Curriculum Vitae for Trine Nørgaard (Norgaard) (updated March 8, 2024)

Personal:

Born July 28, 1987; 36 years old; 3 children
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Education:

Ph.D. – Soil physics, Aarhus University (Oct. 2014)
M.Sc. – Environmental Engineering, Aalborg University (June, 2011)
B.Sc. – Environmental Engineering, Aalborg University (June, 2009)

Employments:

Apr. 2024 –	Tenure Track Assistant professor at Aarhus University, Dept.of Agroecology
Mar. 2021 – Mar. 2024	Assistant professor at Aarhus University, Dept.of Agroecology
Oct. 2014 – Mar. 2021	Post doc at Aarhus University, Dept.of Agroecology
Aug. 2011 – Oct. 2014	PhD student matriculated at Aarhus University, Dept. of Agroecology
Maternity leave	27/9 2016 – 15/8 2017, 16/8 2018 – 18/6 2019, 13/7 2020 – 26/7 2020, 12/7 2021 – 10/5 2022

Participation in selected projects

2023-2026	PI: The effects of Aeolian Dust on Soil Functions in South Greenland – **TADIUS**. DFF Inge Lehmann, 2099-00022B
2023-2026	Co-PI on EU Horizon 2021 project **AI4SoilHealth**: Accelerating collection and use of soil health information using AI technology to support the Soil Deal for Europe and EU Soil Observatory
2022-2025	PI: Microplastic occurrence, transport and effect in soil ecosystems, **Microplastic-SOIL**. DFF, 1032-00390B
2022-2025	Co-PI: Novel rhizosphere-activated hydroxyl radical oxidation of pesticides, **OHiROOT**. DFF-Research Project 1, 2035-00039A
2020-2025	Case Study leader in EU Horizon 2020 project: Sustainable Plant Protection Transition: A Global Health Approach, **SPRINT**, H2020-SFS-2019-2.
2020-2025	Project participant in the European Joint Program SOIL, **EJP soil**: Towards climate-smart sustainable management of agricultural soils.
2018-2022	Co-PI: Glacial flour as new, climate-positive technology for sustainable agriculture in Greenland, **NewLand**, DFF-Research Project 2.
2017-2019	Co-PI: From a Spectroscopic BEEP to groundwater vulnerability assessment, **BEEP**, AUFF-NOVA E 2016-9-36.
2017-2020	Co-PI: Fosforkortlægning af dyrkningsjord og vandområder i Danmark (Phosphorus mapping of agricultural soils and waterways in Denmark), Danish Environmental Protection Agency.
2011-	Co-PI: The Danish Pesticide Leaching Assessment Programme, **PLAP**.

Scientific focus areas:

Soil physical structure characterization; Fate and transport of pesticides in soil; Field scale leaching vulnerability; Colloid dispersibility, mobility and transport; Colloid-facilitated transport; Microplastic occurrence and transport in soil; Fluxes of aeolian dust in the Artic.

International relations:

2022 1 month stay at University of California, Davis, at the department of Civil and Environmental Engineering in connection with the project Microplastic-SOIL. Size and shape characterization of microplastic samples.

Teaching and supervision:
Teacher training programme (adjunktpædagogikum) completed at AU in the fall 2023.
Co-supervisor for 4 MSc, 7 PhD students and 4 Postdocs.
Teaching assistant on several PhD, MSc and BSc courses.
Responsible for teaching high school classes, and supervisor during the "Studieretningsprojekt" (SRP) for individual high school students, 2012-2022.
Responsible for "Studiepraktik" 2019 AU Foulum.

Honors and awards include:
Nov. 2013 Price winner – Soil physics and hydrology student competition, lightning orals and poster presentations. Soil Science Society of America Division Soil Physics and Hydrology Student competition: Lightning Orals with Poster Presentations (Tampa, Florida).
Apr. 2013 Award for excellent poster – Soil Systems and Critical Zone Processes Integrate Life Support Function across Disciplines (Monte Veritá, Switzerland).
Oct. 2012 Price winner – Soil physics and hydrology student competition, lightning orals and poster presentations. Soil Science Society of America Division Soil Physics and Hydrology Student competition: Lightning Orals and Posters (Cincinnati, Ohio).
Oct. 2011 Price winner – General soil physics student poster competition. Soil Science Society of America Division Soil Physics with Student Competition (San Antonio, Texas).

Academic Society Activities:
Presider – Soil Science Society of America Division, Environmental Soil Physics and Hydrology Student competition: Lightning Orals with Poster Presentations (Nov. 2014)
Presider – Soil Science Society of America Division Soil Physics (Nov. 2013)

Google scholar for Trine Nørgaard (Norgaard) (February 1, 2024): h-index: 14; Publications: 36; Number of citations: 871

Web of Science for Norgaard, Trine (Nørgaard, Trine; Norgaard, T.), Web of Science Researcher ID: C-5646-2015 (Author Identifiers, February 1, 2024): h-index: 13; Publications: 36; Number of citations: 629

List of publications for Trine Nørgaard (Norgaard, ORC ID: 0000-0001-7669-3841)

Peer-reviewed journal articles

1. **Norgaard, T.**, Moldrup, P., Olsen, P., Vendelboe, A.L., Iversen, B.V., Greve, M.H., Kjær, J., and de Jonge, L.W. 2012. Comparative mapping of soil physical-chemical and structural parameters at field scale to identify zones of enhanced leaching risk. Journal of Environmental Quality 42:271–283. DOI: 10.2134/jeq2012.0105
2. **Norgaard, T.**, Moldrup, P., Ferré, T.P.A., Katuwal, Olsen, P., and de Jonge, L.W. 2014. Field-scale variation in colloid dispersibility and transport: multiple linear regressions to soil physico-chemical and structural properties. Journal of Environmental Quality 43:1764-1778. DOI:10.2134/jeq2013.12.0510
3. **Norgaard, T.**, Moldrup, P., Ferré, T.P.A., Olsen, P., Rosenbom, A.E., and de Jonge, L.W. 2014. Leaching of glyphosate and aminomethylphosphonic acid from an agricultural field over a twelve-year period. Vadose Zone Journal 13 (10). DOI:10.2136/vzj2014.05.0054
4. Koestel, J.K., **Norgaard, T.**, Luong, N.M., Vendelboe, A.L., Moldrup, P., Jarvis, N.J., Lamandé, M., Iversen, B.V., and de Jonge, L.W. 2013. Links between soil properties and steady-state solute transport through cultivated topsoil at the field scale. Water Resources Research 49:790–807. DOI: 10.1002/wrcr.20079
5. Peng, Y., Knadel, M., Gislum, R., Deng, F., **Norgaard, T.**, de Jonge, L.W., Moldrup, P., and Greve, M.H. 2013. Predicting soil organic carbon at field scale using a national soil spectral library. J. Near Infrared Spectrosc. 21:213–222. DOI: 10.1255/jnirs.1053
6. Katuwal, S., **Norgaard, T.**, Moldrup, P., Lamandé, M., Wildenschild, D., and de Jonge, L.W. 2015. Linking air and water transport in intact soils to macropore characteristics inferred from X-ray computed tomography. Geoderma 237:9–20. DOI: 10.1016/j.Geoderma.2014.08.006
7. Soares, A., Moldrup, P., Vendelboe, A.L., Katuwal, S., **Norgaard, T.**, Delerue-Matos, C., Tuller, M., and de Jonge, L.W. 2015. Effects of soil compaction and organic carbon content on preferential flow in loamy field soils. Soil Science 180:10-20. DOI: 10.1097/SS.0000000000000105
8. Paradelo, M., **Norgaard, T.**, Moldrup, P., Ferré, T.P.A., Kumari, K.G.I.D., Arthur, E., and de Jonge, L.W. 2015. Prediction of the glyphosate sorption coefficient across two loamy agricultural fields. Geoderma 259-260:224-232. DOI:10.1016/j.geoderma.2015.06.011
9. **Norgaard, T.**, de Jonge, L.W., Moldrup, P., Olsen, P., and Johnsen, A.R. 2015. Can simple soil parameters explain field-scale variations in glyphosate-, bromoxyniloctanoate-, diflufenican- and bentazon mineralization? Water, Air, & Soil Pollution 226:262. DOI: 10.1007/s11270-015-2518-z
10. Paradelo, M.P., Katuwal, S., Moldrup, P., **Nørgaard, T.**, Herath, L., and de Jonge, L. W. 2016. X-ray CT-derived soil characteristics explain varying air, water and solute transport properties across a loamy field. Vadose Zone Journal 15:4. DOI: 10.2136/vzj2015.07.0104
11. Muhammed, N., Herath, L., Moldrup, P., Arthur, E., Nicolaisen, M., **Norgaard, T.**, Ferré, T.P.A., and de Jonge, L.W. 2016. Spatial variability of microbial richness and diversity and relationships with soil organic carbon, texture and structure across an agricultural field. Applied Soil Ecology 103:44-55. DOI: 10.1016/j.apsoil.2016.03.004
12. Vendelboe, A.L., **Norgaard, T.**, Olsen, P., de Jonge, L.W., and Rosenbom, A.E. 2016. When does the degradation product of fluazifop-P-butyl, TFMP, leach through an agricultural loamy soil to groundwater? Science of the Total Environment 562:1044-1053. DOI: 10.1016/j.scitotenv.2016.04.182
13. Karup, D., Moldrup, P., Paradelo, M., Katuwal, S., **Norgaard, T.**, Greve, M.H., and de Jonge, LW. 2016. Water and solute transport in agricultural soils predicted by volumetric clay and silt contents. Journal of Contaminant Hydrology 192:194-202. DOI: 10.1016/j.jconhyd.2016.08.001
14. Herath, H. M. L. I., Moldrup, P., de Jonge, L.W., Nicolaisen, M., **Norgaard, T.**, Arthur, E., and Paradelo, M. 2017. Clay-to-carbon ratio controls the effect of herbicide application on soil bacterial richness and diversity in a loamy field. Water Air and Soil Pollution 228:3. DOI: 10.1007/s11270-016-3175-6
15. Katuwal, S., Knadel, M., Moldrup, P., **Norgaard, T.**, Greve, MH., and de Jonge, LW. 2018. Visible-near-infrared spectroscopy can predict mass transport of dissolved chemicals through intact soil (Scientific report). Nature, 8:11188. DOI:10.1038/s41598-018-29306-9

16. **Norgaard, T.**, Paradelo, M., Moldrup, P., Katuwal, S., and de Jonge, L.W. 2018. Particle leaching rates from a loamy soil are controlled by the mineral fines content and the degree of preferential flow. Journal of Environmental Quality 47:1538-1545. DOI: 10.2134/jeq2018.02.0065
17. Manage, L.P.M., Katuwal, S., **Norgaard, T.**, Knadel, M., Moldrup, P., de Jonge, L.W., and Greve, M.H. 2019. Estimating soil particle density using visible near-infrared spectroscopy and a simple, two-compartment pedotransfer function. Soil Science Society of America Journal 83:37-47. DOI: 10.2136/sssaj2018.06.0217
18. Pittaki-Chrysodonta, Z., Arthur, E., Moldrup, P., Knadel, M., **Norgaard, T.**, Iversen, B.V., and de Jonge, L.W. 2019. Comparing visible-near-infrared spectroscopy and a pedotransfer function for predicting the dry region of the soil-water retention curve. Vadose Zone Journal 18:1. DOI: 10.2136/vzj2018.09.0180
19. Arthur, E., Markus, T., **Norgaard, T.**, Moldrup, P., and de Jonge L.W. 2019. Improved estimation of clay content from water content for soils rich in smectite and kaolinite. Geoderma 350:40-45. DOI: 10.1016/j.geoderma.2019.05.018
20. Hermansen, C., **Norgaard, T.**, de Jonge, L.W., Moldrup, P., Müller, K., and Knadel, M. 2020. Predicting glyphosate sorption across New Zealand pastoral soils using basic soil properties or vis–NIR spectroscopy. Geoderma 360:114009. DOI: 10.1016/j.geoderma.2019.114009
21. Katuwal, S., Knadel, M., **Norgaard, T.**, Moldrup, P., Greve, M.H., and de Jonge, L.W. 2020. Predicting the dry bulk density of soils across Denmark: Comparison of single-parameter, multi-parameter, and vis-NIR based models. Geoderma 361:114080. DOI: 10.1016/j.geoderma.2019.114080
22. Liang, Z., Olesen, J. E., **Nørgaard, T.**, and Elsgaard, L. 2020. Extraction and enzymatic assay of glucose in soils with contrasting pH, clay, and organic carbon contents. Communication in Soil Science and Plant Analysis 51:380-391. DOI: 10.1080/00103624.2019.1709486
23. Kotlar, A.M., de Jong van Lier, Q., Andersen, H.E., **Nørgaard, T.**, and Iversen, B.V. 2020. Quantification of macropore flow in Danish soils using near-saturated hydraulic properties. Geoderma 375:1-12. DOI: 10.1016/j.geoderma.2020.114479
24. Pesch, C., Lamandé, M., de Jonge, L.W., **Nørgaard, T.**, Greve, H.G., and Moldrup, P. 2020. Compression and rebound characteristics of agricultural sandy pasture soils from South Greenland. Geoderma 380:1-11. DOI: 10.1016/j.geoderma.2020.114608
25. Weber, P.L., de Jonge, L.W., Greve, M.H., Norgaard, T., and Moldrup, P. 2020. Gas diffusion characteristics of agricultural soils from South Greenland. Soil Sci. Soc. Am. J. 84:1606-1619. DOI: 10.1002/saj2.20114
26. Arthur, E., Rehman, H.U., Tuller, M., Pouladi, N., **Norgaard, T.**, Moldrup, P., and de Jonge L.W. 2021. Estimating Atterberg limits of soils from hygroscopic water content. Geoderma, 381;1-9. DOI: 10.1016/j.geoderma.2020.114698
27. Weber, P., Hermansen, C., **Norgaard, T.**, Pesch, C., Moldrup, P., Greve, M.H., Müller, K., Arthur, E., and de Jonge, L.W. 2021. Moisture-dependent water repellency of Greenlandic cultivated soils. Geoderma, 402. DOI: 10.1016/j.geoderma.2021.115189
28. Pesch, C., Weber, P.L., de Jonge, L.W., Greve, M.H., **Norgaard, T.**, and Moldrup, P. 2021. Soil-air phase characteristics: Response to texture, density, and land use in Greenland and Denmark. Soil Sci. Soc. Am. J, 1-21. DOI: 10.1002/saj2.20284
29. Hermancen C., **Norgaard, T.**, de Jonge, L.W., Weber, P.L., Moldrup, P., Greve M.H., Tuller, M., and Arthur, E. 2021. Linking water vapor sorption to water repellency in soils with high organic carbon contents. 2021. Soil Sci. Soc. Am. J. 85, 1037-1049. DOI: 10.1002/saj2.20248
30. Silva, V., Alaoui, A., Schlünssen, V., Vested, A., Graumans, M., et al. 2021. Collection of human and environmental data on pesticide use in Europe and Argentina: Field study protocol for the SPRINT project. PLoS ONE 16(11):e0259748. DOI: 10.1371/journal.pone.0259748
31. Keesstra, S.D., Munkholm, L., Zechmeister-Boltenstern, S., Taghizadeh-Toosi, A., Knadel, M., et al. 2021. Towards climate-smart sustainable management of agricultural soils: Deliverable D2. 6: Set of reports on State of knowledge in agricultural soil management. EJP Soil. https://library.wur.nl/WebQuery/wurpubs/fulltext/563872
32. Fu, Y., de Jonge, L.W., Greve, M.H., Arthur, E., Moldrup, P., **Norgaard, T**, and Paradelo, M. 2022. Linking Litter Decomposition to Soil Physicochemical Properties, Gas Transport and Land Use. Soil Sci. Soc. Am. J. DOI: 10.1002/saj2.20356

33. Weber, P.L., Hermansen, C., **Norgaard, T.**, Pesch, C., Møldrup, P., Greve, M.H., Arthur, E., de Jonge, L.W. 2022. Evaluating the particle densities of subarctic soils using pedotransfer functions and vis–NIR spectroscopy. Soil Science Society of American Journal, 86:964-978. DOI: 10.1002/saj2.20410
34. Arthur, E., Tuller, M., **Norgaard, T.**, Moldrup, P., Chen, C., Rehman, H.U., Weber, P.L., Knadel, M., de Jonge, L.W. 2023. Contribution of organic carbon to the total specific surface area of soils with varying clay mineralogy. Geoderma. DOI: 10.1016/j.geoderma.2022.116314
35. Møller, A.B., Heckrath, G., Hermansen, C., **Nørgaard, T.**, de Jonge, L.W., Greve, M.H. 2023. Mapping the phosphorus sorption capacity of Danish soils in four depths with quantile regression forests and uncertainty propagation. Geoderma. DOI: 10.1016/j.geoderma.2022.116316
36. Akter, S., de Jonge, L.W., Moldrup, P., Greve, M.H., **Norgaard, T.**, Weber, P., Hermansen, C., Mouazen, A. M., Knadel, M. 2023. Visible near-infrared spectroscopy and pedotransfer function well predict soil sorption coefficient of glyphosate. Remote sensing. 15:6. DOI: 10.3390/rs15061712
37. Navarro, I., de la Torre, A., Sanz, P., Baldi, I., Harkes, P., et al. 2023. Occurrence of pesticide residues in indoor dust of farmworker households across Europe and Argentina. Science of the total environment. DOI: 10.2139/ssrn.4528341
38. Silva, V., Gai, L., Harkes, P., Tan, G., Ritsema, C., et al. 2023. Pesticide residues with hazard classifications relevant to non-target species including humans are omnipresent in the environment and farmer residences. Environment International. DOI: 10.1016/j.envint.2023.108280.

Popular scientific paper

39. **Nørgaard, T.**, Møldrup, P., Olsen, P., and de Jonge, L.W. 2013. Intelligent regulering på landbrugsjorder: Kortlægning af jord kan give øget planteproduktion og reduceret pesticidudvaskning. Landbrugsavisen May 3, 2013 (*In Danish*)