



## Dr. Sigrid Kusch-Brandt

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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, consulting and teaching are based in the environmental engineering discipline, but include interdisciplinary and transdisciplinary components. Key focus areas cover:

- Resource management, circular economy, renewable resources, renewable energy, resource efficiency, cleaner production, waste management, solid waste, organic wastes, e-waste
- Bioeconomy, biological process engineering, anaerobic digestion (biogas)
- Sustainable consumption and production, cleaner production, hydrogen
- 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

2021 ongoing	Project leader bioeconomy and hydrogen strategy, Alb-Donau-Kreis District Administration, Ulm, Germany
2020 ongoing	Lecturer "Circular Economy and Sustainable Management of Resources", University of Applied Sciences, Ulm, Germany
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
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)
2015 ongoing	Future Earth Fellow (ISSC - International Social Science Council/ ICSU – International Council for Science/ Future Earth)
2016 – 2020	Visiting Professor for 'Sustainable and Renewable Resources', University of Padua (Italy), Department for Civil, Environmental and Architectural Engineering (temp.)
2015 – 2019	Member of the British Council Panel 'Environment, Agriculture and Food Sciences'; Institutional and Researcher Links/ Newton Fund assessment groups
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, anaerobic digestion, conception of a dry digestion laboratory; consulting)
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

Editor Roles	<p>Associate Editor “Waste Management &amp; Research” (Sage Journals, since 2022); Associate Editor book project ‘Implementing the UN Sustainable Development Goals – Regional Perspectives’, Volume 4: European Region (since 2021; Springer, World Sustainability Series); Section Editor ‘Environmental Science’ for Science Progress (Sage Journals, since 2019)</p> <p>Editorial Board Member “International Journal of Environmental Research and Public Health” (since 2021); Editorial Board Member ‘MDPI Books’ (since 2021); Editorial Board Member ‘Discover Sustainability’ (Springer Nature, since 2020); Editorial Board Member ‘Waste Management &amp; Research’ (2016 – 2021); Member of Editorial Board ‘News in Engineering (NiE)’ (2013 – 2018)</p> <p>Guest Editor International Journal of Environmental Research and Public Health (Special Issue ‘Towards more Sustainable Food Systems, 2nd Edition’, since 2021); Guest Editor journal ‘Processes’ (Special Issue ‘New Frontiers in Anaerobic Digestion (AD) Processes’, since 2020); Guest Editor International Journal of Environmental Research and Public Health (Special Issue ‘Towards more Sustainable Food Systems’, 2018 – 2020); Guest Editor Resources (Special Issue ‘Underutilised Resources in Urban Environments’, 2018 – 2020); 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)</p>
Journal Referee	<p>ca. 350 completed reviews (rereviews not counted) (total number of enquiries: ca. 940) review mainly for: Waste Management &amp; Research; Waste Management; Applied Energy; Chemical Engineering Journal; Journal of the Air &amp; Waste Management Association; Bioresource Technology; Journal of Cleaner Production; Biological Engineering Transactions; Engineering in Life Sciences; Water Research; Journal of Industrial Ecology; Water, Air, and Soil Pollution; Chemie Ingenieur Technik; Environmental Engineering and Management Journal; Environmental Technology; Critical Reviews in Biotechnology; World Review of Science, Technology and Sustainable Development; Energies; Sustainability; Processes</p>
Reviewer Proposals	<p>ca. 260 completed evaluations (ca. 240 research projects, 10 workshops, 10 PhD placements + others), various programmes (EU, Germany, Romania, Poland, Qatar, Denmark, UK, Latvia, Cyprus, LIRA 2030 Africa/ ICSU)</p>
Conference Reviews	<p>Referee for conference submissions to various conferences (14 completed reviews)</p>
Committees/ Panels	<p>Expert reviewer for IPCC Special Reports (1.5°C Global Warming, Climate Change and Land) (2017, 2018, 2019); Expert reviewer for the REN21 Renewables Global Status Report (Renewable Energy Policy Network for the 21st Century) (2017, 2018, 2019, 2020); Member 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); Consultative expert reviewer for IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services) (2016, 2017, 2018); Panel member ‘Environment, Agriculture and Food Sciences’ for the British Council Researcher Links programme/ Newton Fund (2015 – 2019); Member of the EPSRC Associate Peer Review College (Engineering and Physical Sciences Research Council, UK; since 2016); Rapporteur EU Horizon 2020 (topical area waste, one- and two-stage calls, 5 panels since 2014); Rapporteur UEFISCDI Romania (since 2016, 6 calls); 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); Judge for the Pan-African Awards for Entrepreneurship in Education (run by Teach a Man to Fish, 2017, 2018, 2019); 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, 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)</p>
Distinctions/ Prizes	<p>Publons Top Reviewer (2017, 2018, 2019; multiple award: winner in up to 8 categories); SAGE Excellent Reviewer 2015 (voted by editorial board of Waste Management &amp; Research); Best Reviewer Award Journal of the Air &amp; 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)</p>
Others	<p>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)</p> <p>Further activities as mentor or in similar positions; Several years of voluntary private tutoring for grammar school children with background of migration</p>