**PROJECT MANAGER QUALIFICATIONS**

**SEBASTIAN F. BEHRENS**

**a. Professional Preparation.**

Institution Major Degree Year

University of Bremen, Germany Biology B.Sc. 1997

University of Bremen, Germany Microbiology M.Sc. 2000

MPI for Marine Microbiology, Germany Microbial Ecology Ph.D. 2003

**b. Appointments.**

Since 2015 Assoc. Professor, Civil, Environmental, and Geo-Engineering, University of Minnesota

2008-2014 Assistant Professor, Center for Applied Geosciences, University of Tuebingen, Germany

2004-2008 Postdoctoral Researcher, Civil and Environmental Engineering, Stanford University

**c. Products.**

RECENT PRODUCTS MOST CLOSELY RELATED TO THE PROJECT PROPOSAL

5. Hagemann N, Subdiaga E, Orsetti S, de la Rosa Arranzc JM, Knicker H, Schmidt HP, Kappler A, **Behrens S** (2018) Effect of biochar amendment on compost organic matter composition following aerobic compositing of manure. *Science of the Total Environment* 613-614: 20-29.

4. HagemannN, JosephS, SchmidtH-P, KammannCI, HarterJ, BorchT, YoungRB, VargaK, ElliotKW, McKennaA, ChenH, AlbuM, MayrhoferC, ObstM, ConteP, Dieguez-AlonsoA, **Behrens S**, Kappler A (2017)Organic coating on biochar explains its nutrient retention and stimulation of soil fertility. *Nature Communications* 8: 1089.

3. Archanjo B, Mitchell D, Achete C, **Behrens S**, Kappler A, Enders A, Munroe P, Hagemann N, Zwieten L, Mayerhofer C, Mai T, Horvat J, Mendoza M, Weng Z, Araujo J, Donne S, Joseph S, Albu M (2017) Nanoscale Analyses of the Surface Structure and Composition of Biochars Extracted from Compost and from Cultivated Fields Using Advanced Analytical Electron Microscopy. *Geoderma* 294: 70-79.

2. Hagemann N, Kammann CI, Schmidt H-P, Kappler A, **Behrens S** (2017) Nitrate capture and slow release in biochar amended compost and soil. *PLOS One* 12: e0171214.

1. Hagemann N, Harter J, Kaldamukova R, Guzman-Bustamante I, Ruser R, Graeff S, Kappler A, **Behrens S** (2016) Does soil aging affect the N2O mitigation potential of biochar? A combined microcosm and field study. *GCB Bioenergy* DOI: 10.1111/gcbb.12390

**d. Synergistic activities.**

I follow an interdisciplinary approach that combines the disciplines environmental engineering, microbiology, and molecular biology to understand the basic ecological principles driving the bioremediation of metals, the biodegradation of organic contaminants, and the transport and fate of nutrient in the environment. The knowledge I gain by studying these processes in natural and engineered ecosystems I then apply to optimize remediation approaches, resource recovery, and the biological treatment of water, thereby spanning the gap between basic and applied research aspects of environmental management and restoration.

**ORGANIZATION DESCRIPTION**

The University of Minnesota is the State’s main research and graduate teaching institution. The University partners with communities and governmental agencies across Minnesota to engage students, faculty, and staff in addressing society's most pressing issues. The Department of Civil, Environmental and Geo-Engineering focuses on collaborative and interdisciplinary research within critical areas such as managing and sustaining water and land-use infrastructure, mitigating disaster of the natural and built environments, engineering and developing earth resources, and designing renewable energy systems.