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Short presentation

My research concentrates on ecosystem responses to air pollution and climate change - in particular impacts on ecosystem functioning and feedback to the atmosphere. I have in particular used ecosystem manipulation to understand these impacts - latest through the VILLUM foundation Centre of Excellence CLIMAITE, where KU, DTU and AU collaborated to investigate impacts of single and multifactor climate change on shrubland ecosystems. Currently my particular research focus is on extreme events and impacts on ecosystem functioning

Employment

Professor

Forest and Landscape Ecology
Frederiksberg C
1 May 2015 → nu

Research Director

NIVA - Norsk Institut for Vannforskning
Oslo, Norway
1 Aug 2013 → 1 May 2015

Head of Research Center

Technical University of Denmark
Kongens Lyngby, Denmark
1 Jan 2012 → 1 Aug 2013

Head of Research Programme

Technical University of Denmark
Kongens Lyngby, Denmark
1 May 2006 → 31 Dec 2011

Senior Researcher

Forskningscenter Risø
Roskilde, Denmark
1 Jun 1996 → 30 Apr 2006

Senior Researcher

Forskningscentret for Skov & Landskab
Denmark
1 May 1992 → 31 May 1996

PostDoc

Technical University of Denmark
Kongens Lyngby, Denmark
1 Aug 1989 → 30 Apr 1992

PhD

Technical University of Denmark

Kongens Lyngby, Denmark

1 Apr 1985 → 31 Jul 1989

Publications

Extreme drought impacts have been underestimated in grasslands and shrublands globally

Smith, M. D., Wilkins, K. D., Holdrege, M. C., Wilfahrt, P., Collins, S. L., Knapp, A. K., Sala, O. E., Dukes, J. S., Phillips, R. P., Yahdjian, L., Gherardi, L. A., Ohlert, T., Beier, C., Fraser, L. H., Jentsch, A., Loik, M. E., Maestre, F. T., Power, S. A., Yu, Q., Felton, A. J. & 153 others, Munson, S. M., Luo, Y., Abdoli, H., Abedi, M., Alados, C. L., Alberti, J., Alon, M., An, H., Anacker, B., Anderson, M., Auge, H., Bachle, S., Bahalkeh, K., Bahn, M., Batbaatar, A., Bauerle, T., Beard, K. H., Behn, K., Beil, I., Biancari, L., Blindow, I., Bondaruk, V. F., Borer, E. T., Bork, E. W., Bruschetti, C. M., Byrne, K. M., Cahill, J. F., Calvo, D. A., Carbognani, M., Cardoni, A., Carlyle, C. N., Castillo-Garcia, M., Chang, S. X., Chieppa, J., Cianciaruso, M. V., Cohen, O., Cordeiro, A. L., Cusack, D. F., Dahlke, S., Daleo, P., D'Antonio, C. M., Dietterich, L. H., Doherty, T. S., Dubbert, M., Ebeling, A., Eisenhauer, N., Fischer, F. M., Forte, T. G. W., Gebauer, T., Gozalo, B., Greenville, A. C., Guidoni-Martins, K. G., Hannusch, H. J., Haugum, S. V., Hautier, Y., Hefting, M., Henry, H. A. L., Hoss, D., Iribarne, O., Isbell, F., Johnson, Y., Jordan, S., Kelly, E. F., Kimmel, K., Kreyling, J., Kröel-Dulay, G., Ingrisch, J., Kröpfel, A., Kübert, A., Kulmatiski, A., Lamb, E. G., Larsen, Klaus Steenberg, Larson, J., Leder, C. V., Linstädter, A., Liu, J., Liu, S., Lodge, A. G., Longo, G., Loydi, A., Luan, J., Lawson, J., Lubbe, F. C., Macfarlane, C., Mackie-Haas, K., Malyshev, A. V., Maturano-Ruiz, A., Merchant, T., Metcalfe, D. B., Mori, A. S., Mudongo, E., Newman, G. S., Nielsen, U. N., Nimmo, D., Niu, Y., Nobre, P., O'Connor, R. C., Ogaya, R., Oñativia, G. R., Orbán, I., Osborne, B., Otfinowski, R., Pärtel, M., Penuelas, J., Peri, P. L., Peter, G., Petraglia, A., Picon-Cochard, C., Pillar, V. D., Piñeiro-Guerra, J. M., Ploughe, L. W., Plowes, R. M., Portales-Reyes, C., Prober, S. M., Pueyo, Y., Reed, S. C., Ritchie, E. G., Rodríguez, D. A., Rogers, W. E., Roscher, C., Sánchez, A. M., Santos, B. A., Scarfó, M. C., Seabloom, E. W., Shi, B., Souza, L., Stampfli, A., Standish, R. J., Sternberg, M., Sun, W., Sünnemann, M., Tedder, M., Thorvaldsen, P., Tian, D., Tielbörger, K., Valdecantos, A., van den Brink, L., Vandvik, V., Vankoughnett, M. R., Velle, L. G., Wang, C., Wang, Y., Wardle, G. M., Werner, C., Wei, C., Wiehl, G., Williams, J. L., Wolf, A. A., Zeiter, M., Zhang, F., Zhu, J., Zong, N. & Zuo, X., 2024, In: Proceedings of the National Academy of Sciences of the United States of America. 121, 4, 10 p., e2309881120.

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Scattered tree death contributes to substantial forest loss in California

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Exploring the impacts of unprecedented climate extremes on forest ecosystems: hypotheses to guide modeling and experimental studies

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Exploring the impacts of unprecedented climate extremes on forest ecosystems: hypotheses to guide modeling and experimental studies

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Field experiments underestimate aboveground biomass response to drought

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Re-visiting soil carbon and nitrogen stocks in a temperate heathland seven years after the termination of free air CO₂ enrichment (FACE)

Li, Qiaoyan, Ambus, Per Lennart, Michelsen, Anders, Schmidt, Inger Kappel, Beier, Claus, Dietzen, Christiana Amalie, Reinsch, S., Arndal, M. F. & Larsen, Klaus Steenberg, 2022, In: Geoderma. 428, 7 p., 116185.

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Holm, J. A., Medvigy, D. M., Smith, B., Dukes, J. S., Beier, Claus, Mishurov, M., Xu, X., Lichstein, J. W., Allen, C. D., Larsen, Klaus Steenberg, Luo, Y., Ficken, C., Pockman, W. T., Anderegg, W. R. L. & Rammig, A., 2022, 9 p. (Biogeosciences Discussions; No. 65 - Supplement, Vol. 2022).

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Exploring the impacts of unprecedented climate extremes on forest ecosystems: hypotheses to guide modeling and experimental studies

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Accumulation of soil carbon under elevated CO₂ unaffected by warming and drought

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Accumulation of soil carbon under elevated CO₂ unaffected by warming and drought

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