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Über mich

Über 20 Jahre Erfahrung in der Planung von geotechnischen Bauwerken, insbesondere von Schüttdämmen. Sie ist gerichtl. zertifizierte und allg. beeidete Sachverständige für Bodenmechanik, Grundbau, Wasserkraftwerksbauten und Wasserschutzbauten sowie Materialentnahmen und Tiefbau.
Seit 2014 lehrt Frau Dr. Messerklinger an der FH Wels am Studiengang für Bauingenieurwesen für Hochbau und belegt seit 2019 die Professur für Geotechik, Wasserbau und Bauverfahrenstechnik.

Organisationszugehörigkeiten

Research Center Wels
Wels, Österreich
1 Aug. 2012 → present

Center of Excellence Energie
1 Feb. 2019 → present

Mitglied der österreichischen Staubeckenkommission
Österreichische Staubeckenkommission
Österreich
1 Jän. 2020 → present

Publikationen

CPT data interpretation for quantification of reduced effective stresses in foundation soil under a large-scale hydropower structure
Messerklinger, S., 17 Juni 2026, S. 897-900. 4 S.

Large thermal heat storages in rock caverns – numerical simulation of heat losses
Messerklinger, S., Smaadahl, M. & Rabaiotti, C., Feb. 2024, in: Geomechanik und Tunnelbau. 17, 1, S. 64-70 7 S.

Large rock caverns for heat storage in district heating networks – A comparative study for the city of Salzburg
Messerklinger, S., 11 Okt. 2023, S. 2746-2752. 6 S.

Shafts and spiral tunnels for large heat storages – an economic study on ideal geometries
Messerklinger, S., Smaadahl, M. & Saurer, E., 2023, *Expanding Underground - Knowledge and Passion to Make a Positive Impact on the World- Proceedings of the ITA-AITES World Tunnel Congress, WTC 2023.* Anagnostou, G., Benardos, A. & Marinos, V. P. (Hrsg.). CRC Press/Balkema, S. 144-151 8 S. (Expanding Underground - Knowledge and Passion to Make a Positive Impact on the World- Proceedings of the ITA-AITES World Tunnel Congress, WTC 2023).

Applications of the ICOLD Bulletin on internal erosion in geotechnical engineering
Bridle, R. & Messerklinger, S., 2015, *Slopes and Geohazards.* Winter, M. G., Eldred, P. J. L., Eldred, P. J. L., Winter, M. G., Toll, D. G. & Smith, D. M. (Hrsg.). S. 1971-1976 6 S. (Geotechnical Engineering for Infrastructure and Development - Proceedings of the XVI European Conference on Soil Mechanics and Geotechnical Engineering, ECSMGE 2015; Band 4).

Visuelle Kontrollen an Schüttdämmen von Stauanlagen
Messerklinger, S., 2015, in: Wasser Energie Luft. S. 259-263

Formation mechanism of large subsidence sinkholes in the Lar valley in Iran
Messerklinger, S., 27 Aug. 2014, in: Quarterly Journal of Engineering Geology and Hydrogeology. 47, 3, S. 237-250 14 S.

Failure of a geomembrane lined embankment dam - Case study
Messerklinger, S., Juni 2014, in: Geotextiles and Geomembranes. 42, 3, S. 256-266 11 S.

Safety and sustainability of homogeneous earth dams
Messerklinger, S., Brenner, P. & Zegele, Z., 2013, *9th ICOLD European Club Symposium : Sharing Experience for Safe and Sustainable Water Storage.* 1 Aufl. Venedig: ITCOLD (Italian Committee on Large Dams), Band 1.

The Design of Filter Materials and their Importance in Geotechnical Engineering
Messerklinger, S., 2013, *Int. Conf. on Soil Mechanics and Geotechnical Engineering (ICSMGE).* S. 3313-3316 4 S.

Erosion and Drainage Well Blowout in the Foundation of the Plavinas Powerhouse: Case History.
Messerklinger, S., Dez. 2012, in: Geotechnical and Geological Engineering. 30, 6, S. 1421-1433 13 S.

The Challenge of Dam Heightening
Messerklinger, S. & Brenner, P., 2012, *Int. Symp. on Dams for a Changing World.*

A new pressurized vane shear apparatus
Messerklinger, S., Zumsteg, R. & Puzrin, A., März 2011, in: Geotechnical Testing Journal. 34, 2, S. 112-121

Filter design for the heightening of a high earth core rockfill dam
Messerklinger, S. & Straubhaar, R., 2011, *Dams and Reservoirs under Changing Challenges - Proceedings of the International Symposium on Dams and Reservoirs under Changing Challenges - 79 Annual Meeting of ICOLD, Swiss Committee on Dams.* S. 229-238 10 S. (Dams and Reservoirs under Changing Challenges - Proceedings of the International Symposium on Dams and Reservoirs under Changing Challenges - 79 Annual Meeting of ICOLD, Swiss Committee on Dams).

Heightening of the Göscheneralp Earth-core Rockfill Dam
Messerklinger, S., Aemmer, M. & Straubhaar, R., 2011, in: International Journal on Hydropower & Dams. 18, 3, S. 43-48 6 S.

Large-Scale Cyclic Triaxial Tests for the Seismic Safety Assessment of a high Earth Core Rockfill Dam
Messerklinger, S., Straubhaar, R., Brenner, P., Springman, S. M., Laue, J. & Herzog, R., 2011, *15th Europ. Conf. on Soil Mechanics and Geotechnical Engineering (ECSMGE).*

Long-term Seepage behaviour of an Embankment dam founded on Rock Strata under Artesian Pressure
Messerklinger, S., Brenner, P. & Zegele, Z., 2011, *Int. Symp. on Modern Technologies and Long-term behaviour of Dams (ISMTLTBD).*

Safety and maintenance issues for a long embankment on a karstic foundation under artesian pressure
Messerklinger, S., Brenner, R. P. & Zegele, Z., 2011, *Dam Maintenance and Rehabilitation II - Proceedings of the 2nd International Congress on Dam Maintenance and Rehabilitation.* S. 325-334 10 S. (Dam Maintenance and Rehabilitation II - Proceedings of the 2nd International Congress on Dam Maintenance and Rehabilitation).

Speicherbecken und ihre geotechnischen Herausforderungen
Messerklinger, S., 2011, *11. Geotechnik-Tag in München: Geotechnik und Energie.* S. 85-94

Seasonal Fluctuations of the Monitoring Data of a Large Powerhouse Founded on Glacial Till
Messerklinger, S., Zegele, Z. & Brenner, P., 2010, *8th ICOLD European Club Symposium.*

Sliding stability of a Tyrolean weir
Messerklinger, S. & Peter, M., 2010, *14th Danube-European Conf. on Geotechnical Engineering.*

Economic sampling and extraction of undisturbed, high quality samples in normally consolidated lacustrine clays using a large diameter tube

Messerklinger, S. & Springman, S. M., 2009, in: Geotechnical and Geological Engineering. 27, 2, S. 207-215 9 S.

Non-Linear Elasto-Plastic Behaviour of Lacustrine Clay
Messerklinger, S. & Springman, S. M., 2009, in: Geotechnical and Geological Engineering. S. 93-104

Pressure and rate dependency of the shear strength of conditioned clays
Messerklinger, S., Zumsteg, R., Puzring, A., Egli, H. & Walliser, A., 2009, *4th Int. Young Geotechnical Engineer's Conf. (IYGEC).*

Pressurized vane shear test for soil conditioning
Zumsteg, R., Messerklinger, S., Puzrin, A. M., Egli, H. & Walliser, A., 2009, *Proceedings of the 17th International Conference on Soil Mechanics and Geotechnical Engineering: The Academia and Practice of Geotechnical Engineering.* S. 275-278 4 S. (Proceedings of the 17th International Conference on Soil Mechanics and Geotechnical Engineering: The Academia and Practice of Geotechnical Engineering; Band 1).

The Long-Term Behaviour of a Run-Of-River Scheme in Latvia
Messerklinger, S., Zegele, Z., Dislere, S. & Brenner, P., 2009, *2nd Int. Conf. on the Long Term Behaviour of Dams.*

The in-situ stiffness of the sliding layer in a creeping landslide
Messerklinger, S., Puzrin, A. & Schmid, A., 2008, *Deformational Characteristics of Geomaterials - The Proceedings from the 4th International Symposium, Deformation Characteristics of Geomaterials.* IOS Press (15. September 2008)

Local radial displacement measurements of soil specimens in a triaxial test apparatus using laser transducers
Messerklinger, S. & Springman, S. M., 16 Juli 2007, in: Geotechnical Testing Journal. 30, 6, S. 454-465 12 S.

Local radial displacement measurements using laser transducers
Messerklinger, S., 2007, in: Geotechnical Testing Journal. S. 454-465

Deformation behaviour of soft Swiss lacustrine clays
Messerklinger, S., 2006, VDI Verlag.

Anisotropy and Non-linearity in lacustrine clay
Messerklinger, S., 2005, *3rd Int. Young Geotechnical Engineer's Conf. (IYGEC).*

Small strain Plasticity of lacustrine clay
Messerklinger, S., 2005, *2nd Int. Workshop for Young Doctors in Geomechanics (WHYDOC).*

Displacement measurement with laser scanning in triaxial testing apparatus
Messerklinger, S., Springman, S. M., Bleiker, E. & Zweidler, A., 2004, *Proceedings of the 16th European Young Geotechnical Engineers Conference - EYGEC.* Wien: Published in 2004 in Wien by Österreichischer Ingenieur- und Architekten-Verein

Modelling the anisotropy of soft Swiss lacustrine clay
Messerklinger, S. & Springman, S. M., 2 Juni 2003, *Computational Fluid and Solid Mechanics 2003.* S. 447-450 4 S.

Mineralogical and mechanical behaviour of soft Finnish and Swiss clays
Messerklinger, S., Springman, S. M., Kahr, G., Plötze, M. & Trausch-Giudici, J., 2003, *International Workshop on Geotechnics of Soft Soils, Theory and Practice. : Proceedings; 17 - 19 September 2003, Noordwijkerhout, The Netherlands ; SCMEP ed. by Pieter A. Vermeer [and others] ; organized by the European Research Training Network "Soft Clay Modelling for Engineering Practice."* . Vermeer, P. A. (Hrsg.). VGE, Verlag Glückauf

Modelling soft lacustrine clay
Messerklinger, S. & Springman, S. M., 2003, *2nd M.I.T. Conference on Computational Fluid and Solid Mechanics.*

Swiss lacustrine clay: Mineralogical and Mechanical Characteristics
Messerklinger, S., Springman, S. M., Plötze, M. & Trausch-Giudici, J., 2003, *Int. Workshop on Geotechnics of Soft Soils: Theory and Practice.*

An advanced multilaminate model for clay
Wiltafsky, C., Messerklinger, S. & Schweiger, H. F., 2002, *Numerical Models in Geomechanics - 8th Proceedings of the International Symposium on Numerical Models in Geomechanics, NUMOG 2002.* Pande, G. N. & Pietruszczak, S. (Hrsg.). CRC Press/Balkema, S. 67-74 8 S. (Numerical Models in Geomechanics - 8th Proceedings of the International Symposium on Numerical Models in Geomechanics, NUMOG 2002).

Aktivitäten

Kavernen als Grosswärmespeicher in Fernwärmenetzen
Messerklinger, S. (Redner*in)
25 Nov. 2022

Verladebahnhof Vorchdorf
Messerklinger, S. (Berater)
1 Sep. 2022 → 28 Feb. 2023

Hochwasserereignisse - Maßnahmen vordenken und vorbauen
Messerklinger, S. (Redner*in)
26 Nov. 2019

Österreichisches Nationalkomitee für Talsperren (Externe Organisation)
Messerklinger, S. (Mitglied)
2018

Erosion in dam materials
Messerklinger, S. (Redner*in)
26 Apr. 2017

Bodenmechanik und Grundbau im Bauwesen - oder - ohne Grundbau kein Hochbau
Messerklinger, S. (Redner*in)
28 Mai 2015

The Geological Society, London (Herausgeber (Verlag))
Messerklinger, S. (Gutachter*in)
2015 → 2019

Simulationen mit neu entwickelten Stoffgesetzen
Messerklinger, S. (Redner*in)
8 März 2006

Anisotropes und Nichtlineares Verformungsverhalten von Schweizer Seebodenlehm
Messerklinger, S. (Redner*in)
10 Juni 2005

Eigenschaften von Schweizer Seebodenlehmen
Messerklinger, S. (Redner*in)
15 März 2005

Displacement Measurement with Laser Scanning in Triaxial Testing Apparatus
Messerklinger, S. (Redner*in)
8 Juli 2004

Mineralogical and Mechanical Behaviour of Soft Finnish and Swiss Clay
Messerklinger, S. (Redner*in)
18 Sep. 2003

Modelling Soft Lacustrine Clay
Messerklinger, S. (Redner*in)
18 Juni 2003

Modelling Swiss Lacustrine Clay
Messerklinger, S. (Redner*in)
27 Aug. 2002

Advanced Constitutive Modelling
Messerklinger, S. (Redner*in)
4 März 2002

Comparison of S-CLAY1 and Multilaminate Model.
Messerklinger, S. (Redner*in)
17 Sep. 2001

Auszeichnungen

The Young Researcher Fellowship Award for Exemplary Research in Computational Mechanics
Messerklinger, S. (Empfänger*in), 2003