


Curriculum Vitae and List of Publications

Aigenbauer, Stefan, DI(FH)	
BEST – Bioenergy and Sustainable Technologies GmbH	
Gewerbepark Haag 3; 3250 Wieselburg Land	

Education and Employment		
From (year)	to (year)	
2019	present	Senior Researcher / Project Manager BEST GmbH; department: Smart- and Microgrids
2016	2019	Senior Researcher / Project Manager BEST GmbH; department: Fixed Bed Conversion Systems
2012	2016	Researcher / Project Manager BEST GmbH (former BIOENERGY 2020+ GmbH) department: Biomass Combustion – Innovative CHP Technologies & Next Generation Combustion Systems
2012	present	Part-time lector at the University of applied sciences Wiener Neustadt
2006	2012	Junior Researcher BEST GmbH (former BIOENERGY 2020+ GmbH), 3250 Wieselburg www.bioenergy2020.eu ; department: Biomass Combustion – Next Generation Combustion Systems
9/2006		Diploma examination with excellent success
3/2006	9/2006	Diploma thesis at BEST GmbH (former: Austrian Bioenergy Centre): „Potential der Kraft-Wärmekopplung von fester Biomasse bis 10kWe mit praktischer Untersuchung der thermoelektrischen Energieumwandlung“
8/2005	1/2006	Study internship at Fraunhofer Institut for Solar Energy-Systems in Freiburg/Germany: „Messtechnische Bewertung von Kühlkonzepten mit natürlicher Wärmesenke“
2003	2006	University of applied sciences Upper Austria Campus Wels (FH Wels) Study course: Eco-Energy Engineering https://www.fh-ooe.at/en/wels-campus/ research and laboratory: fuel cell, BlowerDoor-test, wind measurement,...
06/2002		Matriculation with project thesis: „wind measurement for wind power plants“
1997	2002	Federal Secondary College of Engineering Steyr (HTL Steyr); department: mechanical engineering / mechatronics: www.htl-steyr.ac.at

Research (main areas)
Smart- and Microgrids: planning and coordination of R&D projects (e.g. Microgrid Lab 100%)
Innovative Micro-CHP for biomass combustion systems: <ul style="list-style-type: none"> • Thermoelectric, Steam piston engine, Stirling engine, Organic Rankine Cycle • Thermal integration of Micro-CHP systems • State of the art and market overview • Technology benchmark • Heat management
Next generation biomass combustion systems: <ul style="list-style-type: none"> • Development of testing methods • Efficiency improvement of stoves and boilers • Primary- and secondary measures (e-filter, CAT) for reduction of gas- and particulate matter emissions

Projects (project management)
N101340 SCHWACHGAS_BHKW III (10/2018 – 12/2019)
N101450 ETP - Vergaserbrenner (01/2019 – 03/2020)
N441360 MICROGRID LAB 100 (01/2019 – 12/2021)
C10015016-biotheg_V Smart Heater (02/2017 – 04/2018)
IK-I-1-41 STIRBIO (04/2013 – 03/2016)
N100520 MODISYSPOWER (04/2016 – 03/2018)
N100680 SCHWACHGAS BHKW (07/2016 – 05/2017)
N101020 SCHWACHGAS BHKW II (06/2017 – 01/2019)
C100470 Chip2E (EffSys_CleanAir) (05/2018 – 09/2018)
I-1-37 BISON
IK-I-1-22 KOMBINE
IK-I-1-27-3 BioCAT (Rika)
nK-I-1-34 MIKRO-KWK

Honours and Awards
tech2be – Award 2006 2 nd place www.tech2b.at
OEC Young Researcher Award 2016 www.oec.at

Publications
Diploma Thesis
Aigenbauer, S. ; Potential der Kraft-Wärmekopplung von fester Biomasse bis 10kWe mit praktischer Untersuchung der thermoelektrischen Energieumwandlung; FH-Wels; September 2006
Public reports:
Padinger R., Aigenbauer S. , Schmidl C, IEA Task32 report: Best practise report on decentralized biomass fired CHP plants and status of biomass fired small- and micro scale CHP technologies; 2019
Aigenbauer S. , Zellinger M., Stadler M., Microgrid Forschungslabor für 100% dezentrale und erneuerbare Energieversorgung am Technopol Wieselburg; Jahrbuch TGA-Planung 2020
Reviewed Papers
G. Reichert, C. Schmidl, W. Haslinger, M. Schwabl, W. Moser, S. Aigenbauer , M. Wöhler, C. Hohenauer; Investigation of user behavior and assessment of typical operation mode for different types of firewood room heating appliances in Austria
Original Research Article; Renewable Energy, Volume 93, August 2016, Pages 245-254; January 2016
Waltraud Emhofer, Klaus Lichtenegger, Walter Haslinger, Hermann Hofauer, Irene Schmutzer-Roseneder, Stefan Aigenbauer and Martin Lienhard; Ventilation of Carbon Monoxide from a Biomass Pellet Storage Tank - A Study of the Effects of Variation of Temperature and Cross-ventilation on the Efficiency of Natural Ventilation; BOHS The Chartered Society for Worker Health Protection, doi: 10.1093, Ann. Occup. Hyg., 2014
Michael Hartl, Stefan Aigenbauer , Andreas Simetzberger, Ivan Malenkovic etal; Experimental and numerical investigations on a combined biomass-solar thermal; Journal Elsevier; 2011
Conference Papers (Visual / Poster Presentations + Conference Proceedings)
Aigenbauer S. , Stadler M., Zellinger M., Mair C., Liedtke P., Cosic A., Mansoor M., Microgrid Lab – R&D project for decentralized energy supply with biomass and other Distributed Energy Resources (DER); Topic: Decarbonisation of the energy system, oral and visual presentation and proceedings; Central European Biomass Conference CEBC Graz, January 2020

Michael Zellinger; Stefan Aigenbauer ; Michael Stadler; Microgrid Lab Wieselburg; Mission Innovation Austria (MIA) Online Event; Bundesministerium Klimaschutz, Umwelt, Energie, Mobilität, Innovation und Technologie; presentation; May 2020
Hans-Jürgen BRANDT, Josef FRAUSCHER, Ernst HÖFTBERGER, Stefan AIGENBAUER and Christine MAIR; STIR-BIO; paper: Demonstration of the performance of a stirling engine fired by wood pellet combustion; paper; ISEC International Stirling Engine Conference 2018; Taiwan 09/2018
C. Schmidl, S. Aigenbauer , E. Höftberger, C. Mair; Micro-scale CHP technologies – state of the art; 2.2 Biomass and bioliquids combustion for small and medium scale applications, oral presentation; EUBCE 05/2018
Stefan Aigenbauer , Rosemarie Schnetzinger, Christine Mair, Ernst Höftberger, Christoph Schmidl, Alexander Weissinger, Walter Haslinger; Experimental evaluation of a biomass pellet combustion concept developed for a 5 kWel Stirling module; visual presentation; CEBC 01/2017
Mair C., Schnetzinger R., Aigenbauer S. , Höftberger E., Weissinger A., Schmidl C., Haslinger W., Jordan C., Harasek M.; Experimental study of fouling issues in a biomass pellet driven Stirling engine; visual presentation CEBC 01/2017
R. Schnetzinger, S. Aigenbauer , C. Mair, E. Höftberger, A. Weissinger, C. Schmidl, W. Haslinger; Development of combustion concept for biomass pellet driven Stirling engine; EUBCE 06/2016
Stefan Aigenbauer , Ernst Höftberger, Rosemarie Schnetzinger; StirBio: Operation and Efficiency of a Wood- Pellet Fired 5 kWel Stirling; EUBCE 2015, Wien 2015
Rita Sturmlechner, Gabriel Reichert, Stefan Aigenbauer , Harald Stressler, Wilhelm Moser, Christoph Schmidl, Manuel Schwabl, Walter Haslinger; Development of a new method of defining a Real Life Thermal Heat Output for firewood stoves; Europäische Biomassekonferenz 2015
AIGENBAUER, S. ; HARTL, M.; SIMETZBERGER, S.; VERMA, V.; SCHMIDL, C.; Analysis of efficiency losses and solar heating ratio of a storage integrated pellet boiler in combination with a solar heating system under real life conditions; 4. Mitteleuropäische Biomassekonferenz; 2014
Michael Hartl, Stefan Aigenbauer et al; Model based optimization of a combined biomass-solar thermal system; SHC2013; 2013
Stefan Aigenbauer , Michael Hartl, Ivan Malenkovic; Andreas Simetzberger, Vijay Kumar Verma, Christoph Schmidl; System performance of a storage integrated pellet boiler; 20th European Biomass Conference, Mailand 2012
Michael Hartl, Ivan Malenkovic, Franz Helming, Stefan Aigenbauer et al; SOLARKOMBISYSTEM MIT SPEICHERINTEGRIERTEM PELLETSBRENNER – FELDMESSUNGEN UND THEORETISCHE UNTERSUCHUNGEN; Gleisdorf Solar 2012
Michael Hartl, Stefan Aigenbauer , Andreas Simetzberger, Ivan Malenkovic et al; Experimental and numerical investigations on a combined biomass-solar thermal; SHC2012; 2012
Wolfgang Prügler; Stefan Aigenbauer ; Günther Friedl; Andreas Müller; Marktperspektiven ausgewählter Mikro-KWK-Technologien bis 2020; 6. Internationale Energiewirtschaftstagung an der TU Wien; 2009
Conferences / Seminars (Presentations only)
Aigenbauer S. ; Technische Grundlagen Kraft-Wärme-Kopplung mit Biomasse; Kompaktseminar OÖ Energiesparverband; presentation - seminar; 01/2019 and 05/2020
Höftberger E., Aigenbauer S. , Brandt H-J., Verstromung biogener Brennstoffe mit Stirlingmotoren; Co-Autor für Vortrag Güssing´19 Konferenz; 03/2019
Aigenbauer S. ; Heizlastberechnung und europäische Gebäude richtlinie; Biowärmeinstallateure-Kurs; Biomasseverband; St. Pölten; Graz; Weng im Innkreis; 2018, 2019 and 2020
Stefan Aigenbauer , Ernst Höftberger, Rosemarie Schnetzinger; Betriebserfahrungen mit einem Pellet betriebenen 5 kWel Stirling; 20. AK Holzfeuerungen in Straubing 2015
Wilhelm Moser, Stefan Aigenbauer , Gabriel Reichert, Christoph Schmidl; Ergebnisse Ofenprüfung 2020; 18. AKS Straubing; 2014
Höftberger, Ernst; Moser, Wilhelm; Aigenbauer, Stefan ; Haslinger, Walter; Grid Independent Pellet Stoves with an Integrated Thermoelectric Generator, IBC Leipzig, 2011
Stefan Aigenbauer ; Günther Friedl; Definition und Evaluierung ausgewählter Mikro-KWK Technologien; Smart grid week Salzburg, Mai 2009

