## Curriculum vitae

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| **Name:** | Steinar Nordal | | | | |
| **Sex:** | **M** | **Birth year:** | **1954** | **Nationality:** | **Norwegian** |
| **Present position:** | Professor in Geotechnical Engineering, NTNU/NTH from 1987 | | | | |
| **Previous positions:** | Royal Norw. Navy/Marine Structures NTH 1978-79, Researcher, assistant/associate professor SINTEF/NTH 79-86, Visiting professor Univ. of Colorado 1991-1992, University of California San Diego 2005-2006. | | | | |
| **Academic degrees** | *Degree, university and year:* | | | | |
| Sivilingeniør (MSc) 1977 from NTH, Dr.ing. (Ph.D.) 1983 NTH | | | | |
| **Most important membership in academic and professional committees, scientific review work including peer-review, dissemination activities, and other professional merits past 10 years:** | | | | | |
| Member of The Royal Norwegian Society of Sciences and Letters (DKNVS),Norwegian Academy of Technological Sciences (NTVA), Core member of ECT7 The European Technical Committee for Numerical Methods in Geotechnical Engineering. Reviewer for the journals: Geotechnique, Computers and Geotechnics, ASCE Geotechnical Engineering, Acta Geotechnica. Opponent for 7 PhD candidates outside Norway last 10 years. Research dissemination in a 3 day course in Computational Geotechnics in the Netherlands every year last 10 years and every 2nd year at NTNU. Offering one research oriented PhD course at NTNU every year with leading international guest lecturers and more that 50 % international participation. Chairman in committee for organizing the 10th Int. conf. on Numerical Methods in Geotechnical Engineering at NTNU 2010, co-editor of peer reviewed proceedings with 154 papers. Member of ICG –NFR Centre of Excellence board 2003-2012, established the research oriented MSc study as part of the NFR Centre of Excellence Geotechnics and Geohazards. Chairing strategy work in Civil Engineering at NTNU (for Fagplan – IVT), Chairing the committee for the Civil Eng. Study of the Future (2009) and The Faculty Laboratory Committee 2012. | | | | | |

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| **Number of PhD-students** | | **As main supervisor:** | **As co-supervisor:** |
| Presently under supervision: | | 6 |  |
| Finished the last 5 years (01.01.2009-31.12.2014) | | 4 | 2 |
| **Number of publications / patents / popular science** | | **2010-2014:** | **Total career:** |
| In peer-reviewed journals or peer reviewed monographs | | **8** | **20+** |
| Review articles and book chapters | |  |  |
| Peer-reviewed conference proceedings | | **20** | **70** |
| Patents / patent applications | |  |  |
| Popular science books, articles, etc | |  |  |
| **H-index and/or citation-index** | *Indicate method for calculating index (SCI, Google Scholar or similar)* | | |
| **H-index = 6 from Scopus** | | |
| **The three most important publications the last 10 years** | *Title, journal, and link to internet where possible:* | | |
| 1. Soil deformation around a penetrating cone in silt. P. Paniagua1; E. Andò2; M. Silva2; A. Emdal1; S. Nordal1; G. Viggiani2, 1: NTNU, 2:Univ Gerenoble. Géotechnique Letters,Volume 3, 2013, pages185 –191 (Selected by editor as best paper Volume 3, <http://www.icevirtuallibrary.com/content/article/10.1680/geolett.13.00067> ) 2. “Use and misuse of the isotache concept with respect to creep hypothesis A and B.” Degago, S., Grimstad G., Jostad H. P., Nordal, S., Olsson, M.: Géotechnique, 61, No 10, 2011, pp 897-908, October <http://www.icevirtuallibrary.com/content/article/10.1680/geot.9.p.112> 3. Experimental study of strain localization in sensitive clays. Anders Samstad Gylland, Hans Petter Jostad , Steinar Nordal, Acta Geotechnica, (2014) No. 9: 227–240 <http://link.springer.com/article/10.1007/s11440-013-0217-8> | | |

**LIST OF PUBLICATIONS**

**2015**

**Paniagua, P., Fonseca, J., Gylland A.S., Nordal S.**

Microstructural study of the deformation zones during cone penetration in silt at variable penetration rates. Accepted in May 2015 for publication in Canadian Geotechnical Journal, Canadian Science Publishing.

**Grimstad, Gustav; Haji Ashrafi, Mohammad Ali; Degago, Samson Abate; Nordal, Steinar; Emdal, Arnfinn.**

Discussion of ‘Soil creep effects on ground lateral deformation and pore water pressure under embankments’. Geomechanics and Geoengineering 2015 pages.1-8,, An international journal by Taylor and Francis.   
DOI: 10.1080/17486025.2014.985338

**2014**

**Bonadies, F.; Nordal, Steinar; Gylland, Anders Samstad; Grimstad, Gustav; Jostad, Hans Petter; Cuomo, S.; Cascini, L..**

Numerical methods for simulation of downward progressive landslides. I: Numerical Methods in Geotechnical Engineering: Proceedings of the 8th European Conference on Numerical Methods in Geotechnical Engineering, Delft, The Netherlands, 18-20 June 2014.. CRC Press 2014 ISBN 978-1-138-00146-6. p. 579-584

**Guegan, Emilie; Sinitsyn, Anatoly; Nordal, Steinar.**

Field investigations, remote sensing and modelling approach for Arctic coastal erosion. XXV International Coastal Conference "Coastal Zone - Future Perspectives"; 2014-10-13 - 2014-10-17

**Gylland, Anders Samstad; Jostad, Hans Petter; Nordal, Steinar.**

Experimental study of strain localization in sensitive clays. Acta Geotechnica 2014 ;Volume 9.(2) p. 227-240

**Paniagua Lopez, Ana Priscilla; Emdal, Arnfinn; Nordal, Steinar.**

CPT'14- Proc 3rd Int Symp on Cone Penetration Testing. I: CPT'14 - Proc from the 3rd International Symposium on Cone Penetration Testing. Las Vegas, Nevada: The CPT'14 Organizing Committee 2014 ISBN 978-0-615-98835-1. p. 957-966

**Paniagua Lopez, Ana Priscilla; Gylland, Anders Samstad; Nordal, Steinar; Fonseca, J..**

Microstructural study of the deformation zones around a penetrating cone tip in silty soil.. I: Geomechanics from Micro to Macro. Proc 10th Int Symp on Geomechanics from Micro to Macro. CRC Press 2014 ISBN 978-1-138-02707-7. p. 1593-1598

**Paniagua Lopez, Ana Priscilla; Nordal, Steinar; Engin, Harun Kursat.**

Back calculation of CPT tests in silt by the Press-Replace technique. I: Numerical Methods in Geotechnical Engineering: Proceedings of the 8th European Conference on Numerical Methods in Geotechnical Engineering, Delft, The Netherlands, 18-20 June 2014.. CRC Press 2014 ISBN 978-1-138-00146-6. p. 391-396

**Tsegaye, Anteneh Biru; Nordal, Steinar; Benz, Thomas.**

Adaptable non-coaxial cyclic stress-dilatancy relation. I: Numerical Methods in Geotechnical Engineering: Proceedings of the 8th European Conference on Numerical Methods in Geotechnical Engineering, Delft, The Netherlands, 18-20 June 2014.. CRC Press 2014 ISBN 978-1-138-00146-6. p. 1313-1318

**2013**

**Annika Bihs, Steinar Nordal, Noel Boylan and Mike Long (2013),** "Interpretation of consolidation parameters from CPTU results in sensitive clays", *Geotechnical and Geophysical Site Characterization 4 – Coutinho & Mayne (eds), 2013 Taylor & Francis Group, London, ISBN 978-0-415-62136-6*

**P. Paniagua, A.S. Gylland, and S. Nordal (2013),** "Experimental Study of the Deformation Pattern around a Penetrating Coned Tip" *in L. Laloui and A. Ferrari (Eds.): Multiphysical Testing of Soils and Shales, SSGG, pp. 227–232, springerlink.com, Springer-Verlag Berlin* Heidelberg

**Degago, Samson; Grimstad, Gustav; Jostad, Hans Petter; Nordal, Steinar.**

Misconceptions about experimental substantiation of creep hypothesis A. I: *Proceedings of the 18th International Conference on Soil Mechanics and Geotechnical Engineering - Challenges and Innovations in Geotechnics*. Presses des Ponts 2013 ISBN 978-2-85978-478-2. s.215-218

**Degago, Samson; Grimstad, Gustav; Jostad, Hans Petter; Nordal, Steinar.**

Misconceptions about experimental substantion of creep hypotheis A.. I: *Proceedings of the 18th International Conference on Soil Mechanics and Geotechnical Engineering - Challenges and Innovations in Geotechnics*. Presses des Ponts 2013 ISBN 978-2-85978-478-2. s.215-218

**Gylland, Anders Samstad; Jostad, Hans Petter; Nordal, Steinar; Emdal, Arnfinn.**

Micro-level investigation of the in situ shear vane failure geometry in sensitive clay. *Geotechnique* 2013 ;Volum 63.(14) s.1264-1270

**Gylland, Anders Samstad; Rueslåtten, Håkon; Jostad, Hans Petter; Nordal, Steinar.**

Microstructural observations of shear zones in sensitive clay. *Engineering Geology* 2013 ;Volum 163. s.75-88

**Paniagua Lopez, Ana Priscilla; Ando, Edward; Silva, Matias; Emdal, Arnfinn; Nordal, Steinar; Viggiani, Gioacchino.**

Soil deformation around a penetrating cone in silt. *Geotechnique Letters* 2013 ;Volum 3. s.185-191

**Paniagua Lopez, Ana Priscilla; Ando, Edward; Silva, Matias; Nordal, Steinar; Viggiani, Gioacchino.**

Global failure pattern around a penetrating coned tip by X-ray micro tomography and digital volume correlation. I: *Tomography of Materials and Structures*. Ghent, Belgium: ICTMS, Ghent 2013 ISBN 978-9-4619713-0-2. s.281-284

**Tsegaye, Anteneh Biru; Benz, Thomas; Nordal, Steinar.**

On the geometry of plastic potential surfaces and isochoric stress paths. I: *Proceedings of the 18th International Conference on Soil Mechanics and Geotechnical Engineering - Challenges and Innovations in Geotechnics*. Presses des Ponts 2013 ISBN 978-2-85978-478-2. s.667-671

**Tsegaye, Anteneh Biru; Nordal, Steinar; Benz, Thomas.**

On Shear-Volume Coupling in Deformation of Soils. I: *Constitutive Modeling of Geomaterials. Advances and New Applications.*. Springer 2013 ISBN 978-3-642-32813-8. s.491-500

**2012**

**Bihs, Annika; Nordal, Steinar; Boylan, Noel; Long, Mike.**

Interpretation of consolidation parameters from CPTU results in sensitive clays.. I: *Geotechnical and Geophysical Site Characterization 4*. Balkema 2012 ISBN 978-0-415-62136-6. s.227-234

**Gylland, Anders Samstad; Jostad, Hans Petter; Nordal, Steinar.**

Failure geometry around a shear vane in sensitive clay.. I: *NGM 2012. Proc of the 16th Nordic Geotechnical Meeting*. Copenhagen: Danish Geotechnical Society 2012 ISBN 978-87-89833-27-9. s.103-110

**Paniagua Lopez, Ana Priscilla; Bihs, Annika; Nordal, Steinar.**

Improved finite element simulations for interpretation of cone penetration test results.. I: *NGM 2012. Proc of the 16th Nordic Geotechnical Meeting*. Copenhagen: Danish Geotechnical Society 2012 ISBN 978-87-89833-27-9. s.427-434

**Paniagua Lopez, Ana Priscilla; Gylland, Anders Samstad; Nordal, Steinar.**

Experimental Study of the Deformation Pattern around a Penetrating Coned Tip.. I: *Multiphysical Testing of Soils and Shales*. Springer 2012, ISBN 978-3-642-32491-8. s.227-232

**2011**

**Degago, Samson Abate; Grimstad, Gustav; Jostad, Hans Petter; Nordal, Steinar; Olsson, Mats.**

Use and misuse of the isotache concept with respect to creep hypotheses A and B. *Geotechnique* 2011 ;Volum LXI.(10) s.897-908

**Degago, Samson Abate; Nordal, Steinar; Grimstad, Gustav; Jostad, Hans Petter.**

Analyses of Väsby test fill according to creep hypothesis A and B.. I: *Proceedings of the 13th International Conference of the International Association for Computer Methods and Advances in Geomechanics*. Sydney, Australia: Centre for Infrastructure Engineering and Safety 2011 ISBN 978-0-9808244-1-4. s.307-312

**Gylland, Anders Samstad; Jostad, Hans Petter; Nordal, Steinar.**

Strain localization in the presence of excess pore water pressure under quasi static conditions.. 9th Euroconference on Rock Physics and Geomechanics; 2011-10-17 - 2011-10-21

**Gylland, Anders Samstad; Nordal, Steinar; Jostad, Hans Petter; Mehli, Magne.**

Pragmatic Approach for Estimation of Slope Capacity in Soft Sensitive Clay. *Electronic journal of geotechnical engineering* 2011 ;Volum 16/F. s.575-590

**Hanssen, Stian Baardsgaard; Gylland, Anders Samstad; Nordal, Steinar.**

Simulation of the Smaaroed Landslide in soft sensitive clay using a rate dependent, strain softening material model. I: *Proceedings of the 13th International Conference of the International Association for Computer Methods and Advances in Geomechanics*. Sydney, Australia: Centre for Infrastructure Engineering and Safety 2011 ISBN 978-0-9808244-1-4. s.1183-1189

**Nordal, Steinar.**

Geomechanical modelling. CoE International Centre for Geohazards, Annual Seminar; 2011-12-01 - 2011-12-01

**Paniagua Lopez, Ana Priscilla; Bihs, Annika; Nordal, Steinar.**

Interpretation of cone penetration test in clay by finite element simulations.. 9th Euroconference on Rock Physics and Geomechanics; 2011-10-17 - 2011-10-21

**Paniagua Lopez, Ana Priscilla; Nordal, Steinar.**

Three dimensional FE simulations of bearing capacity of footings with focus on shape factors. I: *Proceedings of the 13th International Conference of the International Association for Computer Methods and Advances in Geomechanics*. Sydney, Australia: Centre for Infrastructure Engineering and Safety 2011 ISBN 978-0-9808244-1-4. s.933-938

**2010**

**Benz, Thomas; Nordal, Steinar.**

NUMGE 2010, Numerical Methods in Geotechnical Engineering. CRC Press 2010 (ISBN 978-0-415-59239-0) 955 s.

**Bergan, Jens; Holo, Sigurd Øren; Nordal, Steinar.**

Collapse of thin-walled model piles during hard driving. I: *NUMGE 2010, Numerical Methods in Geotechnical Engineering*. CRC Press 2010 ISBN 978-0-415-59239-0. s.607-612

**Degago, Samson Abate; Jostad, Hans Petter; Olsson, Mats; Grimstad, Gustav; Nordal, Steinar.**

Time- and stress-compressibility of clays during primary consolidation.. I: *NUMGE 2010, Numerical Methods in Geotechnical Engineering*. CRC Press 2010 ISBN 978-0-415-59239-0. s.125-130

**Grimstad, Gustav; Degago, Samson Abate; Nordal, Steinar; Karstunen, Minna.**

Modeling creep and rate effects in structured anisotropic soft clays. *Acta Geotechnica* 2010 ;Volum 5.(1) s.69-81

**Thakur, Vikas; Nordal, Steinar; Hove, Svein.**

Short-term Slope Stability Calculation according to Eurocode 7. I: *NUMGE 2010, Numerical Methods in Geotechnical Engineering*. CRC Press 2010 ISBN 978-0-415-59239-0. s.521-528

**2009**

**Degago, Samson Abate; Grimstad, Gustav; Jostad, Hans Petter; Nordal, Steinar.**

The non-uniqueness of the end-of-primary (EOP) void ratio-effective stress relationship.. I: *Proc of the 17th International Conference on Soil Mechanics and Geotechnical Engineering*. IOS Press 2009 ISBN 978-1-60750-031-5. s.324-327

**Nordal, Steinar.**

Setningsanalyser ved hjelp av Elementmetoden - Del 1.. Kursdagene ved NTNU; 2009-01-06 - 2009-01-07

NTNU

**Nordal, Steinar; Alén, Clas; Emdal, Arnfinn; Jendeby, Leif; Lyche, Einar; Madshus, Christian.**

Skredet i Kattmarkvegen i Namsos 13 mars 2009. Trondheim: Norges teknisk naturvitenskapelige universitet 2009 (ISBN 978-82-92506-71-4) 73s.