

Gerd Bramerdorfer

Full Professor, PhD, SMIEEE

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Updated: November 2023

Short Biography

Gerd Bramerdorfer is a **Full Professor with Johannes Kepler University Linz, the Head of the Institute of Electric Drives and Power Electronics**, and a key researcher of the ‘Center for Symbiotic Mechatronics’ of the Linz Center of Mechatronics.

He received the Dipl.-Ing. degree in Mechatronics in 2007, the Ph.D. degree in electrical engineering in 2014, and the habilitation in 2021, all from Johannes Kepler University Linz (JKU), Austria. Since 2007, he has been with the Institute of Electrical Drives and Power Electronics at JKU, where he has been involved in various research projects and continuously holds classes in the field of electrical machine design, actuators, and power electronics. **He has (co)authored more than 130 papers in technical journals and as contributions for conference proceedings. He was cited >1850 times and his h-index is 24 (GoogleScholar). He simultaneously coordinates collaborations to 10+ international academic partners and several companies.**

Gerd Bramerdorfer is a senior member of IEEE and a member of the the IEEE Industry Applications Society, IEEE Industrial Electronics Society, and the IEEE Power & Energy Society. He serves the scientific community, e.g., as a Guest Editor, a Track Chair, a Topic Chair, and by organizing special sessions and issues. He is reviewer for prestigious international journals and conferences.

Gerd Bramerdorfer is an Associate Editor of the IEEE TRANSACTIONS ON ENERGY CONVERSION, a Past Associate Editor of the IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, and the past Vice-Chair of the Austrian IAS/PELS/IES Joint Chapter.

According to the joint publications of Elsevier, SciTech Strategies Inc., and Stanford on “Updated science-wide author databases of standardized citation indicators” in 2023, **Gerd Bramerdorfer is listed within the top 0.6% researchers worldwide** (among 100k+ researchers, self-citations excluded). The researchers’ performance is evaluated based on a combination of multiple measures to guarantee a fair comparison.

Career

since 03/2023	Johannes Kepler University Linz, Austria	Full Professor and Head of the Institute of Electrical Drives and Power Elec- tronics
since 08/2021	Johannes Kepler University Linz, Austria	Associate Professor at the Institute of Electrical Drives and Power Electronics
09/2016- 07/2021	Johannes Kepler University Linz, Austria	Assistant Professor at the Institute of Electrical Drives and Power Electronics
since 05/2007	Johannes Kepler University Linz, Austria	Research associate at the Institute of Electrical Drives and Power Electronics
since 01/2014	Linz Center of Mechatronics, Austria	Senior researcher and external project leader (as scientific partner)

University Education

09/2001–04/2007	Study: Mechatronics at Johannes Kepler University Linz with focus on electrical drives Project paper: Phase-Controlled Rectifier Diploma thesis: Development of an Electrical Drive for Fan Applications
08/2005–12/2005	Study at Linköpings Tekniska Högskola (LIU), Linköping, Sweden
03/2009–10/2014	Dissertation: Modeling and Optimization of Brushless Electrical Machines for Challenging Performance Requirements, Johannes Kepler University Linz, passed with distinction
09/2016–08/2021	Habilitation (Venia Docendi) in Electric Machines and Drives, Johannes Kepler University Linz

Research stays

- 2016/01–2016/03 Guest researcher at the University of Wisconsin, Madison, US and the Wisconsin Electric Machines and Power Electronics Consortium (WEMPEC)
Invited by: Prof. Bulent Sarlioglu
- 2016/03–2016/05 Guest researcher at the Politecnico di Torino, Dipartimento Energia, Turin, Piedmont, Italy
Invited by: Prof. Andrea Cavagnino
- 2018/10–2018/12 Guest researcher at the Politecnico di Torino, Dipartimento Energia, Turin, Piedmont, Italy
Invited by: Prof. Andrea Cavagnino and Dr. Silvio Vaschetto
- 2019/02–2019/04 Guest researcher at the University of Wisconsin, Madison, US and the Wisconsin Electric Machines and Power Electronics Consortium (WEMPEC)
Invited by: Prof. Eric Severson

Short-Term Research Stays

- 2018/01/11–
2018/01/21 Invited guest researcher, external teaching at the Universidad de Concepcion, Concepcion, Chile
Invited by: Prof. Juan Tapia
- 2019/11/12–
2019/11/21 Invited guest researcher at the Pontificia Universidad Catolica de Valparaiso, Valparaiso, Chile
Invited by: Prof. Werner Jara
- 2023/10/06–
2023/10/13 Invited guest researcher at the Inha University, Incheon, South Korea
Invited by: Prof. Gilsu Choi

Management Skills and Duties

- ERC Starting Grant awardee (2022) - 1.5 Million€, topic: "Charmaelon - Electric Machines with Inherent Speed-Dependent Characteristics for More Sustainable and Efficient Energy Conversion", 2023-2027.
- LiT-project - 165k€, topic: "MotorDoc - Electric Machine Diagnosis for Preventive Treatments and acute care", 2023-2025.
- Project Lead, Management, and Coordination for projects of the Institute of Electric Drives and Power Electronics, Johannes Kepler University Linz, since 2012. Budget range from approx. 4k€ to 80k€.
- Budget and human resource planning for K2-funded activities of the Institute of Electric Drives and Power Electronics, Johannes Kepler University Linz, funding period 2018-2021, in coordination with Professor Amrhein and Professor Gruber, total budget: approx. 1.92 Million Euros, participation in projects as a PI / senior researcher, public and company-related funding.
- Project Leader for K2-funded project (C140112) 'Modeling the Impact of Manufacturing on Soft Magnetic Materials' – 2014-2017, total budget including in-kind approx. 483k€, public and company-related funding, mainly six persons involved
- Project Leader for K2 project (K11108) 'Advanced Modeling of Soft Magnetic Materials' – since 2018, total budget including in-kind: 405k€, public and company-related funding, mainly five persons involved
- Coordinator of the K2-funded Multi-firm project, entitled 'Improved Transient Thermal Modeling of Electric Machines' – since 2018, mainly five internal and three external persons involved, approximated budget including in-kind: 400k€, public and company-related funding.
- Topic coordinator for further K2-funded projects (monitoring of electric machines and drives, topology optimization of electric machines, etc.), since 2018, mainly five persons involved, total budget >600k€, public and company-related funding.
- Coordination of Scientific Partners of the K2 – Area Electric Drives (e.g., Politecnico di Torino, Italy; Robert Gordon University, Scotland; Brno University of Technology, Czechia) – since 2018, approximated budget including in-kind: 160k€ for the current period (2018-2021), and 150k€ for the upcoming period (2022-2026).
- Key Researcher (PI) for the Institute of Electrical Drives and Power Electronics at Johannes Kepler University Linz for the K2-funded activities, funding period 2022-2026, approx. budget volume: 2.9 Million Euros.

Main Research Interests

- Sustainable design and modeling of electric machines and drives
- Condition monitoring of electric machines and drives
- Multi-objective optimization of mechatronic systems including sensitivity and tolerance analyses
- Robust optimization, optimization for high reliability, characterization of the impact of uncertainties on the electric machine performance
- Material characterization for electric machine modeling: (1D-/2D-characteriz., impact of manufacturing and mech. stress, high frequency and PWM aspects)
- Nonlinear optimal control of electric machines
- Magnetic levitation and magnetic bearing technology

Memberships

- Member of IEEE (since 2010), Senior Member since 2018
- Member of the IEEE Industrial Electronics Society (since 2010)
- Member of the IEEE Industry Applications Society (since 2016)
- Member of the IEEE Magnetics Society (2018-2020)
- Member of the IEEE Power & Energy Society (since 2022)
- Member of the electrical machines technical committee of the IEEE Industrial Electronics Society (since 2010)
- Member of the electrical machines committee of the IEEE Industrial Applications Society (since 2017)
- Member of the IEEE Power Electronics Society (2013)
- IEEE Young Professionals (since 2014)

Awards and Achievements

- Best presentation award at IECON 2014 - 40th Annual Conference of the IEEE Industrial Electronics Society
- ETG Literary Prize 2014 together with Dirk Braunisch and Prof. Bernd Ponick, both from the Leibniz Universität Hannover
- Best paper award at 2016 IEEE Energy Conversion Congress and Exposition (ECCE) together with Dheeraj Bobba, Yingjie Li, Timothy A. Burress, Bulent Sarlioglu
- Best presentation award at IECON 2016 - 42nd Annual Conference of the IEEE Industrial Electronics Society
- University of Wisconsin, USA: Honorary Fellow 01/2016-03/2016
- Best Paper Award on Electric Machines and Drives - third place - IEEE Transactions on Energy Conversion 2021 (about 700 papers of the years 2020 and 2021 under evaluation) for the individually authored article: "Effect of the manufacturing impact on the optimal electric machine design and performance".

- Star reviewer for IEEE Transactions on Energy Conversion - 2021.
- Best Paper Award (as co-author) at the IKMT 2022 - "Application of Thermal Neural Networks on a Small-Scale ELeCtric Motor", together with University of Paderborn

Scholarships

- Scholarship from Johannes Kepler University Linz for the research stay at UW Madison, Wisconsin, US, in 2019.
- Scholarship from Johannes Kepler University Linz for the research stay at UW Madison, Wisconsin, US, in 2016.
- Scholarship from the federal state of Upper Austria for the research stay at UW Madison, Wisconsin, US, and Politecnico di Torino, Piedmont, Italy, in 2016.
- Scholarship from the Austrian government and the European Union (ERASMUS) for the exchange semester in 2005, performed at Linköpings universitet (LIU) in Sweden.

Scientific Work

- **Associate Editor of the IEEE TRANSACTIONS ON ENERGY CONVERSION**
05/2019-now
- **Associate Editor of the IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS**
01/2018-12/2019
- **Guest editor of the IEEE Transactions on Industrial Electronics**
(Topic: Optimization of Electric Machine Designs, 2016-2017)
- **Guest editor of the IEEE Transactions on Energy Conversion**
(Topic: Robust design and analysis of electric machines and drives, 2019-2020)
- **Guest editor of the IEEE Transactions on Industry Applications**
(Topic: Magnetically Levitated Motor Systems, 2019-2021)
- **Guest editor of the MDPI open access journal "Electronics"**
(Topic: Design and Optimization of Machines and Drives for Transport Applications, 2021)
- **Reviewer for, e.g., the following journals (all in Thomson Reuter's SCI):**
 - IEEE Transactions on Industrial Electronics
 - IEEE Transactions on Industry Applications
 - IEEE Transactions on Energy Conversion
 - IEEE Transactions on Magnetics
 - COMPEL - The international journal for computation and mathematics in electrical and electronic engineering
- **Reviewer for various conferences**
- **Special session organizer for IEMDC 2015**
(IEEE International Electric Machines & Drives Conference)

- **Special session organizer for ICEM 2022**
(XXVth International Conference on Electrical Machines)
- **Member of the international program committee of the ISMB14**
(14th International Symposium on Magnetic Bearings)
- **Co-chair of the SCEE 2016**
(11th International Conference on Scientific Computing in Electrical Engineering)
- **Technical track co-chair of ICEM 2016, 2018**
(International Conference on Electrical Machines)
- **Topic chair of IEMDC 2017**
(IEEE International Electric Machines & Drives Conference)
- **Technical track co-chair of WEMDCD2019**
(4th IEEE Workshop on Electrical Machine Design, Control and Diagnostics)
- **Topic chair of ECCE 2019, 2020, 2021, 2022, 2023**
(IEEE Energy Conversion Congress & Expo)
- **Conferences attended**
SPEEDAM2010, IECON2010, SPEEDAM2012, IEMDC2013, IECON2013, NdFeBPm2014, PEMD2014, ISMB2014, IECON2014, IEMDC2015, InnovationMesstechnik2015, IECON2015, ICEM2016, SCEE2016, IECON2016, ECCE2017, ITEC2018, ICEM2018, ECCE2018, ECCE2019, CEFC2020, ECCE2020, WEMDCD2021, ECCE2021, ECCE 2023

External Guests Invited for Research Stays

01/2018–12/2018	Marco Cossale, PhD Politecnico di Torino, Italy
08/2019–09/2019	Assistant Professor Silvio Vaschetto, PhD Politecnico di Torino, Italy
09/2019–10/2019	Assistant Professor Jan Barta, PhD Brno University of Technology, Czechia
07/2021–09/2021	Vladimir Bilek, Msc, PhD student Brno University of Technology, Czechia
09/2021–11/2021	Iveta Lolova, Msc, PhD student Brno University of Technology, Czechia
09/2021–12/2021	Marek Toman, Msc, PhD student Brno University of Technology, Czechia
09/2021–02/2023	Kaikai Diao, PhD student Jiangsu University, China

etc.

Invited Talks

- **Keynote speaker at the Kleinmaschinenkolloquium**
(meeting concerning fractional horse power drives) in Ilmenau, Germany, 2013:
“Kostenoptimierter Vergleich bürstenloser Motoren zur Erzielung höchster Wirkungsgrade” (“Comprehensive Cost Optimization Study of High-Efficiency Brushless Synchronous Machines”)

- **Invited talks at the Wisconsin Electric Machines and Power Electronics Consortium (WEMPEC)** in Madison, Wisconsin, USA:
 - 05/15/2015: “Optimizing Mechatronic Components”
 - 05/15/2015: “Rapid Prototyping Control for Electric Drives”
 - 02/04/2016: “Introduction to the Optimization of Electric Machines and Drives”
 - 02/11/2016: “Techniques for Optimizing Electric Machines and Drives and Their Application”
 - 02/18/2016: “Typical Optimization Scenarios in Electric Machine Design and Their Automation”
 - 02/25/2016: “Speed Improvements for Electric Machines’ and Drives’ Optimization”
 - 02/25/2016: “Robust Electric Machine Design Optimization Comprising Sensitivity and Tolerance Analyses”
 - 09/29/2017: “Electric Machine Design Optimization: Recent Developments and Future Trends”
 - 04/05/2019: “Electric Machine Design Optimization: Motivation, Introduction, and General Definitions and Techniques”
 - 04/10/2019: “Electric Machine Design Optimization: Exemplary Scenarios, Lessons Learned, Best Practices”
 - 04/15/2019: “Electric Machine Design Optimization: Convergence and Divergence, Tolerances, Future Research Opportunities”
- **Invited talk at the Massachusetts Institute of Technology (MIT)** in Boston, MA, USA, on September 21, 2018: “More Accurate Modeling of Soft Magnetic Materials for Electric Machine Design”
- **Invited talk at the Electrical Engineering Department of Columbia University in the City of New York** in New York City, NY, USA, on October 1, 2018: “Aspects of Modern Optimization of Rotating Electric Machines”
- **Speaker at the Femag-Anwendertreffen** (Femag user meeting; major annual event in Germany about the calculation of electrical machines) in Friedrichshafen, Germany, on November 15, 2018: “Zeitdiskretes Eisenverlustmodell: Messung, Identifikation, Anwendung” (“Time Domain Based Iron Loss Model: Measurements, Identification and Application”)
- **Invited talk at the Faculty of Electrical and Computer Engineering, Marquette University** in Milwaukee, Wisconsin, USA on March 7, 2019: “Aspects of Modern Optimization of Rotating Electric Machines”
- **Public seminar held at the University of Wisconsin-Madison**, in Madison, WI, USA, on April 17, 2019, “7 Key Aspects for Successfully Solving Large-Scale Electric Machine Optimization Problems”
- **Invited talk at the Faculty of Electrical Engineering and Communication, Brno University of Technology** in Brno, Czechia, on May 27, 2019: “Electric Machine and Drives Design and Optimization at Johannes Kepler University Linz and the Linz Center of Mechatronics (LCM)”

- **Guest lecture at the Faculty of Electrical Engineering and Communication, Brno University of Technology** in Brno, Czechia, on May 5, 2022: “The Impact of Uncertainties on the Electric Machine Performance”
- **Invited talk at JKU Mathematics Mini-workshop** in Linz, Austria, on July 3, 2023: “The Impact of Uncertainties on the Electric Machine Performance”
- **Invited talk and guest lecture at Inha University** in Incheon, South Korea, on Oct. 10 and 11, 2023: “The Impact of Uncertainties on the Electric Machine Performance”, and “Techniques for the Optimal Design of Electromechanical Devices”

Tutorials

- Tutorial at ICEM 2018, on September 2, 2018 (4 hours): “Modern Optimization of Rotating Electric Machines” (together with Antti Lehikoinen)

International Network

I have continuously been investigating opportunities to improve the prior art and I disseminated correspondingly accomplished enhancements. **I am fascinated by (international) collaborations and thinking outside the box for finding new and better solutions to any kind of problem.**

Besides collaborating with researchers from groups that focus on electric machines and drives, **I personally as much enjoy cooperating with people from other fields**, e.g., from the mathematics, as I did with people from the Institute of Computational Mathematics as well as from the Department of Knowledge-Based Mathematical Systems, both from the Johannes Kepler University Linz in Linz, Austria.

Consequently, besides collaborative work that not immediately followed scientific dissemination, e.g., work together with company partners, **I so far collaborated with 99 co-authors of 23 different nationalities who were engaged at research institutions from 14 different countries (as of November 2020).** This is illustrated on the following pages. The interested reader finds all (joint) publications in the list of publications.

I finally would like to emphasize that those collaborations have immensely enriched my life technically and personally and I am deeply grateful for them.



Figure 1: World map showing connections to the places where the research institutions of all co-authors are located (Collaborations with European research institutions and companies are illustrated in Figure 2).

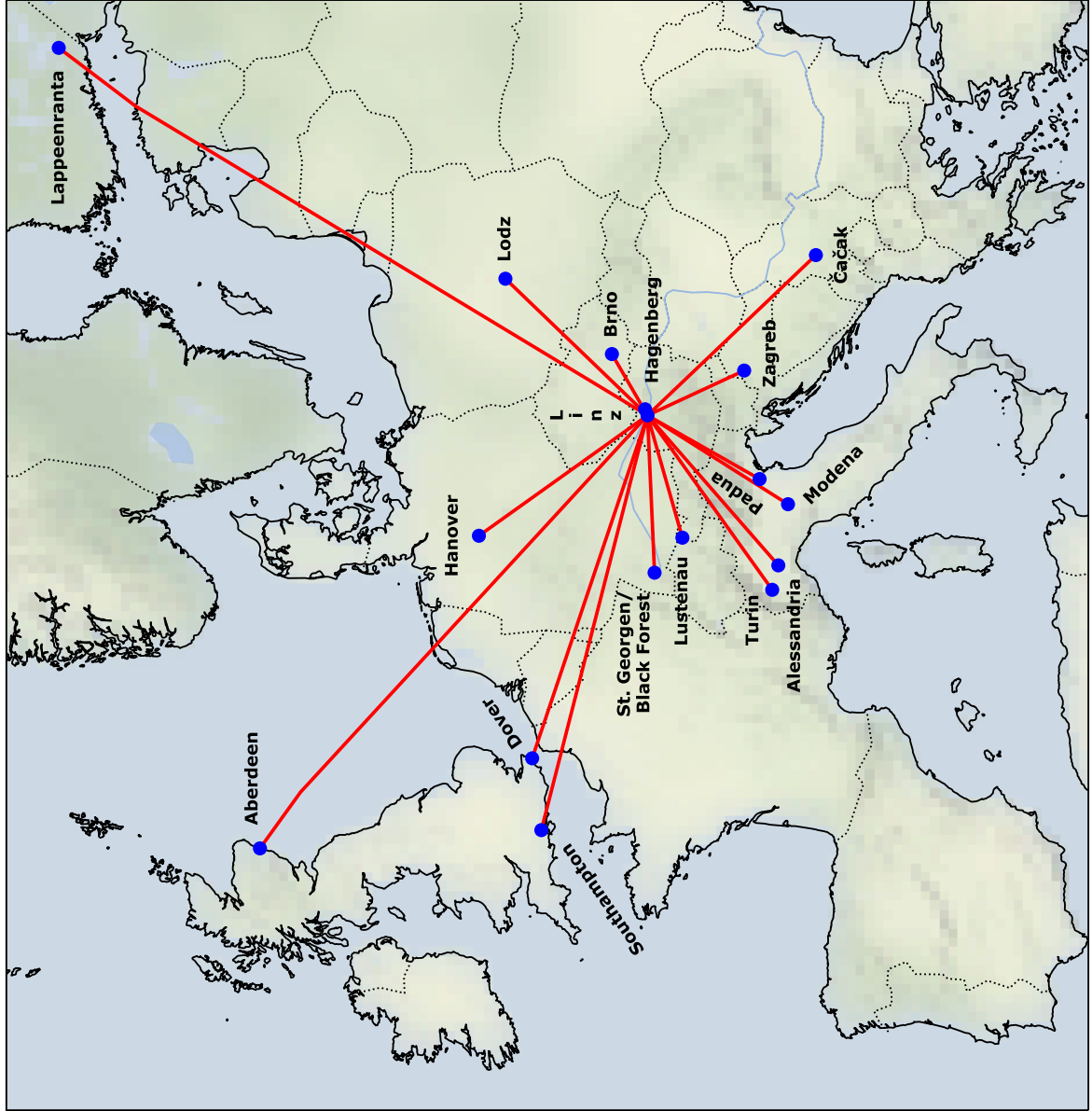


Figure 2: Map of Europe showing connections to the places where the research institutions and companies of all the co-authors from this continent are located.

Table 1: Research institutions of co-authors situated at correspondingly highlighted places in the world map illustrated in Figure 1.

Place (in alphabetical order)	Research Institution
Beijing, China	Beijing Institute of Technology North China University of Technology
Concepcion, Chile	University of Concepcion
Knoxville, TN, USA	Oak Ridge National Laboratory
Madison, WI, USA	Wisconsin Electric Machines and Power Electronics Consortium (WEMPEC) University of Wisconsin-Madison
Mississippi State, MS, USA	Mississippi State University
Montreal, Canada	McGill University
Ningbo, China	University of Nottingham Ningbo China
Sydney, Australia	University of Technology Sydney University of Sydney
Tianjin, China	Hebei University of Technology
Valparaiso, Chile	Pontificia Universidad Catolica de Valparaiso
Waco, TX, USA	Baylor University
Zhenjiang, China	Jiangsu University

Table 2: Research institutions / companies of co-authors situated at correspondingly highlighted places in the map of Europe illustrated in Figure 2.

Place (in alphabetical order)	Research Institution / Company
Aberdeen, Scotland	Robert Gordon University
Alessandria, Italy	Politecnico di Torino
Brno, Czechia	Brno University of Technology
Cacak, Serbia	University of Kragujevac
Dover, England	Megger Limited
Hagenberg, Austria	University of Applied Sciences Upper Austria
Hanover, Germany	Leibniz University Hannover
Lappeenranta, Finland	Lappeenranta University of Technology
Lodz, Poland	Lodz University of Technology
Lustenau, Austria	ATB TECHNOLOGIES GmbH
Modena, Italy	University of Modena and Reggio Emilia
Padua, Italy	University of Padova
Southampton, England	University of Southampton
St. Georgen / Black Forest, Germany	ebm-papst
Turin, Italy	Politecnico di Torino
Zagreb, Croatia	University of Zagreb

Organized Talks and Workshops

- Organisation of the talk of Dr. Oliver Winter from AIT, Austria, in Linz, Austria :“Entwurf und Realisierung eines eisenlosen Radnabenmotors für Leichtbaufahrzeuge” (“Design and Realization of an Iron-Free In-Wheel Motor for Lightweight Vehicles”), 01/16/2014
- Organisation of the talk of Dr. Dave Staton, MotorCAD, in Linz, Austria, “Electromagnetic and Thermal Analysis of Electric Motors”, 06/20/2016
- Organisation of the talk of Marco Cossale, Politecnico di Torino, in Linz, Austria, “High-Performance Multi-phase Electrical Machines”, 11/11/2016
- Organisation of the talk of Prof. Andrea Cavagnino and Dr. Silvio Vaschetto, Politecnico di Torino, in Linz, Austria, “Thermal Modeling of Electrical Machines”, 04/18/2018
- Organisation of the talk of Dr. Jan Barta, Brno University of Technology, in Linz, Austria, “Squirrel Cage Rotor Design and Manufacturing for High-Speed Applications”, 01/30/2019
- Joint Czech, Italian, and Austrian Workshop on Electric Machine Design (approx. 10 attendees), 09/13/2019

Attended workshops, meetings, and further scientific work

- IEEE Workshop on Electrical Machines Design, Control and Diagnosis (WEMDCD) in Modena (online), Italy, 2021
- Meeting of the Electrical Machines Technical Committee of the IEEE Industrial Electronics Society (2010, 2013, 2014, 2015, 2016)
- Meeting of the Electrical Machines Technical Committee of the IEEE Industry Applications Society (2017, 2018, 2019)
- Meeting of the Industrial Drives Technical Committee of the IEEE Industry Applications Society (2017, 2018, 2019)
- IEEE Joint Chapter Meeting (IEEE Joint IAS/PELS/IES Austrian Chapter, IEEE Joint IAS/PELS/IES German Chapter and IEEE PELS Swiss Chapter), July 4th/5th 2013 in Graz, Austria
- International Workshop on 1&2 dimensional magnetic measurement and testing in Torino, Italy, 2014
- IEEE Workshop on Electrical Machines Design, Control and Diagnosis (WEMDCD) in Torino, Italy, 2015
- Femag-Anwendertreffen (major annual event in Germany about the calculation of electrical machines) visited 7 times (2009-2014,2018)
- Kleinmaschinenkolloquium (meeting concerning fractional horse power drives) in Ilmenau, Germany, 2013
- CADFEM-User Meeting 2009 in Vienna, Austria

Teaching at Johannes Kepler University Linz (since 2008)

- Design, Modeling, and Optimization of Electrical Drives and Actuators
- Electric Machines
- Power Electronics
- Transportation Electrification

External Teaching at Other Universities

- Lecture “Electric Power Engineering, and Electric Drives” at University of Innsbruck, Austria, 2017.
- Lecture “Electromechanical Actuators” at University of Innsbruck, Austria, 2018.
- Lecture “Optimal Design Techniques for Electromechanical Devices” held in Chile in January 2018.

(Co-)supervised PhD Theses

- Gereon Goldbeck: “Modeling soft magnetic materials for electric machine application under 2D magnetic and mechanical excitation” - ongoing
- Daniel Wöckinger: “Characterizing materials based on magnetic measurements” - ongoing
- Christoph Dobler: “Improved iron loss modeling for more accurate electric machine performance prediction” - ongoing

Five more JKU-internal PhD theses expected to be started at the end of 2023 or early 2024.

Gerd Bramerdorfer further co-supervises theses of PhD students working at international partners from academia (e.g., Robert Gordon University in Scotland, Brno University of Technology in Czechia) and industry (confidential).

Further (co-)supervised Theses

Gerd Bramerdorfer has frequently been supervising Bachelor and Master theses since 2009.

Monographs

- [1] **G. Bramerdorfer**, “On increasing the reliability of electric machine performance prediction,” Habilitation treatise, Johannes Kepler University Linz, Nov. 2020.
- [2] **G. Bramerdorfer**, “Modeling and optimization of brushless electrical machines for challenging performance requirements,” Ph.D. dissertation, Johannes Kepler University Linz, Oct. 2014.
- [3] **G. Bramerdorfer**, “Entwicklung eines neuartigen Lüfterantriebs (“design of an electrical drive for fan applications”),” Master’s thesis, Johannes Kepler University Linz, 2007.

Patents

- [1] **G. Bramerdorfer** and W. Amrhein, “Electric machine and method for reducing a cogging torque of an electric machine,” Patent EP2 572 443 (abandoned), May, 2011.
- [2] **G. Bramerdorfer** and W. Amrhein, “Verfahren zur Reduktion eines Rastmoments einer elektrischen Maschine,” Patent, May 20, 2010, Austrian Patent AT 509 968 B1.
- [3] **One more patent application pending**, no details given here for reasons of confidentiality.

Guest Editorials and Editorships

- [1] E. Severson and A. Chiba, “Guest editorial: Special issue on magnetically levitated motor systems (accepted guest editorship),” *IEEE Transactions on Industry Applications*, vol. 57, no. 6, pp. 6742–6743, 2021.
- [2] **G. Bramerdorfer**, A. Cavagnino, S. Choi, G. Lei, D. Lowther, S. Stipetic, J. Sykulski, Y. Zhang, and J. Zhu, “Robust design and analysis of electric machines and drives,” *IEEE Transactions on Energy Conversion*, 2020.
- [3] A. Cavagnino, **G. Bramerdorfer**, and J. A. Tapia, “Optimization of electric machine designs—part II,” *IEEE Transactions on Industrial Electronics*, vol. 64, no. 02, pp. 9716–9720, 2018.
- [4] A. Cavagnino, **G. Bramerdorfer**, and J. A. Tapia, “Optimization of electric machine designs—part I,” *IEEE Transactions on Industrial Electronics*, vol. 64, no. 12, pp. 9716–9720, 2017.

Journal Articles

- [1] D. Riquelme, C. Madariaga, W. Jara, **G. Bramerdorfer**, J. A. Tapia, and J. Riedemann, “Study on stator-rotor misalignment in modular permanent magnet synchronous machines with different slot/pole combinations,” *Applied Sciences*, vol. 13, no. 5, 2023. [Online]. Available: <https://www.mdpi.com/2076-3417/13/5/2777>
- [2] M. Choi, G. Choi, **G. Bramerdorfer**, and E. Marth, “Systematic development of a multi-objective design optimization process based on a surrogate-assisted evolutionary algorithm for electric machine applications,” *Energies*, vol. 16, no. 1, 2023. [Online]. Available: <https://www.mdpi.com/1996-1073/16/1/392>
- [3] D. Woeckinger, **G. Bramerdorfer**, C. Dobler, G. Goldbeck, W. Amrhein, S. Schuster, S. Scheiblhofer, and J. Reisinger, “Measuring concept for determining the chemical composition of bulk materials in industry,” *Journal of Magnetism and Magnetic Materials*, vol. 564, p. 170099, 2022. [Online]. Available: <https://www.sciencedirect.com/science/article/pii/S0304885322009842>

- [4] C. Dobler, D. Woeckinger, **G. Bramerdorfer**, G. Goldbeck, and W. Amrhein, “Influence of the winding system on the measurement accuracy for characterising soft magnetic materials,” *Journal of Magnetism and Magnetic Materials*, vol. 564, p. 170004, 2022. [Online]. Available: <https://www.sciencedirect.com/science/article/pii/S0304885322008897>
- [5] D. Woeckinger, **G. Bramerdorfer**, S. Drexler, S. Vaschetto, A. Cavagnino, A. Tenconi, W. Amrhein, and F. Jeske, “Measurement-based identification of lumped parameter thermal networks for sub-kw outer rotor pm machines,” *IEEE Transactions on Industry Applications*, vol. 59, no. 1, pp. 823–833, Jan 2023.
- [6] **G. Bramerdorfer** and W. Amrhein, “Optimization of pmsms considering multi-harmonic current waveforms: Theory, design aspects, and experimental verification,” *IEEE Transactions on Industry Applications*, vol. 59, no. 1, pp. 834–844, Jan 2023.
- [7] K. Diao, X. Sun, **G. Bramerdorfer**, Y. Cai, G. Lei, and L. Chen, “Design optimization of switched reluctance machines for performance and reliability enhancements: A review,” *Renewable and Sustainable Energy Reviews*, vol. 168, p. 112785, 2022. [Online]. Available: <https://www.sciencedirect.com/science/article/pii/S1364032122006694>
- [8] K. Diao, **G. Bramerdorfer**, X. Sun, Z. Yang, and S. Han, “Multi-objective design optimization of a novel switched reluctance motor with unequal alternating stator yoke segments,” *IEEE Transactions on Transportation Electrification*, pp. 1–1, 2022.
- [9] E. Poskovic, L. Ferraris, **G. Bramerdorfer**, and M. Cossale, “A thermographic method to evaluate different processes and assembly effects on magnetic steels,” *IEEE Transactions on Industry Applications*, pp. 1–9, 2022.
- [10] S. Vaschetto, Z. Gmyrek, C. Dobler, **G. Bramerdorfer**, and A. Cavagnino, “Experimental assessment and modeling of losses in interlocked magnetic cores,” *IEEE Transactions on Industry Applications*, pp. 1–11, 2022.
- [11] C. Zhang, Y. Yang, **G. Bramerdorfer**, N. Bianchi, J. Zhao, J. Qu, and S. Zhang, “A computationally efficient surrogate model based robust optimization for permanent magnet synchronous machines,” *IEEE Transactions on Energy Conversion*, pp. 1–13, 2022.
- [12] G. Choi and **G. Bramerdorfer**, “Comprehensive design and analysis of an interior permanent magnet synchronous machine for light-duty passenger EVs,” *IEEE Access*, pp. 1–13, 2021.
- [13] J. Barta, L. Knebl, **G. Bramerdorfer**, I. Lolova, S. Silber, and O. Vitek, “Topology optimization of rotor bars geometry and arrangement for a line-start permanent magnet synchronous machine,” *IEEE Access*, pp. 1–1, 2021.
- [14] A. Khamitov, W. Gruber, **G. Bramerdorfer**, and E. Severson, “Comparison of combined winding strategies for radial non-salient bearingless machines,” *IEEE Transactions on Industry Applications*, 2021.
- [15] K. Diao, X. Sun, G. Lei, **G. Bramerdorfer**, Y. Guo, and J. Zhu, “Robust design optimization of switched reluctance motor drive systems based on system-level sequential taguchi method,” *IEEE Transactions on Energy Conversion*, pp. 1–1, 2021.
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