebied Toronto, after press release Yvo Veenis, Groundwater Technology
10) Bouwwereld.nl (2019) Pilotproject biocementatie: grondverbetering door bacteriën, after press release Yvo Veenis, Groundwater Technology
11) Groundwater Technology (2019) Nederlandse techniek voor biologische bodemversteviging voor het eerst toegepast in havengebied Toronto, interview for press-release Groundwater Technology
12) Dieudonné, A., Jommi, C. & van Paassen, L.A. (2017) Towards the truth on peatlands subsidence TU Delft DeltaLinks.
13) Van Paassen, L.A. (2017) Adventures of a 'Lost Dutchman' in Arizona, De Mol, De Ondergrondse.
14) Van Paassen, L.A. (2013) Interview voor Delta rubriek Desgevraagd (sinkholes), 18 maart 2013.
15) Van Paassen, LA. (2012) Biogrout; grond verbeteren met bacteriën, Civiele Techniek 66(7), 14-15.
16) Van Paassen, L.A. (2010) Vijf jaar onderzoek: eerste veldproeven Biogrout, Civiele Techniek 64(7), 40-43.
17) Van Paassen, L.A. (2009) Bacteriën houden de zandlaag bij elkaar, interview given for newspaper 'Het Parool'.
18) Contribution to Dutch TV-science-quiz: Hoe?Zo! 11 augustus 2009 (www.teleac.nl/hoezo).
19) Van Paassen, L.A. (2008, January 8) Radio interview: Microbe World radio (www.microbeworld.org/look/radio.aspx).
20) Van der Star, W.R.L., van Paassen, L.A., Molendijk, W.O. & van Loosdrecht, M.C.M. (2008) Winnaar BBasic Leo Petrus Innovation Trophy 2008.
21) Van Paassen, L.A. & van der Star, W.R.L. Interview gegeven voor AA van de Graaf. Prijswinnend idee: innovatieve zandfixatie. In: Civiele techniek. 2008 issue 5/6 (thema milieu), 27-28.
22) Van Paassen, L.A. (2008) Journalist workshop 8 januari 2008 by R. de Jong (2008) Journalisten in het lab, in: C2W life sciences 2, 2 februari 2008, 23-24.
23) Van Paassen, L.A. (2008) Interview gegeven voor M. Bliekendaal-van Dorp: Wat te doen met een miljoen, in: C2W life sciences 2, 2 februari 2008.
24) Van Paassen, L.A. (2008) n.a.v. journalisten workshop 8 januari 2008 door J. Engels (2008) Het nut van bacteriën, in: *Trouw*, 4 maart 2008.
25) Van Paassen, L.A., Lambert, J., den Hamer, D. (2008, december) Bodemeigenschappen zijn veelzijdige bouwers in de bodem, *Land+Water*.
26) Van Paassen, L.A. (2008) Poster presentation BSDL symposium.
27) Van Paassen, L.A. (2008) Poster bij exhibitie n.a.v. 2nd World Scientific Congress Challenges in Botanical Research and Climate Change.
28) Van Paassen, L.A. (2008) 9 prikkelende en intrigerende kwesties (7 jan; 26 mei, 2,3,4,6 jul, 3 aug, 21 okt, 19 nov) voor de NWT Scheurkalender 2009.

29) Van Paassen, L.A. (2007) Interview gegeven voor artikel "Permanente zandkastelen". In: Delta, nr 24, 30-08-2007, pp 7. Auteur: Tomas van Dijk: (2007, augustus 30).
30) Van Paassen, L.A. (2007, 11 December) BioGrout Microbial carbonate precipitation as soil improvement method, in *De Ondergrondse newsletter*.
31) Van Paassen, L.A. & Kleerebezem, R. (2007, April 11) Imagine schoolproject finalisten 2006-2007: Verest, T., van der Meer, S., Schepers, I., Penterman, R., Rijkers, E., “Dijken bouwen met bacteriën voor Bam in Afrika - slimme grond maakt dijk sterker”. *www.watisgenomics.nl/genomics/genomics/milieu.html* Auteur: Maartje de Gruyter.
32) Molendijk, W.O., van Paassen, L.A. & Admiraal, B.J. (2004) “Smartsoils® Grondeigenschappen op bestelling.” Geotechniek nr. 5, 30-33.
33) Schmitz, R.M. & van Paassen, L.A. (2003) Decay of liquid limit of clays with increasing salt concentration. Dutch Ass. Eng. Geol. Delft, INGEOKRING newsletter, Vol 9, nr 1, pp 10-14.

Invited Presentations (external)

1) Van Paassen, L.A. (2020) Field trials on Bio-based Ground Improvement Methods, 26th IACGE Geotechnical Workshop, International Association of Chinese Geotechnical Engineers, January 23, 2020
2) Van Paassen, L.A. (2019) Field trials on Bio-based Ground Improvement Methods, JSPS sponsored project by Akiko Nakano, Thuyloi University, Hanoi, Vietnam, December 10, 2019
3) Van Paassen, L.A. (2019), Field trials of Bio-mediated Ground Improvement, Geo-Insitute webinar on soil improvement, December 3, 2019 (invited lecture)
4) Van Paassen, L.A. (2019) Bio-based solutions for a sustainable society, Controlling Transport of Resource, waste and energy across phases and scales to improve soil behavior, Bio-inspired Geotechnics workshop, September 2019, (poster)
5) Kavazanjian E., & Van Paassen, L.A. (2019), Biogeotechnical Mitigation of Earthquake-Induced Soil Liquefaction, NHERI Workshop on Bio-based liquefaction mitigation in Portland, 11 September 2019 (invited lecture).
6) Van Paassen, L.A. (2019) Bio-based solutions for a Sustainable Society, Lafarce Holcim, 6th International Forum for Sustainable Construction hosted by American University in Cairo, Egypt, April 4, 2019 (invited lecture)
7) Hamdan, N., Van Paassen, L.A. (2018) Partnerships with Engineering Industry at the Center for Bio-Mediated and Bio-Inspired Geotechnics and Associated Projects (invited lecture), Geo-Institute Arizona Chapter, December meeting, Scottsdale, December 19th.
8) Van Paassen, L.A. (2018) Bio-barriers to mitigate internal erosion, KAIST Daehyon, South Korea (invited lecture)
9) Van Paassen, L.A. (2018), Scale up and field trials of Bio-mediated Ground Improvement, Geo-Insitute webinar on soil improvement, August 21 2018 (invited lecture)
10) Van Paassen, L.A. (2018), Scale up and field trials of Bio-mediated Ground Improvement, Cambridge University, July 22 2018 (invited lecture)
11) Hall, C.A. & Van Paassen, L.A. (2018), Bio-based Solutions to Mitigate Geologic Hazards, Association of Environmental and Engineering Geologists – Phoenix Chapter, Dinner Meeting, Scottsdale Thursday, February 22, 2018 (seminar)
12) Van Paassen, L.A. (2017) Recent Advances in Bio-based and Bio-inspired Geotechnics, Invited lecture at Montana State University, 21 September 2017.
13) Van Paassen, L.A. (2017) Biochemical decomposition of Organic Matter and its effect on Shrinkage and Water Retention Behavior of Fine Grained Organic Sediments, Centre for Usable Space, Nanyang Technical University, 24 July 2017.
14) Van Paassen, L.A. (2017) Bio-based barriers for seepage and erosion control in water retaining structures, Centre for Usable Space, Nanyang Technical University, 24 July 2017.
15) Van Paassen, L.A. (2017) 1-Day Seminar on 'Biogeotechnics', Faculty Of Civil Engineering (FCE), Universiti Teknologiki Mara, 19 July 2017.
16) Van Paassen, L.A. (2017) Advances in Bio-based Geotechnical Engineering, The Institution of Engineers, Malaysia, 20 July 2017.
17) Van Paassen, L.A. (2017) Applications of biomineralization in geotechnical engineering G-I Arizona chapter, 26 January 2017.
18) Van Paassen, L.A. (2016) Exhibition in Kurhaus, Zandmotor congress 14 & 15 september, Kurhaus Scheveningen.
19) Van Paassen, L.A. (2015) Natuurlijke oplossingen voor bouwen op slappe bodem, Symposium 100 jaar Grontmij: Slappe bodem vraagt sterke schouders, Bilthoven, 13 oktober 2015 (invited speaker).
20) Van de Giessen, P., van Paassen, L.A., Jacobs, W., den Hamer, D. (2015) Finalist New Horizons Boskalis Innovation Challenge 2015.

21) Van Paassen, L.A. (2015) Bouwen met de natuur: Biologische beïnvloeding van mechanische grondeigenschappen, Bodembreed, Rotterdam 24 november 2015 (invited speaker).
22) Van Paassen, L.A. (2015) Industrial applications of biominerals; now and future, EPSRC workshop Prague, August 2015 (invited speaker).
23) Van Paassen, L.A. (~) (2014) BioGeoCivil: a fertile combination of biology and civil engineering, RWS network hub, 3-12-2014 (invited speaker).
24) Van Paassen, L.A. (2012) LimesNet Research Workshop, Theme: Geo-materials 10–11 May 2012, Bath, UK (invited lecture).
25) Van Paassen, L.A. & van Baalen, L. (2012) Buisleidingenplatform, 26 april 2012, Ridderkerk (invited lecture).
26) Van Paassen, L.A., Heimovaara, T.J. & Jonkers, H.M. (2011) Bio-based cement for ground improvement applications and self-healing concrete, Future Cements conference, London (invited lecture).
27) Van Paassen, L.A. (2010) How to predict the distribution of mechanical properties during biological ground improvement, 21st Alert Workshop and School Programs, Aussois, October 4-9 2010 (oral presentation).
28) Van Paassen, L.A. (2008) Biogrout, bacteria build underground, Lecture international journalist workshop Biotechnology, January 8, 2008, Delft.
29) Van Paassen, L.A. (2008) Smartsoils® grondeigenschappen op bestelling, Lezing Slappe bodemdag, KIVI Niria, June 12, 2008, Zoetermeer.
30) Van Paassen, L.A. (2008) BioGrout, new methods to strengthen soils and rock using micro-organisms. Guest lecture: BSc course Rock Mechanics, Applied Earth Sciences, TU Delft, 25 November 2008, Delft.
31) Van Paassen, L.A. (2008) Smartsoils® grondeigenschappen op bestelling, middagsymposium duurzaam ophogen, Deltares, 26 November 2008, Delft.
32) Van Paassen, L.A. (2008) Biogrout, bacteriën bouwen in de bodem, Lecture for journalists, department Geo-Engineering, 2 December 2008, TU Delft, Delft.
33) Van Paassen, L.A. (2008) Smartsoils® Changing soil properties in situ, Guest lecture: International course on Dike Safety and Flood Protection, Deltares, 4 December 2008, Delft.
34) Van Paassen, L.A. (2008) Smartsoils® grondeigenschappen op bestelling, Gastlezing: studiedag Intelligent gebruik niet geschikte gronden, KIVI Niria, 10 December 2008, Antwerpen.
35) Van Paassen, L.A. (2007) Bacteria mediated mineral precipitation in coastal sediments, workshop “Paulina defaunation experiment: presentation of results” Ghent University, Gent, Belgium, 1 February 2007.
36) Van Paassen, L.A. (2007) BioGrout: microbial carbonate precipitation as soil improvement method. Eindhoven, The Netherlands, Invited lecture at "Biofilms in porous media" workshop, TU Eindhoven, The Netherlands, 6 September 2007.
37) Van Paassen, L.A. (2007) BioGrout: microbially induced carbonate precipitation in sand – flow and transport aspects. Utrecht, The Netherlands, Lecture and abstract at “Marie Curie Workshop on Flow and Transport in Industrial Porous Media”, Utrecht University, The Netherlands, 12 November 2007.
38) Van Paassen, L.A. (2007) Bacteriën bouwen in de bodem. Delft, The Netherlands, lecture at open house at LST, TU Delft, The Netherlands, 19 & 22 Oktober 2007.

Invited Presentations – ASU Internal

1) Van Paassen, L.A. & Moug, D. (2019) Liquefaction Mitigation via Microbial Denitrification, CBBG annual meeting, October, 2019 (invited lecture)
2) Kavazanjian, E. Van Paassen, L.A. & Khodadadi Tirkolaei, H. (2019) CBBG at NHERI or gone, not far, to Or-e-gon), CBBG webinar, September 20, 2019
3) Van Paassen, L.A. (2019) CBBG Summer program, CBBG Welcome & Introduction, May

4) Van Paassen, L.A. (2019) Biogeotechnical engineering: Using Biology for Sustainable Construction, guest lecture in Julian Tao's course on Bio-inspired design, April 2019.
5) Van Paassen, L.A. (2018) Field Trials on MICP and MIDP, CBBG Webinar, ASU, October 19 2018
6) Van Paassen, L.A., Kavazanjian E., Rittmann, B., Mahabadi, N., Zapata, C., Khodadadi, H., Hamdan, N. **Hall, C.A**., **Stallings, E.G.**, **Kim, D**,. Wang, L., **Martin, K., Krishnan, V.**, Paez, J., Borah, D. Egan, A.(#), von Lichtenstein D.(#), (2018) Field applications of MICP and MIDP, CBBG midterm meeting, Georgia Institute of Technology, Atlanta, April 12 2018 (oral presentation)
7) **Kim, D.(~)**, Mahabadi, N., **Hall, C.**, van Paassen, L. (2017) Pore-scale Investigation of Biogenic Gas Distribution: The Effect of Gas Production Rate, CBBG site visit 2017 (poster)
8) **Hall, C.(~)**, Van Paassen, L., Rittmann, B & Kavazanjian, E. (2017) Microbially Induced Desaturation and Precipitation (MIDP) via Denitrification under Centrifugal Loading, CBBG site visit 2017 (poster)
9) Mahabadi, N. **Hall, C.** & Van Paassen, L.A. (2017), Desaturation via Biogenic Gas Formation and Migration: Micro & Mesoscale Experiments, CBBG site visit 2017 (poster)
10) **Stallings, E.G.**, Kavazanjian, E., Zapata, C. & Van Paassen L.A. (2017)Unsaturated Fluid Flow through Granular Soils Treated with Microbial Induced Desaturation and Precipitation (MIDP)
11) Van Paassen, L.A. (2017) Bio-based Geotechnics, Environmental Engineering Seminar, ASU, 21 November 2017.
12) Van Paassen, L.A. (2017) Bio-based Ground Improvement, CBBG webinar, ASU, 3 March 2017.

Invited Conference Presentations, including students

1) Van Paassen, L.A.(*) **Hall, C.A.**, **Stallings, E.**, **Kim, D.**, Wang, L. (∞), Mahabadi, N. (X), Zapata, C., Kavazanjian, E. (2018), A multiscale approach towards improved design and better understanding of bio-based ground improvement methods, 2018 World Congress on Advances in Civil, Environmental and Materials Research (ACEM18), Incheon, South Korea 27-29 August 2018 (invited lecture)
2) Van Paassen L.A. (2018), Scale up and field trials on bio-based soil improvement methods, Second China-US Workshop on Ground Improvement Technologies, Shanghai, May 26 2018 (invited lecture)
3) Van Paassen, L.A. & Kavazanjian, E. (2017) Desaturation by Biogenic Gas Formation as Ground Improvement Technique, State of the Art lecture during Second Pan-American Conference on Unsaturated Soil Mechanics, Dallas, 15 November 2017 (invited lecture).
4) Van Paassen, L.A. (2017) Research on Bio-mediated and Bio-inspired Geotechnics at Netherlands and USA, Symposium on New Technologies for Urban Geotechnical Constructions, Singapore, 26-27 July 2017.
5) Van Paassen, L.A. (*~) (2016) Applications of Biomineralization in Geotechnical and Geo-Environmental Engineering Goldschmidt Conference Abstracts 3263. (invited presentation).
6) Van Paassen, L.A., van Wijngaarden, W.K., van der Star, W.R.L., van Zwieten, G., van Baalen, L. (2013) Field trials in biocementation: modeling and monitoring, 5th International Conference on Porous Media & Annual Meeting, Interpore 21 - 24 May, 2013, Prague, Czech Republic (invited speaker).
7) Van Paassen, L.A. (2013) Bio-based ground improvement methods, Installation effects in geotechnical engineering, Geoinstall, 24-27 March 2013, Rotterdam, The Netherlands (featured speaker).
8) Van Paassen, L.A. (2012) Bio-mediated ground improvement from concept to field application, 22nd V.M. Goldschmidt conference, Earth in Evolution, 24-29 June 2012, Montreal, Canada (keynote lecture).

9) Van Paassen, L.A., van Hemert, W.J., van der Star, W.R.L., van Zwieten, G. and van Baalen, L. (2012) Direct Shear Strength of Biologically Cemented Gravel. In: Geocongress 2012 State of the art and practice in geotechnical Engineering (invited lecture).
10) Van Paassen, L.A. (2012) Liquefaction of Iron ore cargo, Ingeokring symposium 28 September 2012, Delft (invited lecture).
11) Van Paassen, L.A. (2012) Sustainable reuse of dredged sediments in The Netherlands, 4-6 June, Lille, France (invited lecture).
12) Van Paassen, L.A. (2009) 3D modelling of cemented zones in biogrouted sand, Ingeokring symposium 3 December 2009 (invited lecture).
13) Van Paassen, L.A. (2007) BioGrout: new methods to improve properties of soils and rock using micro-organisms. Invited lecture at Ingeokring symposium "And what is the engineering geologist doing today?" Delft, The Netherlands, 30 November 2007. (invited lecture)

Peer-reviewed Conference Presentations

1) Wang, L.(*), van Paassen, L.A.(˜), & Kavazanjian, E. (2020) Feasibility Study on Liquefaction Mitigation of Fraser River Sediments by Microbial Induced Desaturation and Precipitation (MIDP) Geo-Congress 2020: Biogeotechnics, 121-131 (oral)
2) **Woolley, M.A.(*˜)**, van Paassen, L.A. & Kavazanjian E. (2020) Impact on Surface Hydraulic Conductivity of EICP Treatment for Fugitive Dust Mitigation, Geo-Congress 2020: Biogeotechnics, 132-140 (poster)
3) **Hall, C.A.**(˜), Mahabadi, N., Kavazanjian, E., van Paassen, L.A., & Rittmann B. (2019) Biogeochemical Reactive Transport Model for Denitrification-Driven Ground Improvement. Geophysical Research Abstracts 21 (poster)
4) Mahabadi, N., Zheng, X., Yun, T.S., van Paassen, L.A. & Jang, J. (2019) Gas bubble migration and trapping in porous media – Pore-scale simulation, Interpore 2019, Valencia (poster)
5) Khodadadi Tirkolaei, H., van Paassen, L.A., Kavazanjian, E. (2019) The effect of kinetics on the efficiency of biologically induced carbonate precipitation via urea hydrolysis for soil improvement applications, Interpore 2019, Valencia (poster)
6) **Kim, D.**, Mahabadi, N., Jang, J. & van Paassen, L.A. (2019) Pore-scale Characterization of Biogenic Gas Formation in Porous Media: The Effect of Gas Production Rate, Interpore 2019, Valencia (oral)
7) Mahabadi, N., **Kim, D.**, Jang, J. & van Paassen, L.A. (2019) Pore Network Simulation of Biogenic Gas Nucleation and Migration in Porous Media, Interpore 2019, Valencia (poster)
8) Wang, L.(˜) & van Paassen, L.A. (2019) Liquefaction mitigation of Fraser River sand with Microbial Induced Desaturation and Precipitation (MIDP), Interpore 2019, Valencia (poster)
9) **Woolley, M.**, Kavazanjian, E. & van Paassen, L.A. (2019) Hydrogel-Enhanced EICP Application to Fugitive Dust Mitigation:Impacts on Surface Permeability and Erosion Resistance, Interpore 2019, Valencia (poster)
10) Van Paassen, L.A.(˜), Zeng, C. & Zheng, J, (2019) Numerical modelling of microbially induced calcite precipitation in field trials, Interpore 2019, Valencia (oral)
11) Hall, C.A., Rittmann, B., Kavazanjian, E. & van Paassen, L.A. (2019) Multiphase Biogeochemical Model to Predict Microbially Induced Desaturation and Precipitation for Earthquake Hazard Mitigation, AGU Fall Meeting 2019 (oral)
12) Hall, C.A. & van Paassen L.A. (2018) Multiphase Biogeochemical Model to Predict Microbially Induced Desaturation and Precipitation at Field-Scale, AGUFM 2018, H21N-1886
13) Borah, D(*~). & Van Paassen, L.A. (2018) Use of Biogenic Gas Production as a Pre-Treatment to improve the Efficiency of Dynamic Compaction, Interpore 2018, New Orleans, 589 (poster)

14) **Kim, D.** (*~), Mahabadi, N.(X), Jang, J. & Van Paassen, L. (2018), Permeability Reduction Caused by Multiple Treatments of Biomineral Precipitation in Homogeneous Porous Media: Experimental Study and Pore Scale Modelling, Interpore 2018, New Orleans, 749 (oral presentation)
15) **Kim, D.**, Mahabadi, N.(X), Jang, J. & Van Paassen, L. (2018), Experimental Study and Modeling of Biogas Formation in Homogeneous Porous Media, Interpore 2018, New Orleans, 748 (poster)
16) Mahabadi, N.(˜) & Van Paassen, L. (2018) Pore Scale Simulation of Biogenic Gas Formation and Migration in Porous Media, Interpore 2018, New Orleans, 772 (oral presentation)
17) Mahabadi, N.(˜), Khodadadi Tirkolaei, H.(X), **Krishnan, V.** & Van Paassen, L. (2018), The Impact of Precipitation Scenarios on the Characteristics of Porous Media: Numerical Simulation vs Experiments, Interpore 2018, New Orleans, 773 (poster)
18) **Hall, C.**, Van Paassen, L., Rittmann, B & Kavazanjian, E. (2018) Microbially Induced Desaturation and Precipitation (MIDP) via Denitrification during Centrifugal Loading, Interpore 2018, New Orleans (oral presentation)
19) Mahabadi, N.(~), Kim, D., Hall, C., van Paassen, L. (2017) Effect of carbonate precipitation on the hydrodynamics of porous media: Numerical Simulation, AGU Fall Meeting 2017, New Orleans. (oral presentation)
20) **Kim, D.**(~), Mahabadi, N., **Hall, C.**, van Paassen, L. (2017) Characterization of biogenic gas and mineral formation process by denitrification in porous media, AGU Fall Meeting 2017, New Orleans. (oral presentation)
21) **Kim, D.**(~), Mahabadi, N., **Hall, C.**, van Paassen, L. (2017) Characterization of calcite mineral precipitation process by EICP in porous media, AGU Fall Meeting 2017, New Orleans. (poster)
22) Van Paassen, L.A. (2017) The kinetics of microbially induced calcium carbonate precipitation by urea hydrolysis, AGU, New Orleans, 11 December 2017 (oral presentation).
23) Chin a Moei, S., van Paassen, L.A.(*), Hazwani, N.M.Z., Chassagne, C., Jommi, C. (2017) The Effect of Organic Matter on Shrinkage and Water Retention Behaviour of Organic Dredged Sediments, Sednet 2017, Genoa, Italy. (oral presentation)
24) Chin a Moei, S., van Paassen, L.A. (*), Hazwani, N.M.Z., Chassagne, C., Jommi, C. (2017) The Effect of Organic Matter on Shrinkage and Water Retention Behaviour of Organic Dredged Sediments, Responsible Management of Peatlands, IPS, Aberdeen, Scotland. (oral presentation)
25) Van der Star, W.R.L. (*), Schenkeveld, F.M., Klessens, T.M.A., van Zwieten, G. (~) & van Paassen, L.A. (2017) Experiments to investigate the effectiveness of a new geochemical method to mitigate backward erosion piping. 25th Meeting European Working Group on Internal Erosion in Embankment Dams & their Foundations. (oral presentation)
26) Den Hamer, D.A. (*~), van Paassen, L., Bergwerff, L. & Pham, V. (2016) Impact of injection strategy on calcium carbonate distribution in porous media, Goldschmidt Conference Abstracts 646 (poster).
27) Pham, V.P. (*~), van Paassen, L.A., den Hamer, D. & van der Star, W. (2016) Soil Improvement Potential of Microbially Induced Gas Formation and Carbonate Precipitation. Goldschmidt Conference Abstracts 2496 (poster).
28) Bergwerff, L. (*~), Picioreanu, C., van Loosdrecht, M. & van Paassen, L. (2016) Considerations for Saturation Calculations of Concentrated Non-Equimolar Calcium Carbonate Precipitation, Goldschmidt Conference Abstracts 212 (poster).
29) Debuigne, T. (*~), Brakni, S., Sutton, G., El Fgaier, F., Harrington, J., Masson, E., van Paassen, L., Lemiere, B., van Dessel, J., Wijdeveld, A. (2015) Social, geographical, technical, environmental and economic approaches to strength marine sediment reuse options through CEAMaS project. SedNet Conference, Krakow 2015 (oral presentation).

30) Wijdeveld, A. (*~), van Paassen, L.A., Chassagne, C., Tollenaar, R., Oliveira, B. (2015) Lift up of lowlands, looking at the reuse of sediments on peat meadows by looking at the physical, chemical and biochemical properties in relation to the local situation Sednet, Krakow 2015 (oral presentation).
31) Afanasyev, M. (*~), Huisman, H., van Paassen, L.A. and Heimovaara, T.J. (2015) Studying the past, understanding the present, predicting the future - analysis of corrosion systems in soil surrounding buried ancient metal, BioGeoCivil Summit 2015 17-19 November The Art Centre, Delft, The Netherlands. (oral presentation)
32) Afanasyev, M. (*~), van Paassen, L.A. and Heimovaara, T.J. (2015) Quantification of soil heterogeneity induced by corroding metal objects, using X-ray computed micro tomography (CMT), BioGeoCivil Summit 2015 17-19 November The Art Centre, Delft, The Netherlands. (oral presentation+poster)
33) Kulshreshtha, Y.(*~), Schlangen, E., Jonkers, H.M., Vardon, P.J., van Paassen, L.A. (2015) CoRncrete: A bio-based construction material, BioGeoCivil Summit 2015 17-19 November The Art Centre, Delft, The Netherlands. (poster)
34) Nakano, A.(*~), van Paassen, L.A., van der Star, W.R.L. (2015) Microbially induced carbonate precipitation by nitrate reducing bacteria using pulsed flow injections, BioGeoCivil Summit 2015 17-19 November The Art Centre, Delft, The Netherlands. (oral presentation+poster)
35) Pham, V.P.(*~), Nakano, A., van Paassen, L.A., van der Star, W.R.L. & Heimovaara, T.J., (2015) Biological Denitrification – Calcium Carbonate Precipitation Combination in geotechnical engineering, BioGeoCivil Summit 2015 17-19 November The Art Centre, Delft, The Netherlands. (oral presentation+poster)
36) Tollenaar, R.(*~), van Paassen, L.A. & Jommi, C. (2015) New insights on dessication cracks in fine grained sediments, BioGeoCivil Summit 2015 17-19 November The Art Centre, Delft, The Netherlands. (oral presentation)
37) Zain, N.H.M., van Paassen, L.A., Jommi, C., Heimovaara, T.J. (2015) The Effect of Decomposition on Compression Behaviour of Organic Sediments from Wormer & Jisperveld, The Netherlands, BioGeoCivil Summit 2015 17-19 November The Art Centre, Delft, The Netherlands (oral presentation+poster).
38) Afanasyev, M., Heimovaara, T., van Paassen, L. (2014) Examination for Predicting Ground Settlement Based on Measurement Records by Using a Neural Network Model, EGU General Assembly Conference Abstracts 16, 5122. (poster)
39) Pham, V., van Paassen, L.A., Nakano, A., Kanayama, M. and Heimovaara, T. (2013) Microbially induced carbonate precipitation (MICP) by denitrification as ground improvement method - Process control in sand column experiments, Geophysical Research Abstracts, Vol. 15, European Geosciences Union General Assembly, Vienna, 7-12 april 2013 (oral presentation).
40) Bergwerff, L., van Paassen, L.A., Picioreanu, C., and van Loosdrecht, M.C.M. (2013) Investigation of Biogrout processes by numerical analysis at pore scale, Geophysical Research Abstracts, Vol. 15, European Geosciences Union General Assembly, Vienna, 7-12 april 2013 (poster presentation).
41) Afanasayev, M., Heimovaara, T.J. and van Paassen, L.A. (2013) Numerical model to simulate biological protection of steel corrosion, Geophysical Research Abstracts, Vol. 15, European Geosciences Union General Assembly, Vienna, 7-12 april 2013 (poster presentation).
42) Van Paassen, L.A. (2011) Bio-mediated ground improvement: From laboratory experiment to pilot applications, Geofrontiers, 2011, (oral presentation).
43) Van Paassen, L.A., Harkes, M.P., van Zwieten, G.A., van der Zon, W.H., van der Star, W.R.L. & van Loosdrecht, M.C.M. (2009) Scale up of BioGrout: a biological ground reinforcement method, 17th international conference on soil mechanics and geotechnical engineering, 5-9 october 2009, Alexandria, Egypt (oral presentation).

44) Van Paassen, L.A. (2009) Microbes turning sand into sandstone, using waste as cement. 4th International Young Geotechnical Engineering Conference Alexandria, Egypt (oral presentation).

B. PROFESSIONAL ACTIVITIES AND SERVICE

SUMMARY OF PROFESSIONAL ACTIVITIES AND SERVICE
Editor for peer-reviewed journal: **1**
International/national conferences chaired: **2**
International/national conferences committees: **4**
International/national conference sessions chaired: **7**
Peer Reviewer for **14** Journals
Proposal Review Service for **6** Funding Agencies
2 Engineering School-level Committees

Editor for peer-reviewed journal

2020-present ICE journal on Environmental Geotechnics

International/national conferences

1. Organising committee: UNESCO workshop on subsidence and earth fissures (2019)
2. Session chair, Geocongress 2020, Minneapolis (1 session)
3. Session chair, Interpore 2019, Valencia (3 sessions)
4. Session chair Geocongress 2019, Philadelphia (1 session)
5. Session chair, Interpore 2018, New Orleans (2 sessions)
6. Organizing Committee, ETH Global E4D Summerschool 'Sand, an (in)finite resource' august 2016.
7. Chair, Lift up Lowlands workshop, 10 December 2015.
8. Chair Organising Committee, BioGeoCivil Summit 2015, 17-19-November 2015.
9. Session convenor, European Geosciences Union General Assembly, Vienna, 7-12 april 2013.
10. Organizing Committee, Bio-Soils workshop, Cambridge, 2011.
11. Organizing/Scientific Committee, European Young Geotechnical Engineering Conference, Rotterdam, 2011.
12. Session Chair, conference on Frontiers in Shallow subsurface technologies, Delft, 2009.
13. Organizing committee, BGCE 2008, 1st International conference BioGeoCivil Engineering, 23-25 June 2008, The Netherlands, Delft.
14. Session chair, BioGeoCivil, Bodembreed, Ede, 2008.

Faculty committees

1. ASU/SSEBE, Faculty search committee (2018), Julian Tao
2. ASU-SSEBE, Lab management committee (2017-present).
3. TUD Applied Earth Sciences, Faculty Search committee (2013,2016)
4. TUD-Applied Earth Sciences, Communication committee (2009-2016)

Professional Committees/Boards

2018-present	ASCE Geo-Institute Technical committee on Soil Improvement
2018-present	ASCE Geo-Institute Technical committee on Site Investigation and Engineering Geology
2018-present	Treasurer AEG Arizona Chapter
2009-2012	Editor Ingeokring Newsletter (Dutch department of the IAEG and ISRM)
2013	Team captain Roparun: team Geo-runners 2013.

2004-2008 Treasurer of Ingeokring (Dutch department of the IAEG and ISRM).
2000-2001 Treasurer of student rugby club SRC Thor.
1999-2001 Team captain student rugby club SRC Thor.
1996-1997 Treasurer student athletics club DSAV De Delvers.

Professional memberships

2019-present Geological Society of America (GSA)
2018-present American Association for Engineering Geology and the Environment (AEG)
2017-present American Society for Civil Engineers (ASCE), Geo-Institute, Affiliated Member.
2014-present Geochemical Society (GS), Member.
2017-present American Geophysical Union (AGU)
2014-2016 European GeoSciences Union (EGU).
2007-present International Society for Rock Mechanics (ISRM).
2007-present International Association for Engineering Geology and the Environment (IAEG).
2000-present Ingeokring (Dutch department of IAEG and ISRM).
1998-present Kivi-Niria: Geotechniek and Mijnbouwkunde (Dutch department of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE)).
1996-present Koninklijk Nederlands Genootschap voor Mijnbouwkunde en Geowetenschappen (KNGMG) (Royal Dutch society for mining engineering and geosciences).

Journal Reviews

1. Ecological Engineering
2. Environmental Geotechnics
3. Bulletin for Engineering Geology and the Environment
4. Geotechnique
5. Geotechnique Letters
6. ASCE Journal of Geotechnical and Geoenvironmental Engineering
7. Canadian Geotechnical Journal
8. Materials
9. Water Research
10. Handbook of Porous Media
11. Transport in Porous Media
12. JGR Biogeosciences
13. Journal of the Royal Society Interface
14. Geomicrobiology Journal
15. GeoDerma

Article/Abstract reviews for conferences

1. ASCE Geo-Institute Geo-congress 2020
2. Interpore 2019
3. ASCE Geo-Institute Geo-congress 2019
4. Interpore 2018
5. 30th International Conference on Ocean, Offshore and Artic Engineering
6. Young Geotechnical Engineering Conference, Rotterdam, 2011
7. BioGeoCivil Engineering 2008

Proposal Reviews

1. National Science Foundation
2. Dutch Science Foundation STW
3. United States – Israel Binational Science Foundation
4. Israel Science Foundation
5. European Research Council
6. Swiss National Science Foundation

Outreach activities

1. Mentor for CBBG summer program hosting a research experience for K-12 teachers (RET) and Young Scholars (YS) in 2017, 2018, and 2019
2. Geo-career fairs with AEG and ASCE Geo-Institute
3. Advisor for Student Leadership Council, CBBG, 2017-2018
4. CBBG outreach activities, such as Night of the open door, Homecoming, Visits to elementary schools Capitol, Estrella Vista, 2017-present.
5. Workshops, lectures, demonstrations Open days Applied Earth Sciences, 2009-2016 .

PERSONNEL: STUDENT SUPERVISION / MENTORING, TEACHING, DISSERTATION COMMITTEES, RESEARCHERS, AND OUTREACH

SUMMARY OF MENTORING:
Postdoctoral Researchers: **1**
Ph.D. Students Graduated: **10** (4 chair, 1 co-chair, 5 advisor)
Ph.D. Students Current: **8** (2 chair, 2 co-chair, 4 advisor)
M.S. Students Graduated: **49**
M.S. Students Current: **5**
Undergraduate Students (Research): **27**
Student Fellowships and Awards: **2**
SUMMARY OF TEACHING:
Undergraduate Courses Taught, including New Course Development: **7**
Graduate Courses Taught, including New Course Development: **8**
Average Teaching Evaluation Score for Undergraduate Courses taught at ASU: **4.3/5**
Average Teaching Evaluation Score for Graduate Courses taught at ASU: **4.2/5**

Mentored Ph.D. students

1) **Zachary Hubbard** (2020-present), Geotechnical and Geo-environmental applications of Microbially Induced Iron Precipitation (co-chair)
2) **Farideh Ehsasi** (2020-present), bio-mediated ground improvement applications for iron ore tailings (chair)
3) **Elizabeth Stallings** (2017-present), Microbial Induced Desaturation and Carbonate Precipitation through denitrification, effect of biogas formation on hydraulic conductivity o MIDP treated sand. (co-chair)
4) ***Caitlyn Hall*** (2017-present), Modelling and field scale implementation of Microbial induced desaturation and precipitation. (advisor)
5) ***Miriam Wooley***: Enzymatic Induced Carbonate precipitation for Dust Control (advisor)
6) ***Vinay Krishnan*** (2017-present): (advisor)
7) ***Kimberly Martin*** (2017-present), Field-Scale Trial of Enzyme-Induced Carbonate Precipitation (EICP) as a Ground Improvement Technology (co-advisor/committee member)
8) **Daeyhun Kim** (2017-2019) Pore-scale Study of Bio-mineral and Bio-gas Formations in Porous Media (chair) https://repository.asu.edu/items/55491
9) ***Ashley Evans***, (2018) Estimation of pressuremeter modulus from shear wave velocity in the Sonoran Desert graduated august 2018 (committee member)
10) Maria Barciela, Consolidation & strength development of soft mud deposits by horizontal drainage (external advisor 2015-2019). https://doi.org/10.4233/uuid:ae11c3e7-86f2-4c6a-8d53-ee8781d56a72
11) Nor H.B. Zain (2019), Effect of Oxidation on the Compression Behaviour of Organic Soils, 9 July 2019, PhD dissertation https://doi.org/10.4233/uuid:aa7fe90a-7bf5-4c91-aa3e-c6a594a7d59d, (chair 2013-2019).
12) Luke Bergwerff, Numerical modeling of biocementation (chair 2012-present).
13) Michael Afanasyev, Engineering bio-based solutions for corrosion mitigation (daily supervisor 2011-2016).
14) Vinh Pham (2017) Bio-based Ground Improvement through Microbial Induced Desaturation and Precipitation (MIDP), 4 July 2017, PhD dissertation, https://doi.org/10.4233/uuid:3997066a-0ad6-4de2-9c79-e5e474bae20f, (chair 2012-2017).
15) Roderick Tollenaar (2017) Experimental Investigation on the Dessication and Fracturing of Clay, 15 June 2017, PhD dissertation, doi:10.4233/uuid:40f6b033-0e6a-460b-9501-30cf35a99b8d (chair 2012-2017).

16) Bruna Oliveira (2017) Lift up Lowlands, Using and upgrading dredged sediments to mitigate and reverse subsidence in low lying polder areas, 15 February 2017, PhD dissertation, http://edepot.wur.nl/387316 (advisor 2012-2017).
17) Yutian Yao (2016) Dewatering Behaviour of Fine Oil Sands Tailings: An Experimental Study, 28 November 2016, doi:10.4233/uuid:1ac8f35b-0738-42b4-8ae2-5a5f68941814 (co-chair 2010-2016).
18) Miranda van Wijngaarden (2016) Mathematical Modelling and Simulation of BioGrout, 12 January 2016, doi:10.4233/uuid:3c5fac03-e5ff-4b5c-a68d-7737c227bb09 (advisor 2009-2016).

Mentored M.S. students, Thesis research projects

1) Andrew Enns (current), Bio-based Scour mitigation
2) Sahil Kanawade (current), Microbially Induced Iron Precipitation
3) Anderson Nyaga (current) Calibration of drilled shaft resistance,
4) Joel Ramirez (current), non-thesis student
5) Belchor Sebastiao (current), non-thesis student
6) Aide Robles (2019) Reductive Dechlorination Sustained by Microbial Chain Elongation, MS, Arizona State University(committee member)
7) Jessy Hopman (2018), Denitrification based biogenic pre-treatment of soils for ground improvement (advisor)
8) Sai Singhar (2018), Evaluation of Climate Parameter with regards to Unsaturated Clay Soil Suction Profiles, MSc thesis Geotechnical Engineering, Arizona State University, (committee member)
9) Alan Cuzme (2018), Estimating Expansive Soil Field Suction Profiles Using a Soil Suction Surrogate, Arizona State University, (committee member)
10) Devajani Borah (2018) Use of Biogenic Gas Production as a Pre-Treatment to Improve the Efficiency of Dynamic Compaction in Saturated Silty Sand, MSc thesis Geotechnical Engineering, Arizona State University, August 2018 (chair)
11) Sayalee Joshi (2018) Exploring microbial chain elongation for production of organics and hydrogen in soils, Arizona State University, MSc thesis (committee member)
12) Gustav Andrag (2017) Compaction of silty sands through biogenic gas desaturation pretreatment, MSc thesis Geotechnical Engineering (external advisor)
13) Stephen Chin a Moei (2016) Effects of Organic Matter on Shrinkage and Water Retention Behaviour of Organic Dredged Sediments, MSc thesis Geo-Engineering, 14 December 2016. (chair)
14) Barend van de Bosch (2016) The effect of initial concentration on the consolidation behaviour of mud, MSc thesis Hydraulic Engineering Delft University of Technology, 1 December 2016 (chair).
15) Bas Druijf (2016) The use of additives to stabilise dredged material, MSc thesis Resource Engineering, Delft University of Technology, 31 October 2016 (chair)
16) Kaj Althuis (2016) Predicting the breaching production of a slope during a wet mining process, MSc thesis Resource Engineering, Delft University of Technology, 28 September 2016 (committee member).
17) Marcella Schoenmakers (2016) Remediation measures for solid bulk cargoes: Moisture content reduction inside a ship's cargo hold, Delft University of Technology, MSc thesis Geo-Engineering. (chair).
18) Nadine van Dijk (2016) Experimental investigation to the settling and consolidation of dredged Upper Till, MSc Geo-Engineering, Delft University of Technology, January 2016 (chair).
19) Ewoud Volbeda (2016) GeoWall – A challenging Quay wall, MSc thesis Hydraulic Engineering, Delft University of Technology, 29 January 2016.(committee member)

20) Erik Hendriks, Building with soft soils: The effect of pore water chemistry on the mechanical behaviour of cohesive sediment, MSc thesis Hydraulic Engineering, Delft University of Technology, (committee member).
21) Katja Smoor (2015) The impact of overburden pressure on unsaturated shrinkage behaviour of fine-grained soils, MSc Geo-Engineering, Delft University of Technology, 17 December 2015.
22) Remco Vis (2015) Control of Subsurface Flow: The Effect of Al-OM Interactions on Hydraulic Conductivity, MSc RE, 31 August 2015.
23) Yask Kulshreshtha (2015) CoRncrete: A bio-based construction material, MSc GE, 30 July 2015.
24) Michiel Ensing (2014) In-pit co-disposal of tailings in an onshore dredge mine, MSc RE, 5 September 2014.
25) Geert van de Weg (2014) Liquefaction of iron ore; with a focus on the determination of the soil water retention curve, MSc GE, 26 August 2014.
26) Konstantinos Petropoulos (2013) Earthquake induced liquefaction susceptibility of Carbonate sands, MSc GE, 16 December 2013.
27) Barend Ubbink (2013) Controlled Precipitation of Calcium Carbonate in Spatial Dimension with Multiple Calcium Chloride and Sodium Carbonate Pulses, MSc PE, 8 November 2013.
28) Liu Xu (2013) Development and Evaluation of a Numerical Model being able to Simulate Soil Pore Size Change and Geosciences, MSc GE, 26 August 2013.
29) Thomas Nijssen (2013) Modelling of cyclic drying/rewetting behaviour of Albian oil sand tailings, MSc GE, 5 July 2013.
30) Joelle Langeveld (2013) The influence of biofilm development on the effective gas permeability in hydraulic fractures, MSc PE, 23 April 2013.
31) Gert-Jan Meier (2012) Reconstitution of sensitive clays, MSc thesis Geo-Engineering, 24 October 2012.
32) Andrina Drost (2012) Geomechanical properties of a backfill material suitable for stabilising salt caverns in Twente, MSc thesis Resource Engineering, 24 August 2012.
33) Stijn Biemans (2012) Prevention of pipeline floatation during dredge-based backfilling, MSc Geo-Engineering, 21 August 2012.
34) Vinh Pham (2012) Utilization of Rice husk ash in GeoTechnology: Applicability and effect of the burning conditions, MSc thesis Geo-Engineering, 6 July 2012.
35) Sandra Leurs (2012) Frost salt scaling of blast furnace slag concrete, MSc Civil Engineering and Geosciences, 8 April 2012.
36) Mathijs Mol (2012) The design and development of CaveCad: A state of the art integrated cave management system, MSc Civil Engineering and Geosciences, 6 March 2012.
37) Dianne den Hamer (2012) Stabilization of Peat by Infiltration of Reactants. A feasibility study: infiltration of silica biopolymer suspension in peat, MSc Geochemistry, Utrecht University, 17 February 2012.
38) Dimitrios Baltoukas (2012) 1-D Approximation for the simulation of preferential flow in heterogeneous landfill conditions, MSc Civil Engineering and Geosciences, 15 February 2012.
39) Jochem van der Meulen (2012) Modeling of Ripening Behaviour of Albian Oil Sand Tailings in Canada, MSc Civil Engineering and Geosciences, 30 January 2012.
40) Shantie Kapoershan (2012) Visual studies of counter-current imbibition in newly constructed glass micromodels and Hele Shaw cells, MSc Civil Engineering and Geosciences, 12 January 2012.
41) Werner van Hemert (2011) A study on monitoring the first field applications of Biogrout in gravel, MSc Civil Engineering and Geosciences, 31 August 2011.
42) Effrosyni Boufidou (2011) Towards understanding the DOQ Priorat terroirs: A multivariate GIS analysis, MSc Civil Engineering and Geosciences, 30 August 2011.

43) Bert Lietaert (2011) Design and development of a hazard map for the positioning and siting of large jack-up rigs at the geologically complex areas of the Gulf of Suez, MSc Civil Engineering and Geosciences, 30 June 2011.
44) Nienke Bruinsma (2011) Model for the formation of phosphate minerals inside granular sludge to describe segregation in a granular sludge reactor, MSc Biotechnology, 23 June 2011.
45) Nick Russell (2011) Optimization of mining and processing for an Albanian Nickel-Laterite mine, MSc Mining Engineering, 17 June 2011.
46) Andre van Turnhout (2011) One- and two-dimensional numerical modelling of enamel caries formation and microbial conversions in dental plaque, MSc Biotechnology, 9 June 2011.
47) Linda de Vries (2011) The deviating interpretation of Almere to the NEN-6743: The result of a heterogeneous soil profile, or a result of misinterpreted overconsolidation?, MSc Geo-Engineering, 1 June 2011.
48) Arjan Kochx (2011) The effect of filter jacket clogging on the performance of prefabricated vertical drains in soft soils, MSc Geo-Engineering, 22 March 2011.
49) Esther Rozenbrand (2011) Investigation into quantitative visualisation of suffusion, MSc Geo-Engineering, 1 February 2011.
50) Fitsum Yemaneab Emha (2011) Shear strength of Bremanger sandstone rockfill at low stress, MSc thesis Geo-Engineering, 31 January 2011.
51) Guido Rutten (2011) Interactions between beachrock formations and shoreline evolution; Case study: Togo, MSc thesis Geo-Engineering, 12 september 2011.
52) Mesay Mamo (2010) Statistical Characterization of Spatial Variability for a Hydraulic Fill Slope, MSc Geo-Engineering, 1 June 2010.
53) Maren Katterbach (2009) Final safety design of the Cumbindanovu dam in Sardina: A combined approach of geotechnical and structural engineering, MSc Engineering Geology, 30 November 2009.
54) Kenneth Lupogo (2009) Effects of fines on the mechanical behavior of sandy soils MSc Geo-Engineering, 25 August 2009.
55) Joseph Ogochukwu Isimite (2008) Computational model to study hydrodynamics, solute transport, crystal growth and erosion in porous media, MSc Chemical Engineering, March 2008.

Mentored Undergraduate students/BSc or honors thesis research projects

1) Preston Wong (#) (2020) Bio-based scour protection,
2) Kristina Coppinger (#) (2019-2020), Undergraduate Barrett honors student Microbially Induced Desaturation and Precipitation by denitrification for mitigation of earthquake induced liquefaction
3) Addison Sherman (#) (2019-2020), Undergraduate hourly worker Microbially Induced Desaturation and Precipitation by denitrification for mitigation of earthquake induced liquefaction
4) Katie Currier (#), Denitrification for mitigation of liquefaction Young Scholar/Undergraduate hourly worker (2019-2020)
5) Anderson Nyaga (#),characterization of iron ores (2018-2019)
6) Oniya Silas (#) Denitrification for liquefaction mitigation (2017-2018)
7) Devon von Lichtenstein (#) Denitrification for liquefaction mitigation (2017-2018)
8) Tycho Klessens (2017) Flood protection with dynamic internal erosion tackling zones (DIETZ), BSc thesis Applied Earth Sciences, 20 January 2017 (chair).
9) Roy Meinen (2017) Beachrock: MICP by denitrification, BSc thesis Applied Earth Sciences, 20 January 2017 (chair).
10) Wouter van Adrichem (2016) Optimal sand-clay mixture for sand sculptures - An experimental investigation, BSc thesis Civil Engineering, 22 June 2016 (chair).

11) Manon Ligeon (2016) Preventing coastal erosion by biological denitrification, BSc thesis Civil Engineering, 22 June 2016 (chair).
12) Jarco de Jong (2016) Degradation of CoRncrete in a Wet Environment, BSc thesis Applied Earth Sciences, 22 June 2016 (chair).
13) Niels Overbosch (2016) Sand Binders, A Cost and Strength Analysis, BSc thesis Applied Earth Sciences, 22 June 2016 (chair).
14) Joep Lamberti (2016) Assessing slope stability for blended iron ores stockpiles with Arcelor Mittal, BSc thesis Civil Engineering, 21 January 2016 (chair).
15) Sara Essam (2015-failed) Crack development in clay BSc thesis Civil Engineering (chair unfinished).
16) Kaj van der Waal (2014) Processing Analysis & Market Analysis Bentonite for Sivomatic Bentonite, BSc thesis Applied Earth Sciences, 9 October 2014.
17) Michiel Ooms (2014) Characterization and applications of bentonite, BSc thesis Applied Earth Sciences, 24 June 2014.
18) Aron Noordam (2014) Het ontwateren van ijzererts, BSc thesis Civil Engineering, 23 June 2014.
19) Bas Druijf (2014) Dewatering Bulk Cargo, BSc thesis Civil Engineering, 23 June 2014.
20) Kamilla Guijt (2014) Reclaiming Pantai Mutiar, BSc thesis Civil Engineering, 23 June 2014.
21) Michiel Ooms (2013) The Effect of Flocculants on the Dewatering of Clay Slurries: an experimental study, BSc research minor project Applied Earth Sciences, 20 June 2013.
22) Stephen Cam (2013) Water Retention Research of Iron Ore Fines, BSc thesis Civil Engineering, 1 November 2013.
23) Melvin Koote (2013) Het droogproces van slib uit de Delftse Hout, BSc thesis Applied Earth Sciences, 5 July 2013.
24) Alex Greeuw (2013) The Condensation and Evaporation of Water in Iron Ore, BSc thesis Civil Engineering, 13 June 2013.
25) Omer Kilic (2013) Characteristics of iron ore, BSc thesis Civil Engineering, 9 January 2013.
26) Eline Heemskerk (2012) L-vormige keermuren, BSc thesis Applied Earth Sciences, 15 October 2012.
27) Roman Hijman (2012) The effect of flocculant on the sedimentation and consolidation of fine tailings, BSc thesis Applied Earth Sciences, 24 August 2012.
28) Wynze Meier (2012) The influence of introduced air bubbles on the flow of water in a porous medium, BSc research minor project Applied Earth Sciences, 9 July 2012.
29) Els Wijermars (2011) Sedimentation of Oil Sands Tailings, BSc thesis Applied Earth Sciences, 26 april 2011.
30) Mathijs Bootsma (2010) Shear strength of the Bremanger Sandstone: “Determining the basic friction angle using a Golder Direct Shear Box”, BSc thesis Applied Earth Sciences, 3 September 2010.
31) Mathijs Janzen (2010) Specific Cementing of Reservoir Rock with Dual Permeability, BSc thesis Applied Earth Sciences, 6 August 2010.
32) Miranda Pieron (2009) Strength and deformation of biologically cemented sandstone, BSc thesis Applied Earth Sciences, 16 June 2009.
33) Bram van den Eijnden (2008) Reinforcement of calcarenite room and pillar mines by microbially induced calcite precipitation, BSc thesis Applied Earth Sciences, 24 July 2008.
34) Wiebe van Vuure (2006) Kinetics of urea hydrolysis by Sporosarcina pasteurii with calcium carbonate precipitation, BSc thesis Biotechnology, 14 October 2006.

Courses taught

2018-present ASU – CEE351 Introduction to Geotechnical Engineering. 4/5
2018-present ASU – CEE598 Engineering Geology, spring semester, 12 students, 4.5/5.
2017-present ASU – CEE598 Biogeotechnical Engineering, fall semester, 12 students, 4.2/5.

2014-2016 TUD – AESB2340 Extraction of Resources (lecturer/course manager)
2015-2016 Postacademic education (PAO): “Handen aan de Grond” Soil characterization (lecturer).
2012-2016 TUD - CIE5320 Site investigation and physical modeling (lecturer).
2010-2016 TUD - TA1009/AESB1240 Introduction Applied Earth Sciences (lecturer).
2010-2016 TUD - AESB3440 Field development; Geotechnical and Environmental aspects in Resource extraction (lecturer).
2010-2016 TUD - AESM1630 Engineering properties of soils and rock (lecturer).
2009-2016 TUD - AESM2901 Engineering Geological Fieldwork (course manager).
2010-2013 TUD - AESM1750 Geology for Engineers (course manager).
2010 Postacademic education (PAO): Engineering Geology Abroad.
2011-2012 TUD - AESM1720 Rock Mechanics Applications (lecturer) .
2010-2013 TUD - TA2230 Introduction to Geo- & Resource Engineering (course manager).
2009-2011 TUD - AESM1660 Subsidence.
2010-2013 TUD - TA3690 Special topics in Geo-Engineering (guest lecture).
2010-2013 TUD - CIE4780 Special topics in Underground Space Technology (guest lecture).

C. RESEARCH SUPPORT

SUMMARY OF RESEARCH SUPPORT
Total amount of all pending proposals in which Prof. Van Paassen is the PI or co-PI: $17,842,209.00
Total amount of all awards in which Prof. Van Paassen is the PI or co-PI: $12,506,356.00
Prof. Van Paassen's share (recognition) in all awards as PI or co-PI*: $1,034,469.66
Total amount of all awards in which Prof. Van Paassen is the PI**: $1,034,469.66
Prof. Van Paassen's share (recognition) of the total amount received at ASU as PI or co-PI as of 05/19/2020: $1,031,734.66
Prof. Van Paassen's share of Research Expenditures as of 1/1/2020: $862,625.26

*Recognition and expenditures for CBBG projects are based on a fixed percentage; this not necessarily correspond to the project-based recognition and expenditures.
**This includes projects within CBBG for which I am the Senior Investigator, and the project supported by ADOT for which I was not eligible to be the PI for administrative reasons.

Sponsored research awards/projects at ASU:

1. SPR754 Calibrating Side Resistance Factors of Drilled Shafts, PI: Kavazanjian, Edward; Sponsor: ADOT: Research Center; Award/Identifying Number: AWD00032961; ADOT16-147805/4; Period of Performance: 7/1/2018 - 3/31/2020; Total Amount: $111,331.00
2. Toronto Project shipping and analysis, PI: Kavazanjian, Edward, Sponsor: Deltares, Award/Identifying Number: PO 1124395; Period of Performance: 9/1/2018 - 5/31/2020; Total Amount: $5,000.00
3. CBBG Core Project: Groundwater Technologies BV; PI: Kavazanjian, Edward; Award/Identifying Number: LTR 11/20/2018; Total Amount: $26,969.00
4. Feasibility Study to evaluate potential applications of biocementation through MICP by urea hydrolysis for iron ore mine tailings (ArcelorMittal); PI: van Paassen, Leon; Award/Identifying Number: AGR 10/9/2019; Total Amount: $95,000.00
5. Engineering Research Center for Bio-Mediated and Bio-Inspired Geotechnics (CBBG); PI: Kavazanjian, Edward; Sponsor: National Science Foundation (NSF); Award/Identifying Number: AWD00029108; Period of Performance: 1/1/2017 - 7/31/2020; Total Amount: $12,250,321.00

Pending

6. Engineering Research Center for Bio-Mediated and Bio-Inspired Geotechnics (CBBG); PI: Kavazanjian, Edward; Sponsor: National Science Foundation (NSF); Award/Identifying Number: FP00000011_Rev4; Period of Performance: 8/1/2020 - 7/31/2025; Total Amount: $16,444,444.00
7. Multi-Scale Investigation of Bio-Based Mineral Precipitation in Carbonate Bearing Granular Soils and Construction Related Waste; PI: Kavazanjian, Edward; Sponsor: National Science Foundation (NSF); Award/Identifying Number: FP00021773; Period of Performance: 6/1/2020 - 5/31/2023 Total Amount: $600,000.00
8. Microbially Induced Desaturation (MID) to Mitigate Liquefaction in Portland; PI: van Paassen, Leon Sponsor: Portland State University; Award/Identifying Number: FP00023193; Period of Performance: 8/1/2020 - 7/31/2023; Total Amount: $172,000.00
9. Ecophysiological controls of coupled soil organic carbon formation and microbial perchlorate reduction in Martian regolith; PI: Delgado, Anca; Sponsor: NASA; Award/Identifying Number: FP00023797 Period of Performance: 9/1/2020 - 8/31/2023; Total Amount: $ 625,765.00

Sponsored research awards/projects not clearly recognized by OKED Research Analytics

1. CBBG Research Project, Senior Investigator: Microbially Induced Precipitation and Desaturation through denitrification for liquefaction mitigation, ($ 472,083 up to 2020)

2. CBBG Research Project, Senior Investigator: Bio-based scour mitigation, ($ 60,000 up to 2020)
3. CBBG Research Project, co-Senior Investigator: Microbial Induced Iron Precipitation, ($ 80,000 up to 2020)
4. Recruited Groundwater Technology as industry member for CBBG (+$25,000 membership fee), November 2018
5. Recruited Arcelor Mittal as industry member for CBBG (+$25,000 membership fee), November 2019
6. NSF I-Corps 2018 Spring Cohort Indianapolis ($25k) through USC, San Diego, April 2018.
7. CBBG Research Project, Senior Investigator: Biogenic Gas Production to improve the efficiency of compaction methods, ($ 10,000)
8. CBBG 20.
9. G-I Special projects grant: Developing online games for site characterization and engineering geology: TCC Engineering Geology & Site Characterization ($ 6,000).

Sponsored research/projects prior to joining ASU:

2015	CEAMaS: Civil Engineering Applications for Marine Sediments, FP7 INTERREG IVB through the European Regional Development Fund (ERDF) total 4,800,000 Euro of which 550,000 Euro TUD) for postdoc position, equipment, travel, and dissemination (valorization of STW Lift up Lowlands project) with CD2E, Port of Dunkerque (GPMD), École Centrale de Lille, Université Lille, University College Cork, Cork Institute of Technology, BRGM, BBRI. Principal Investigator.
2010-2016	Lift up Lowlands: Upgrading of natural materials and methods for sustainable lift up of low lying polder areas (750,000 Euro funded by STW for 2 PhD students in collaboration with Wageningen University), Principal investigator TUDelft.
2010-2016	Biofix: Bio-mediated ground improvement to mitigate liquefaction and piping of granular sediments (750,000 Euro funded by STW for 2 PhD students in collaboration with department of Biotechnology, Delft University of Technology), Principal investigator TUDelft.
2011-2015	Principal Investigator for several industry funded projects on Liquefaction of Iron Ore Cargo in Bulk Carriers (total 150,000 Euro).
2004-2009	Biogrout: ground improvement by microbially induced carbonate precipitation (2,000,000 Euro for TUDelft, Deltares & Volker Wessels) funded by Senter Novem, Dutch Ministry of Economic affairs), PhD Research.
2004	Client representative for geotechnical/geophysical survey for trenched pipeline, Caspian Sea, Kazaghstan (32,000 euro).
2002-2004	Numerous geotechnical consultancy projects, including slope stability, sheet piled walls, pile and raft foundations, directional drilling, settlement prediction.
2002	Dike failure investigation and restoration, Maasbree/Venlo.
2001-2002	MSc thesis project: Research on influence of pore fluid salinity on compressive behaviour of clays from Caspian Sea.
2000-2002	Field measurements and consulting: Pile Integrity Testing, Vibration Monitoring.
1999	Multidisciplinary project: Feasibility study for new public transport system, Andorra.
1998	Engineering Geological Fieldwork, Northern Spain; mapping, rock and soil classification, rock and soil laboratory testing.