



Dr. Sigrid Kusch

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Diploma Environmental Engineering (Dipl.-Ing., specialised in waste management and process engineering), completed 2001

PhD Doctoral degree completed 2007 (subject field: bioenergy, anaerobic digestion: laboratory and applied research)

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Thematic Competence Profile

Background and practice of my research and teaching are based in the environmental engineering discipline, but include interdisciplinary and transdisciplinary components. Key focus areas cover:

- Resources management, circular economy, sustainable consumption and production, renewable resources, resource efficiency, cleaner production, waste management, solid waste, organic wastes, e-waste
- Renewable energy, bioenergy, biological process engineering, anaerobic digestion (biogas)
- Organic resources, food waste, sustainable food systems
- Interconnections of urban and rural areas, energy in urban environments, integration of underutilised biogenic energy carriers (bio-waste, zoo waste, horse manure, other lignocellulosic materials)

Relevant Professional Positions, Academic Training and Recognition

2017	Visiting Professor for 'Sustainable and Renewable Resources', University of Padua (Italy), Department for Civil, Environmental and Architectural Engineering (temp.)
2009 ongoing	Visiting Researcher/ Visiting Research Fellow at University of Southampton (UK), Engineering and the Environment, member of the Bioenergy and Organic Resources Research Group
2016 ongoing	Member of the EPSRC Associate Peer Review College (Engineering and Physical Sciences Research Council, UK)
2015 ongoing	Member of the British Council Panel 'Environment, Agriculture and Food Sciences'; Institutional and Researcher Links/ Newton Fund assessment groups
2015 ongoing	Appointed Eurostars expert (waste treatment, renewables) (Eureka, European Commission)
2014 ongoing	Expert for the European Commission in Horizon 2020
2014 ongoing	Founder of 'ScEnSers Independent Expertise – Science and Engineering for Sustainable Environmental Resources' (non-commercial organisation, think tank)
2008 ongoing	Consultant and Freelance Project Engineer, Independent Scientist (currently in Ulm/ Germany, previously Nuernberg, Wuerzburg) (waste management, renewable energy, anaerobic digestion) (to flexibly complement academic focus)
2016 ongoing	Editorial Board member of Waste Management & Research
2015 ongoing	Future Earth Fellow (ISSC - International Social Science Council/ ICSU – International Council for Science/ Future Earth)
2015 – 2016	Coordinating Lead Author of the European Assessment of the Global Environmental Outlook Report of the United Nations Environment Programme (UNEP GEO 6)
2015 – 2016	Contributing expert to the UN Global Sustainable Development Report 2016 (GSDR 2016, UN Division for Sustainable Development)
2014 – 2016	Contract Professor for 'Sustainable and Renewable Resources', University of Padua, Italy
2011 – 2012	Substitute (Interim) Professor for Waste Management at Technical University of Dresden, Germany (temporary placement for 2 semesters with full teaching and examination responsibilities in the area of waste and resources management); Head of Chair; Deputy Director of the Institute for Waste Management and Contaminated Site Treatment
2011 – 2012	Member of Expert Panel 3rd ERA-IB Joint Call 2012 (European Research Area Industrial Biotechnology, EU panel with 11 experts)
2011 – 2014	Appointed as ZIF Young Fellow (Centre for Interdisciplinary Research, Bielefeld)
2008 – 2012	Academic Associate at University of Stuttgart (waste management, organic resources) (since 2010 partial and since 2011 primarily faculty position; since 2010 establishment of a research group based on new research areas brought to the faculty, such as zoo waste, micro gas grids, horse manure, urban bioenergy; granted leave for one year in 2011/12 to assume position in Dresden)
2007	Intellectual Property Manager at Technical University of Munich; responsible for intellectual property issues for several engineering faculties
2003 – 2007	Doctoral student with University of Hohenheim, Stuttgart (research in bioenergy)
2003 – 2006	Researcher at State Institute for Agricultural Engineering and Bioenergy, Stuttgart (applied and laboratory research in anaerobic digestion, dry digestion; conception of a dry digestion laboratory; consulting to practice)
2003	Freelance work for a waste specialist journal (RecyclingMagazin) in Munich

2002	Research at EAWAG in Duebendorf, Switzerland (ecological sanitation)
2001 – 2002	Research Assistant at University of Stuttgart (sanitary engineering)
2000	Temporary placement with Park Environmental Services in Newport/ UK (waste treatment)
1998 – 2000	Research Assistant at University of Stuttgart (industrial water technology)
1994 to 2001	Studies in Environmental Engineering; Technical University of Berlin, University of Stuttgart, ENTPE France, Technical University of Dresden

Selected Specific Activities

Journal Referee	ca. 180 completed reviews (total number of enquiries: ca. 365) review mainly for: 1) Waste Management & Research; 2) Waste Management; 3) Applied Energy; 4) Chemical Engineering Journal; 5) Journal of the Air & Waste Management Association; 6) Bio-resource Technology; 7) Journal of Cleaner Production; 8) Transactions of the ASABE American Society of Agricultural and Biological Engineers; 9) Biological Engineering Transactions; 10) Engineering in Life Sciences; 11) Water Research; 12) Journal of Industrial Ecology; 13) Water, Air, and Soil Pollution; 14) Chemie Ingenieur Technik; 15) Environmental Progress and Sustainable Energy; 16) Environmental Engineering and Management Journal; 17) Environmental Technology; 18) Critical Reviews in Biotechnology; 19) World Review of Science, Technology and Sustainable Development; 20) International Journal of Global Energy Issues; 21) International Journal of Environmental Engineering; 22) Energies; 23) Sustainability
Reviewer Proposals	ca. 90 completed evaluations (ca. 80 research projects, 5 workshops, 5 PhD placements) for various programmes (EU, Germany, Romania, Qatar, Denmark, UK, LIRA 2030 Africa/ ICSU)
Conference Reviews	Referee for conference submissions to various conferences (13 completed reviews)
Editor Roles	Editorial Board Member 'Waste Management & Research' (since 2016); Member of Editorial Board 'News in Engineering (NiE)' (since 2013); Guest Editor Engineering in Life Sciences (Special Issue 'Progress in Biogas', 2011 – 2012); Guest Editor International Journal of Environmental Engineering (Special Issue 'Progress in Landfill Management and Landfill Emission Reduction', 2009 – 2011)
Committees/ Panels	Expert reviewer for the REN21 Renewables 2017 Global Status Report (Renewable Energy Policy Network for the 21st Century) (2017); Member of expert panel for technology assessments for TEL (Technology Exchange Lab) (non-profit organisation) (2017); Consultative expert reviewer for ICSU (International Council for Science) on the framework for understanding SDG interactions (2016); External consultative expert reviewer for IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services) (2016, 2017); Panel member 'Environment, Agriculture and Food Sciences' for the British Council Researcher Links programme/ Newton Fund (since 2015); Rapporteur EU Horizon 2020 (topical area waste, one- and two-stage calls, 3 panels since 2014); Rapporteur UEFISCDI Romania (NP III, 2016); Member of Expert Panel 3rd ERA-IB Joint Call 2012 (Industrial Biotechnology, 2011 – 2012); Member of the Committee Hydro Sciences of the TU Dresden (2012); Contest Judge for the 'Global School Enterprise Challenge' (run by Teach a Man to Fish, student led school businesses, 2 assessment rounds of final results in 2015 and 2016); Judge for business plans in the 'Global School Enterprise Challenge' (2016); Contest Judge 'Future City Competition' US National Finals 2015/16 (STEM programme for school students run by the US National Engineers Week Foundation, focal topic in 2015/16: waste management); Chairperson at several congresses (since 2009); Member of scientific/ organising committee of several congresses and other scientific/ public events (ca. 12 events)
Distinctions/ Prizes	SAGE Excellent Reviewer 2015 (voted by editorial board of Waste Management & Research); Best Reviewer Award Journal of the Air & Waste Management Association (2013); Appointed participant for the Young Scientists' DFG/ISSC/ICSU Conference on Integrated Science for the Future Earth theme 'Food Futures', Villa Vigoni, Italy (2013); Ranked among final top 40 high-potentials for the Fast Track Programme of the Robert Bosch Stiftung, Stuttgart, aiming at accelerated uptake of leadership positions (2012); Nominee for the postdoctoral programme 'Eliteprogramm für Postdoktoranden der Baden-Wuerttemberg Stiftung' based on conception of a research line newly brought to the faculty on urban bioenergy (zoo waste, micro gas grids, horse manure, biowaste) (2010); Listed 2nd by BTU Cottbus (Brandenburgische Technische Universität, Germany) for the appointment of a junior professor for the area 'Waste Management and Bioenergy' (2009/2010); Recipient of several travelling scholarships; Nominee for the UNV Online Volunteering Award 2015 (nominated by Art for All in the World); Recipient of Scheffel-Prize of Literarische Gesellschaft Karlsruhe (literary community in Southern Germany) (1993)
Others	Member of several professional affiliations (academic and engineering); STEM-Mentor (science, technology, engineering, mathematics) for grammar school girls (project Cybermentor, University of Regensburg, 2010 – 2012); Co-organiser of an institutional 'girl's day' (one-day programme with technical/ scientific topics for grammar school girls, University of Hohenheim, 2005) Further activities as mentor or in similar positions; Several years of voluntary private tutoring for grammar school children with background of migration