January 2025

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Distinguished Professor
Director, Colorado Power Electronics Center
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Ph.D., Electrical Engineering ……..…… January 1989
California Institute of Technology, Pasadena
Thesis topic: Synthesis of PWM and Quasi-Resonant DC-to-DC Power Converters
M.S., Electrical Engineering …… June 1986
University of Belgrade, Serbia
B.S., Electrical Engineering ……..…… June 1984
University of Belgrade, Serbia

EXPERIENCE:

Distinguished Professor ……... November 2023 to Present
Dept. of Electrical and Computer Engineering, University of Colorado, Boulder
Professor ….……..…… August 2006 to November 2023
Dept. of Electrical and Computer Engineering, University of Colorado, Boulder
Director, Colorado Power Electronics Center ……...……... August 1999 to Present
Dept. of Electrical and Computer Engineering, University of Colorado, Boulder
Associate Professor ……... August 1999 to July 2006
Dept. of Electrical and Computer Engineering, University of Colorado, Boulder
Assistant Professor ….……..…… August 1992 to July 1999
Dept. of Electrical and Computer Engineering, University of Colorado, Boulder
Assistant Professor ….……..…… September 1989 to July 1992
University of Belgrade, Serbia
Research Fellow ….……..…… January 1989 to August 1989
California Institute of Technology, Pasadena
Graduate Research Assistant ….…… January 1989 to August 1989
California Institute of Technology, Pasadena
Graduate Teaching/Research Assistant ….……..… July 1984 to July 1986
University of Belgrade, Serbia

RESEARCH PROJECTS:

Sponsored projects

NSF Engineering Research Center: Advancing Sustainability through Powered Infrastructure for Roadway Electrification (ASPIRE)

2021-2031, CU-Boulder Co-Principal Investigator, project sponsored by NSF. Partners: Utah State University (lead), University of Texas El Paso, Purdue University

Medium-Voltage Resource Integration

2024-2027, Principal Investigator, collaboration with Co-PI Prof. Luca Corradini, project sponsored by NREL.

High-density, High-efficiency, Large Step-down Conversion for Space Applications

2023-2028, Principal Investigator, collaboration with Lockheed Martin, project sponsored by DARPA SPCE program.

High-Voltage Bidirectional DC-DC Converter

2023-2026, Principal Investigator, collaboration with Alphacore, project sponsored by NASA SBIR Phase I and Phase II.

Advanced Cooling Solutions for High-Frequency Medium-Voltage Planar Transformers

2023-2025, Principal Investigator, collaboration with Advanced Cooling Technologies, project sponsored by DOE SBIR Phase II.

High-Density Electric-Vehicle Power Electronics

2023-2025, Principal Investigator, project sponsored by Toyota Research Institute of North America.

Next-Generation PV Microinverters

2023-2024, Principal Investigator, collaboration with Co-PI Prof. Luca Corradini, project sponsored by Qcells.

Scalable Modular MVAC-to-DC Architecture

2022-2023, Principal Investigator, project sponsored by Electric Hydrogen.

Flexible Air-Quality Control System, Building Pandemic Resilience for Native American Communities

2022-2024, Principal Investigator, a collaboration with Co-PI Prof. Shelly Miller (CU-Boulder ME), project sponsored by NIST Rapid Assistance (for) Coronavirus Economic Response (RACER) program through PowerAmerica.

Data-Driven Design Automation Techniques for Power Electronics

2021-2023, Principal Investigator, project sponsored by Lockheed Martin.

Gallium Nitride Power Amplifier Design, Test, & Advanced Packaging for High-Performance

2021-2026, Co-Principal Investigator, collaboration with PI Prof. Zoya Popovic and Co-PI Prof. Taylor Barton, project sponsored through SCALE center.

Modular Wide-Bandgap String Inverters for Low-Cost Medium-Voltage Transformerless PV Systems

2018-2022, CU-Boulder Principal Investigator, project sponsored by DOE Solar Energy Technology Office. Partners: U of Washington (lead), NREL, Wolfspeed.

A High-voltage, High-reliability Scalable Architecture for Electric Vehicle Power Electronics

2018-2021, Co-Principal Investigator, PI: Prof. Erickson. Project sponsored by ARPA-E CIRCUITS program. Partners: NREL, Wolfspeed, Toyota.

Multi-Level Power Conversion

2019-2021, Principal Investigator, project sponsored by Advanced Energy

High-Efficiency, Ultra-High Density Power Converters

2019-2021, Principal Investigator, project sponsored by Lockheed Martin

Modular Architecture and Algorithms for Wide Bandgap Energy Conversion in Utility-Scale Wind and Solar

2017-2019, Principal Investigator, project sponsored by NREL.

Converter Topologies and Control for Multiple-Voltage-Domain Power Distribution

2017-2019, Principal Investigator, project sponsored by Lockheed Martin

Modeling, Control and Design of Bypass Converters for Plug-and-Play Energy Storage Architecture

2017-2018, Principal Investigator, collaboration project with USU, sponsored by ONR.

GATE Center for Innovative Drivetrains in Electric Automotive Technology Education (IDEATE)

2011-2019, Co-Principal Investigator, collaboration project with UCCS, sponsored by DOE GATE program.

Microchip power distribution in support of DAHI

2017, Principal Investigator, collaboration project with Lockheed Martin, sponsored by DARPA DAHI program

A Disruptive Approach to Electric Vehicle Power Electronics

2015-2017, Co-Principal Investigator, project sponsored by DOE Vehicle Technologies Incubator program.

Robust Cell-Level Modeling and Control of Large Battery Packs

2013-2017, Principal Investigator at CU-Boulder, project sponsored by ARPA-E AMPED program, collaboration with USU, UCCS, NREL and Ford

I/UCRC Planning Grant

2015, Principal Investigator at CU-Boulder, sponsored by NSF, collaboration with ASU, Dartmouth College, OSU

High-Efficiency Boost DC-DC Converter

2013-2014, Co-Principal Investigator, project sponsored by Toyota Motor Corporation

Boost DC-DC Converter and Controller

2012, Principal Investigator, project sponsored by Toyota Motor Corporation

Wafer-Level Sub-Module Integrated DC/DC Converter

2012-2015, Principal Investigator, project sponsored by ARPA-E Solar ADEPT program, collaboration with NREL and Nuvotronics

Vector Split Polar (VeSP) Transmitter

2012-2015, Co-Principal Investigator, project sponsored by DARPA MPC program

Buck DC-DC Converters Using GaN HEMT

2012-2015, Principal Investigator, collaboration project with TQS, sponsored by DARPA MPC program

Power System Converters and Control

2011-2012, Co-Principal Investigator, project sponsored by Raytheon

DC-DC Battery Charger for Grid-Interactive PV Power System

2010-2012, Principal Investigator, collaboration project with Satcon, sponsored by Hawaii Renewable Energy Development Venture/DOE

Energy Management System Algorithms for Microgrids

2011-2012, Principal Investigator, project sponsored by Intel Corp.

Field Study of Plug-In Hybrid Electric Vehicles

2010-2012, Co-Principal Investigator, project sponsored by Toyota Motor Sales, USA.

Modeling, Simulation and Control of Micro-Grids with Significant Electric-Vehicle Penetration

2010-2011, Principal Investigator, project sponsored by Intel Corp.

Power Management System with Smart DC-DC Converters

2010-2011, Principal Investigator, Phase II STTR project sponsored by In-Scope Solutions.

Smart DC-DC Converter Modules

2011, Principal Investigator, project sponsored by Northrop Grumman Space Technology.

High-Efficiency RF Transmitters

2009-2010, Principal Investigator, project sponsored by National Semiconductor, Co-PI: Z.Popovic

Adaptive Control of Multi-Output DC-DC controllers

2009-2010, Principal Investigator, project sponsored by Northrop Grumman Space Technology.

Power Management System

2008, Co-Principal Investigator, with R.Erickson and A.Gasiewski, Phase I STTR project sponsored by In-Scope Solutions.

Auto-tuning DC-DC controllers

2008, Principal Investigator, project sponsored by Northrop Grumman Space Technology.

Techniques for High Efficiency High Power Solid State RF Amplifiers

2006-2008, Co-Principal Investigator, project sponsored by SAIC, PI: Z. Popovic.

Robust Integrated Power Electronics (RIPE)

2005-2007, Co-Principal Investigator, project supported by DARPA through GE Research, PI: R.Zane.

High-Efficiency RF Power Amplifiers based on Delta-Sigma Modulation

2005-2007, Co-Principal Investigator, project supported by ONR, PI: Z.Popovic.

GAANN-HYSE (Hybrid-Signal Electronics) Fellowship Program

2004-2007, Co-Principal Investigator, sponsored by the US Department of Education, PI: Z.Popovic.

Power management for High-Efficiency RF Power Amplifiers

2002-2006, Co-Principal Investigator, project sponsored by the DARPA IRFFE program, PI: Z.Popovic.

High-Performance, Low-Power Wireless Communication

1997-2002, Co-Principal Investigator, project sponsored by NSF, PI: M. Varanasi, Co-PI's: Z. Popovic, T. Brown.

Computer-Aided Analysis of Power Electronic Systems
1997-2002, Principal Investigator, NSF CAREER Award.

Mixed-Signal Integrated Controllers for High Quality Power Rectifiers
1998-1999, Principal Investigator, CU Summer Session Research Grant.

Analysis of Spacecraft Electrical Power Converters
1997, Co-Principal Investigator, sponsored by Lockheed Martin Corp, PI: R. Erickson.

New Approaches to Simulation and Control of Power Electronic Systems
1993-1997, Principal Investigator, NSF Research Initiation Award.

Power Management for Portable Systems,
1994-1997, Principal Investigator, CAMPmode.

Electric Vehicle Single-Phase Battery Chargers
1992-1994, Co-Principal Investigator, General Motors Corporation, PI: R. Erickson.

Colorado Power Electronics Center (CoPEC) sponsored projects

- **Universal AC-DC Charger**, 2023-2024, collaboration with Prof. Luca Corradini, CoPEC project sponsored by FreeWire Technologies.
- **Modeling and Control of Resonant Inverters**, 2022-2023, CoPEC project sponsored by Eximis Surgical.
- **Synthesis of Ultra-High-Efficiency Converter Architectures,** 2021-2022, Principal Investigator, CoPEC project sponsored by Texas Instruments.
- **Auto-tuning of digitally controlled buck or boost converters**, 2021-2022, Principal Investigator, CoPEC project sponsored by Dialog Semiconductor.
- **High-frequency automotive LED drivers**, 2015-2021, Principal Investigator, CoPEC project sponsored by Texas Instruments.
- **High-frequency digitally controlled buck or boost converters**, 2019-2020, Principal Investigator, CoPEC project sponsored by Dialog Semiconductor.
- **High-efficiency dc-dc converters**, 2014-2018, Co-PI, CoPEC project sponsored by Huawei
- **High-efficiency, high step-down dc-dc converters**, 2014-2018, Co-PI, CoPEC project sponsored by Texas Instruments.
- **Stacked ac systems**, 2015-2017, Principal Investigator, CoPEC project sponsored by Empower
- **High-efficiency boost power conversion**, 2017, Principal Investigator, CoPEC project sponsored by Suntech Drive

- **Second-order sliding mode control**, 2013-2015, Principal Investigator, CoPEC project sponsored by Maxim
- **Digital control of inverters for electrosurgical generators,** 2010-2015, Principal Investigator, CoPEC project sponsored by Covidien
- **Power converters and power management techniques in servers**, 2010-2014, Principal Investigator, CoPEC project sponsored by Texas Instruments
- **Integrated DC-DC converters**, 2011-2012, Principal Investigator, CoPEC project sponsored by Qualcomm
- **High-efficiency tracking power supplies for RF power amplifiers in base stations**, 2007-2009, and 2012-2014, Principal Investigator, CoPEC project sponsored by Texas Instruments
- **Efficiency modeling and optimization in single-phase PFC rectifiers**, 2007-2010, Principal Investigator, CoPEC project sponsored by Cirrus Logic
- **Adaptive control of digitally controlled PFC rectifiers,** 2009-2011, Principal Investigator, CoPEC project sponsored by Delta Electronics
- **Digital control of phase-shifted DC-DC converters,** 2008-2010, Principal Investigator, CoPEC project sponsored by Covidien
- **On-line efficiency optimization**, 2009-2011, Principal Investigator, CoPEC project sponsored by Texas Instruments
- **Design optimization in digital controllers for DC-DC converters,** 2008-2010, Principal Investigator, CoPEC project sponsored by Analog Devices, Co-PI: R.Zane
- **Multi-phase and multi-level converters for low-power applications,** 2008-2009, Principal Investigator, CoPEC project sponsored by Freescale Semiconductor
- **Adaptive control of DC-DC converters,** 2008-2009, Principal Investigator, CoPEC project sponsored by National Semiconductor
- **Time-optimal digital control of switched-mode power converters**, 2007-2009, Principal Investigator, CoPEC project sponsored by Primarion
- **Integrated digitally-controlled point-of-load power supplies**, 2004-2009, Principal Investigator, CoPEC project sponsored by Toshiba
- **Adaptive power management and tuning for RF power amplifiers**, 2006-2010, Principal Investigator, CoPEC project sponsored by National Semiconductor, Co-PI: Z.Popovic.
- **Digital PFC control**, 2005-2009, Principal Investigator, CoPEC project sponsored by Texas Instruments
- **Sensorless dead-time optimization**, 2005-2007, Principal Investigator, CoPEC project sponsored by Texas Instruments.
- **Auto-tuning techniques for point-of-load converters**, 2006-2007, Co-Principal Investigator, CoPEC project sponsored by Astec/Artesyn, PI: R.Zane.

- **Health monitoring in PMAD systems through power converter modules with direct digital control**, 2006-2007, Co-Principal Investigator, CoPEC project sponsored by NASA, PI: R.Zane.
- **Multi-phase digital pulse-width modulator**, 2005-2006, Principal Investigator, CoPEC project sponsored by Intel. Co-PI: R.Zane.
- **High-speed multi-phase digital controller**, 2005-2006, Principal Investigator, CoPEC project sponsored by Intel, Co-PI: R.Zane.
- **Digital current-mode control**, 2003-2005, Principal Investigator, CoPEC project sponsored by Texas Instruments.
- **Envelope-tracking power supply for RF power amplifiers in portable applications**, 2004-2006, Principal Investigator, CoPEC project sponsored by National Semiconductor, Co-PI: Z.Popovic.
- **Digital control of multi-phase converters**, 2003-2005, Co-Principal Investigator, CoPEC project sponsored by Artesyn Technologies, PI: R.Zane.
- **Stability control in PMAD systems through power converter modules with direct digital control**, 2003-2005, Co-Principal Investigator, CoPEC project sponsored by NASA, PI: R.Zane.
- **CoPEC/Northrop Grumman associate sponsorhip**, 2005-ongoing, Co-Principal Investigator, sponsored by Northrop Grumman, Co-PI's: R.Erickson, R.Zane.
- **CoPEC/Zilker Labs associate sponsorhip**, 2003-ongoing, Co-Principal Investigator, Co-PI's: R.Erickson, R.Zane.
- **CoPEC/Intersil associate sponsorhip**, 2003-2004, Co-Principal Investigator, sponsored by Intersil, Co-PI's: R. Erickson, R. Zane.
- **Digital PWM controller for low-power portable applications**, 2003-2004, Principal Investigator, CoPEC project sponsored by National Semiconductor.
- **Feed-forward digital pulse-width modulators**, 2003-2004, Principal Investigator, CoPEC project sponsored by National Semiconductor.
- **Calibrated delay-line A/D converters**, 2002, Principal Investigator, CoPEC project sponsored by National Semiconductor.
- **High-frequency digital PWM controllers**, 2000-2001, Principal Investigator, CoPEC project sponsored by National Semiconductor.
- **Dual-mode digitally-controlled inverter for photovoltaic applications**, 2003, Principal Investigator, CoPEC project sponsored by Philips Research.
- **Synthesis and digital control of universal-input power-factor correctors with reduced stresses**, 2000-2002, Co-Principal Investigator, CoPEC project supported by Philips Research, Co-PI: R.Erickson.
- **Digital control of isolated DC-DC converters**, 1999-2000, Principal Investigator, CoPEC project supported by Tyco Electronics, Co-PI: R.Erickson.
- **High-performance power-factor correctors for avionics**, 2000-2002, Co-Principal Investigator, CoPEC project supported by Rockwell Collins, Co-PI: R.Erickson.

- **Converter topologies and control for solid-state LED lighting**, 2001, Co-Principal Investigator, CoPEC project supported by Philips Advance, Co-PI: R.Erickson.

AWARDS and RECOGNITIONS:

- **Distinguished Professor**, University of Colorado, 2023
- **2023 IEEE William E. Newell Power Electronics Award** for contributions to digital control, modeling, and topologies of switched-mode power supplies.
- **2022 IEEE PELS R. David Middlebrook Achievement Award** for contributions to modeling and analysis of digitally controlled power converters
- **Fellow of the IEEE**, 2015 for contributions to digital control of high-frequency switched-mode power converters.
- **Distinguished Lecturer**, IEEE Power Electronics Society, 2011-2017
- **Modeling and Control Technical Achievement Award**, IEEE Power Electronics Society, 2012
- **Boulder Faculty Assembly Excellence in Teaching Award**, 2013
- **College of Engineering Faculty Research Award**, College of Engineering and Applied Sciences, University of Colorado Boulder, 2020.
- **Charles Hutchinson Memorial Teaching Award**, College of Engineering and Applied Sciences, University of Colorado, 2012.
- **Department Research Award**, ECEE Department, CU Boulder, 2017.
- **Department Service Award**, ECEE Department, CU Boulder, 2015.
- **Bruce Holland Excellence in Teaching Award**, ECEE Department, CU Boulder, 2004, 2011, and 2018.
- **CU-Boulder Inventor of the Year Award**, 2006
- **NSF CAREER Award**, 1997.
- **NSF Research Initiation Award**, 1993.
- **Fullbright Fellowship**, 1986.
- **Caltech Graduate Fellowship**, 1986
- **City of Belgrade Award** for the outstanding academic record, 1984.
- **Best Electrical Engineering Graduate Award**, University of Belgrade, 1984.

Publication Awards

- **Best Paper Award**, IEEE Transactions on Energy Conversion 2019-2020, for the paper: P. K. Achanta, B. B. Johnson, G.-S. Seo, and D. Maksimovic, "A multilevel DC to three-phase AC architecture for photovoltaic power plants," *IEEE Trans. Energy Conv.*, vol. 34, no. 1, pp. 181–190, Mar. 2019.
- **First Prize Paper Award**, IEEE Industry Applications Society, 2017, for the paper: M. M. Rehman, F. Zhang, M. Evzelman, R. Zane, K. Smith, and D. Maksimovic, "Advanced Cell-level Control for Extending Electric Vehicle Battery Pack Lifetime," IEEE ECCE 2016.

- **Transactions Second Prize Paper Award**, IEEE Power Electronics Society, 2016, for the paper: C. Olalla, C. Deline, D. Clement, Y. Levron, M. Rodriguez, D. Maksimovic, "Performance of Power-Limited Differential Power Processing Architectures in Mismatched PV Systems" *IEEE Trans. Power Electron.*, vol. 30, no. 2, Feb 2015.
- **Transactions Prize Letter Award**, IEEE Power Electronics Society, 2010, for the paper: J. Morroni, R. Zane, D. Maksimovic, "Design and implementation of an adaptive tuning system based on desired phase margin for digitally controlled DC–DC converters," *IEEE Trans. Power Electron.*, vol. 24, no. 2, pp. 559 – 564, Feb 2009.
- **Transactions Prize Letter Award**, IEEE Power Electronics Society, 2008, for the paper: D.Maksimovic, R.Zane, "Small-signal discrete-time modeling of digitally controlled PWM converters," *IEEE Trans. on Power Elect.*, Vo.22, No.6, pp.2552-2556, Nov.2007
- **Second Prize Paper Award**, IEEE Industry Application Society, 2015, for the paper: M.M.U.Rehman, M.Evzelman, K.Hathaway, R.Zane, G.Plett, K.Smith, E.Wood, D.Maksimovic, "Modular approach for continuous cell-level balancing to improve performance of large battery packs," presented at IEEE ECCE 2014.
- **Transactions Prize Paper Award**, IEEE Power Electronic Society, 1997, for the paper "Nonlinear-carrier control for high power factor boost rectifiers," *IEEE Transactions on Power Electronics*, Vol.11, No.4, July 1996, pp.578-584, with Y.Jang and R.Erickson.
- **Best Paper Award**, HFPC Conference, 1989, for the paper "Switching converters with large range of DC conversion ratios," with S.Cuk.

TEACHING:

- **Courses taught and developed:**
  - **Modeling and Control of Power Electronics**, a 5-course MOOC sequence offered through Coursera, 2020-ongoing; developed
  - **Power Electronics Specialization**, a 6-course MOOC sequence offered through Coursera, 2016-ongoing; introduced and developed with R. Erickson and K. Afridi; authored Advanced Converter Control Techniques (course 4 in the sequence), co-authored Capstone Design Project in Power Electronics (course 6 in the sequence). *https://www.coursera.org/specializations/power-electronics*
  - **Power Electronics for Electric Drive Vehicles** (ECEN5007, graduate-level); introduced and developed in Fall 2012 as part of the DOE GATE sponsored Innovative Drivetrains in Electric Automotive Technology Education (IDEATE) program and a new graduate certificate program; offered on-campus and on-line;.
  - **Electronics Design Laboratory** (ECEN2270, sophomore-level laboratory); introduced and developed in 2011; now a core course in the new EE/ECE curriculum;
  - **Renewable sources and efficient electrical energy systems** (ECEN2060, sophomore-level); introduced and developed 2008-2010; now a sophomore elective in the EE/ECE curriculum
  - **Introduction to Microelectronic Circuits** (ECEN 3250, junior-level); a core EE/ECE undergraduate course; developed new lecture and lab materials
  - **Power Electronics Lab** (ECEN4517/5517, senior/graduate); developed new lab materials (with R. Erickson)
  - **Analog IC design** (ECEN 4827/5827, senior/graduate); introduced and developed (with R. Zane); offered on-campus and on-line.
  - **EE Capstone Design Lab**; introduced and developed in 2001; now integrated with ECE/EE senior capstone design laboratory.
  - **Introduction to Power Electronics** (ECEN 4797/5797, senior/graduate); contributed to development (with R. Erickson); offered on-campus and on-line; *ecee.colorado.edu/~ecen5797*
  - **Advanced modeling and control techniques in power electronics** (ECEN 5807, graduate); contributed to development (with R. Erickson); offered on-campus and on-line;
  - **Resonant and soft-switching techniques in power electronics** (ECEN 5817, graduate); contributed to development (with R. Erickson);
  - **Energy conversion** (ECEN 3170, junior); contributed lecture materials.
  - **Advanced electronics lab** (ECEN 4618); developed new lab materials; led to development of ECEN2830.

- **Teaching accomplishments:**

  - *Co-Director of the Engineering Workforce Development* in the ASPIRE NSF ERC, 2020-2023
  - *The Charles Hutchinson Memorial Teaching Award*, CU-Boulder College of Engineering and Applied Science, 2012.
  - Received DOE GATE program grant to introduce a new *Graduate Certificate in Electric Drivetrain Technology* and curriculum in Innovative Drivetrains in Electric Automotive Technology Education (IDEATE), collaboration with R.Zane (USU), G.Plett and S.Trimboli (UCCS), 2012-2019.
  - *Distinguished lecturer* of the IEEE Power Electronics Society, 2011-2017.
  - *Bruce Holland Excellence in Teaching Award*, ECEE Department, University of Colorado, 2004, 2011, 2018.
  - Co-author of the third edition of the textbook *Fundamentals of Power Electronics*, Springer 2020, with Prof. R. Erickson. The textbook has been adopted at numerous schools worldwide and is considered a standard reference by professionals and researchers in the field of Power Electronics; more than 15,000 copies in circulation, more than 11,000 citations in research publications.
  - With Prof. R. Erickson, introduced and developed curriculum (ECEN5797, ECEN5807, ECEN5817) for the *Professional Certificate in Power Electronics*, available both on-campus and on-line for continuing education students.
  - Graduated more than 50 Ph.D. students.
  - Member of the ECEE Department Curriculum Committee, 2002-2010; contributed to the development of the new EE/ECE curriculum.

- **Graduate student supervision (Ph.D. Thesis):**

  1. **Aarranon Bharathan**, Ph.D. candidate, high-efficiency, high step-down converters (in progress)
  2. **Audrey Cheshire**, Ph.D. candidate, drain-supply modulators (in progress)
  3. **Ashwini Kumar Dubey**, Ph.D. candidate, EV power electronics (in progress)
  4. **Shivangi Sinha**, Ph.D. candidate, modular resonant converters, magnetics design (in progress)
  5. **Skye Reese**, Ph.D., 2024, An Approach to Switching Converter Design using Machine Learning- and Device Physics-based Component Models
  6. **Chandan Suthar**, Ph.D. 2023, High Performance Digital Control and Synthesis of DC-DC Converters for Wide Bandwidth and High Efficiency.
  7. **Janko Celikovic**, Ph.D. 2022, Modeling and Control Optimization of DC-DC Power Converters for Battery-Powered Mobile Applications
  8. **Branko Majmunovic**, Ph.D., 2022, Optimization of Active-Bridge-based Modular Power Converters.

9. **Satyaki Mukherjee**, Ph.D. 2021, Thesis: Wide Range DC-DC Power Conversion Systems - Architectures, Circuits and Components
10. **Vivek Sankaranarayanan**, Ph.D. 2021, Thesis: Control Strategies for Efficiency Optimization of Composite Converters
11. **Yucheng Gao**, Ph.D. 2021, Thesis: Design and Optimization of a 100 kW Composite Converter for Electric Vehicle Drivetrain
12. **Kyle Goodrick**, Ph.D. 2021, Systematic Optimization of Multiple Voltage Domain DC Distribution Architectures, ECEE Department Best PhD Thesis award.
13. **Jianglin Zhu**, Ph.D. 2020, Transformerless Stacked Active Bridge Converters: Analysis, Synthesis and Design.
14. **Prasanta Achanta,** Ph.D. 2018, Analysis, Modeling and Control of Stacked DC-AC Converters
15. **Yushi Liu**, Ph.D. 2018, Low Profile, High Power Density and High Efficiency DC-DC Converters, co-advisor: Prof. Khurram Afridi
16. **Fan Zhang**, Ph.D. 2017, Modeling and Control of a Modular Battery Management
17. **Alihossein Sepahvand**, Ph.D. 2017, High Frequency DC-DC Power Conversion for Automotive LED Driver Applications.
18. **Anderson Hoke**, Ph.D. 2016, candidate, Electric Vehicle Charge Optimization Including the Costs of Battery Wear, and Active Power Control of Photovoltaic Systems without Storage
19. **Fenglong Lu**, Ph.D. 2016, Autonomous Control of Series-Connected Low Voltage Micro-inverters (LVAC) for Photovoltaic (PV) panels
20. **Hua Chen**, Ph.D. 2016, Advanced Electrified Automotive Powertrain with Composite DC-DC Converter (completed); co-advisor: Prof. Robert Erickson.
21. **Yuanzhe Zhang**, Ph.D. 2015, "High frequency GaN drain supply modulators for RFPAs" (completed)
22. **Beom Seok Choi**, Ph.D. 2015, "Differential power processing submodule integrated converters for photovoltaic power systems" (completed)
23. **Scott Jensen**, Ph.D. 2015, "Fast tracking current driven electrosurgical generators" (completed)
24. **Alexander Brissette**, Ph.D. 2014, "Analysis of the deployment, performance, and design of distributed static series compensators" (completed)
25. **Nguyen Hien Minh**, "Smart DC power system controls," Ph.D., 2014 (completed)
26. **Joshua Traube**, Ph.D., "Grid-tied power electronics," 2013 (completed)
27. **Daniel Costinett**, Ph.D., power control and management for ultra high-efficiency data servers; co-advisor: Prof. Regan Zane (completed 2013)
28. **Mark Norris**, "Envelope tracking converters," Ph.D. (completed Fall 2012)
29. **Yushan Li**, "Integrated Switched-Mode Power Supplies for RF Power Amplifiers in Mobile Applications," Ph.D. (completed Spring 2012).

30. **Sang Hee Kang**, “Efficiency Optimization in Digitally Controlled Flyback DC-DC Converters Over Wide Ranges of Operating Conditions,” Ph.D. (completed Fall 2011)
31. **Sung Woo Moon**, “Auto-Tuning of Digitally Controlled Single-Phase Low Harmonic Rectifiers and Inverters,” Ph.D. (completed Spring 2011)
32. **Fu-Zen Chen**, “Digital Control Techniques for Efficiency Improvements in Single-Phase Boost Power Factor Correction Rectifiers,” Ph.D. (completed Fall 2010)
33. **Barry Mather**, “Digital Control Techniques for Single-Phase Power Factor Correction Rectifiers,” Ph.D. (completed Fall 2010)
34. **Xu Zhang**, “Digital Control Techniques for Synchronous Buck DC-DC Converters,” Ph.D. (completed Fall 2009)
35. **Jeff Morroni**, “Adaptive Tuning and Monitoring of Digitally Controlled Switched-Mode Power Supplies,” Ph.D. (completed Fall 2009, co-advisor with R.Zane)
36. **Mari Shirazi**, “Embedded Frequency Response Measurement Capability for Monitoring and Tuning of System Dynamics in Digitally-Controlled DC-DC Converters,” Ph.D. (completed Fall 2009, co-advisor with R.Zane)
37. **Amir Babazadeh**, “Switching Surface Approach for Improved Transient Response in Digitally Controlled DC-DC Power Converters,” Ph.D. (completed Fall 2009)
38. **Vahid Yousefzadeh**, “Power Management for RF Power Amplifiers,” Ph.D. (completed August 2006)
39. **Yang Zhang**, “Digital Masterless Control for Multi-Phase Switching Power Converters,” Ph.D. (completed August 2007, co-advisor with R.Zane).
40. **Xufeng Jiang**, “Switching Power Converters for RF Power Amplifiers,” Ph.D. (completed June 2007).
41. **Milan Ilic**, “Digitally-controlled High-Power DC Supplies,” Ph.D. (completed June 2007)
42. **Hao Peng**, “Digital current-mode control,” Ph.D. (completed May 2006).
43. **Barry Arbetter**, “DC-DC converter design for battery-operated systems," Ph.D. (completed August 2006).
44. **Sandeep Dhar**, “Low-Power Design Using Adaptive Voltage Scaling,” Ph.D. (completed June 2004).
45. **Praneet Athalye**, “High-performance power factor correctors for avionics applications,” Ph.D., June 2004 (completed, co-advisor with R.Erickson).
46. **Aleksandar Prodic**, “Digital control of switching converters: design and VLSI/DSP implementation,” Ph.D., May 2003 (completed).
47. **Kusumal Changtong**, “Magnetics modeling and design for improved cross-regulation,” Ph.D., May 2003 (completed, co-advisor with R. Erickson).
48. **Jingquen Chen**, “Topologies and Control of Single-Phase Low-Harmonic Rectifiers,” Ph.D., June 2002 (co-advisor with R. Erickson).

49. **Regan Zane**, "Mixed-signal VLSI for Control in Power Electronics," Ph.D., December 1999 (completed).
50. **Predrag Pejovic**, "A Method for Simulation of Power Electronic Systems Using Piecewise-Linear Device Models," Ph.D. June 1995 (completed)

- **Graduate student supervision (M.S. Thesis or project):**
  - **Bailey Sauter**, M.S. 2024, data-driven design automation, magnetics modeling and design.
  - **Trent Martin**, M.S., 2023, Thesis: Modular series-stacked bidirectional AC/DC architecture for 3-phase grid-tied applications
  - **Shivangi Sinha**, M.S., 2023, Thesis: 48 V - 1 V Active Clamp Stacked Direct Forward Converter.
  - **Phillip Montoya**, M.S. candidate, Monolithic GaN converters, 2022 (completed).
  - **Tadakazu Harada**, M.S. candidate, "High-Efficiency DC Transformer", 2014 (completed)
  - **Dongxue Li**, M.S. candidate, Envelope Tracking Power Supplies, 2014 (completed)
  - **Daniel Clement,** M.S. candidate, sub-module integrated DC-DC converters for PV applications, 2013 (completed)
  - **Greg Stahl**, M.S. candidate, smart DC micro-grids, 2012 (completed)
  - **Shruti Yalamarty**, "Switched-Mode Power Converters for RF Power Amplifiers," M.S. Spring 2008 (completed)
  - **Bhaskar Ramachandran**, "Dynamic Dead-Time Optimization in Synchronous Buck DC-DC Converters," M.S., December 2007 (completed)
  - **Toru Takayama**, "Optimization of Monolithic Digitally-Controlled DC-DC Converters," M.S., December 2006 (completed)
  - **Serge Simonov**, "Inductor Design for Monolithic DC-DC Converters," M.S., December 2004 (completed)
  - **Asif Syed**, "Feed-forward digital pulse-width modulators," M.S., May 2004 (completed)
  - **Ershad Ahmed**, "Digital controller for low-power applications," M.S., May 2004 (completed).
  - **Michael Vincent**, "Design and implementation of a self-calibrated delay-line Analog-to-Digital converter," M.S., December 2002 (completed).
  - **Ben Patella**, "High-speed, low-power digital PWM controller," M.S., December 2000 (completed). Received the College Award for Excellence in Scholarship and Research for recognition of his work.
  - **Nagandini Jayaram**, "Power Factor Corrector Based on Coupled-Inductor SEPIC Converter with Nonlinear-Carrier Control," December 1997, M.S. (completed).

- **Anders Fagerhaud**, “Nonlinear-Carrier Control for Single-Phase High-Power-Factor Rectifiers,” M.S., December 1996 (completed).
- **Brede Arntzen**, “Switched-Capacitor DC-DC Converter Design for Low-Power Applications," M.S., December 1995 (completed).

PUBLICATIONS:

Google Scholar: https://scholar.google.com/citations?hl=en&user=97xFEH0AAAAJ

Books:

1. R. W. Erickson, D. Maksimovic, *Fundamentals of Power Electronics*, 3rd edition, Springer 2020.
2. L. Corradini, D. Maksimovic, P. Mattavelli, R. Zane, *Digital Control of High-Frequency Switched-Mode Power Converters*, IEEE Press/Wiley, 2015.
3. E. Alarcon, V. Yousefzadeh, A. Prodic, D. Maksimovic, "Data Conversion Pulse-Width Modulators for Switched-Mode Power Converter Digital Control," Chapter 14 in *Analog Circuit Design*, M. Steyaert, A. Roermund, A. Baschirotto, Editors, Springer 2012.

Journal Articles:

1. M. Chen et al., "MagNet Challenge for Data-Driven Power Magnetics Modeling," in IEEE Open Journal of Power Electronics, pp. 1-16, 2024. (Early Access)
2. A. Zade, S. Gurudiwan, D. Maksimović and R. Zane, "High-Bandwidth Control of a 20-kW Single-Stage Unfolding-Based AC–DC Converter Using the Extra Element Theorem and Current Emulation Technique," in IEEE Transactions on Power Electronics, vol. 39, no. 11, pp. 14411-14429, Nov. 2024.
3. D. H. Zhou, J. Čeliković, D. Maksimović and M. Chen, "Balancing Multiphase FCML Converters With Coupled Inductors: Modeling, Analysis, Limitations," in IEEE Transactions on Power Electronics, vol. 39, no. 8, pp. 9268-9291, Aug. 2024.
4. J. Čeliković et al., "Hardware-Efficient Digital Autotuning for Integrated Switched-Mode Battery Chargers," in IEEE Transactions on Power Electronics, vol. 39, no. 5, pp. 5041-5057, May 2024.
5. L. Corradini and D. Maksimović, "Steady-State Indeterminacy in Lossless Switched-Mode Power Converters," in *IEEE Transactions on Power Electronics*, vol. 38, no. 3, pp. 3001-3013, March 2023.
6. T. Xie, J. Zhu, D. Maksimovic and H. -P. Le, "A Highly Integrated Hybrid DC–DC Converter With nH-Scale IPD Inductors," in IEEE Journal of Solid-State Circuits, vol. 58, no. 3, pp. 705-719, March 2023.
7. R. Mallik, B. Majmunović, S. Dutta, G. -S. Seo, D. Maksimović and B. Johnson, "Control Design of Series-connected PV-powered Grid-forming Converters via Singular Perturbation," in IEEE Transactions on Power Electronics, vol. 38, no. 4, pp. 4306-4322, April 2023
8. B. Majmunović et al., "1 kV, 10-kW SiC-Based Quadruple Active Bridge DCX Stage in a DC to Three-Phase AC Module for Medium-Voltage Grid Integration,"

in IEEE Transactions on Power Electronics, vol. 37, no. 12, pp. 14631-14646, Dec. 2022.

9. B. Majmunović and D. Maksimović, "400–48-V Stacked Active Bridge Converter," in IEEE Transactions on Power Electronics, vol. 37, no. 10, pp. 12017-12029, Oct. 2022.
10. Y. Son et al., "Levelized Cost of Energy-Oriented Modular String Inverter Design Optimization for PV Generation System Using Geometric Programming," in IEEE Access, vol. 10, pp. 27561-27578, 2022.
11. M. Kamel, M. M. U. Rehman, F. Zhang, R. A. Zane and D. Maksimović, "Differential Input Current Regulation in Parallel Output Connected Battery Power Modules," in IEEE Transactions on Power Electronics, vol. 37, no. 4, pp. 3854-3864, April 2022.
12. Y. Gao et al., "Modeling and Design of High-Power, High-Current-Ripple Planar Inductors," in *IEEE Transactions on Power Electronics*, vol. 37, no. 5, pp. 5816-5832, May 2022.
13. V. Sankaranarayanan, Y. Gao, R. W. Erickson and D. Maksimovic, "Online Efficiency Optimization of a Closed-Loop Controlled SiC-Based Bidirectional Boost Converter," in *IEEE Transactions on Power Electronics*, vol. 37, no. 4, pp. 4008-4021, April 2022
14. M. Kamel, M. M. U. Rehman, F. Zhang, R. A. Zane and D. Maksimović, "Differential Input Current Regulation in Parallel Output Connected Battery Power Modules," in *IEEE Transactions on Power Electronics*, vol. 37, no. 4, pp. 3854-3864, April 2022.
15. E. M. Dede et al., "Thermal Design, Optimization, and Packaging of Planar Magnetic Components," in *IEEE Transactions on Components, Packaging and Manufacturing Technology*, vol. 11, no. 9, pp. 1480-1488, Sept. 2021
16. S. Mukherjee, V. Yousefzadeh, A. Sepahvand, M. Doshi and D. Maksimović, "A Two-Stage Automotive LED Driver With Multiple Outputs," in *IEEE Transactions on Power Electronics*, vol. 36, no. 12, pp. 14175-14186, Dec. 2021
17. M. Kamel, R. A. Zane and D. Maksimović, "Voltage Sharing With Series Output Connected Battery Modules in a Plug-and-Play DC Microgrid," in *IEEE Transactions on Power Electronics*, vol. 36, no. 11, pp. 13118-13127, Nov. 2021
18. J. Zhu and D. Maksimović, "Transformerless Stacked Active Bridge Converters: Analysis, Properties, and Synthesis," in *IEEE Transactions on Power Electronics*, vol. 36, no. 7, pp. 7914-7926, July 2021.
19. S. Mukherjee, Y. Gao and D. Maksimović, "Reduction of AC Winding Losses Due to Fringing-Field Effects in High-Frequency Inductors With Orthogonal Air Gaps," in *IEEE Transactions on Power Electronics*, vol. 36, no. 1, pp. 815-828, Jan. 2021

20. K. J. Goodrick, J. Zhu and D. Maksimović, "Systematic Optimization of Multiple-Output DC Distribution Architectures," in IEEE Journal of Emerging and Selected Topics in Power Electronics, vol. 9, no. 5, pp. 5703-5717, Oct. 2021

21. S. Mukherjee, V. Yousefzadeh, A. Sepahvand, M. Doshi and D. Maksimović, "High-Frequency Wide-Range Resonant Converter Operating as an Automotive LED Driver," in *IEEE Journal of Emerging and Selected Topics in Power Electronics*, vol. 9, no. 5, pp. 5781-5794, Oct. 2021.

22. M. Khatua, A. Kumar, V. Yousefzadeh, A. Sepahvand, M. Doshi, D. Maksimovic, K. Afridi, "High-Performance Megahertz-Frequency Resonant DC–DC Converter for Automotive LED Driver Applications," in IEEE Transactions on Power Electronics, vol. 35, no. 10, pp. 10396-10412, Oct. 2020.

23. F. Lu, B. Choi and D. Maksimovic, "Autonomous Power-Source Regulation in Series-Connected Low-Voltage Microinverters," in *IEEE Journal of Emerging and Selected Topics in Power Electronics*, vol. 8, no. 2, pp. 1442-1453, June 2020.

24. P. K. Achanta, B. B. Johnson, G. Seo and D. Maksimovic, "A Multilevel DC to Three-Phase AC Architecture for Photovoltaic Power Plants," in *IEEE Transactions on Energy Conversion*, vol. 34, no. 1, pp. 181-190, March 2019.

25. C. Olalla, Md. Nazmul Hasan, C. Deline, and D. Maksimović, "Mitigation of Hot-Spots in Photovoltaic Systems Using Distributed Power Electronics," Energies 2018, 11(4), 726.

26. A.F. Hoke, M. Shirazi, S. Chakraborty, E. Muljadi D. Maksimovic "Rapid Active Power Control of Photovoltaic Systems for Grid Frequency Support." *IEEE J. on Emerg. Select. Topic in Power Elec.*, Vol. 5, No. 3, 1154-1163. , Sept. 1, 2017.

27. C. Olalla, D. Maksimovic, C. Deline, L. Martinez-Salamero, "Impact of distributed power electronics on the lifetime and reliability of PV systems." *Progress in Photovoltaics*, Vol. 25, No. 10, 821-835, Oct. 01, 2017.

28. S. Jensen and D. Maksimovic, "Fast Tracking Electrosurgical Generator Using Two-Rail Multiphase Buck Converter With GaN Switches," *IEEE Trans. Power Electron*., vol. 32, no. 1, pp. 634-641, Jan. 2017.

29. H. Chen, H. Kim, R. Erickson and D. Maksimovic, "Electrified Automotive Powertrain Architecture Using Composite DC–DC Converters," *IEEE Trans. Power Electron*., vol. 32, no. 1, pp. 98-116, Jan. 2017.

30. Y. Zhang, M. Rodriguez, D. Maksimovic, "Very High Frequency PWM Buck Converters Using Monolithic GaN Half-Bridge Power Stages with Integrated Gate Drivers," *IEEE Trans. Power Electron*., Vol.31, No.11, pp. 7926-7942, Nov 2016.

31. P. Thummala, D. Maksimovic, Z. Zhang, M. Andersen, "Digital Control of a High Voltage (2.5 kV) Bidirectional Flyback DC-DC Converter for Driving a Capacitive Incremental Actuator," *IEEE Trans. Power Electron*., Vol.31, No.12, pp. 8500-8516, Dec 2016.

32. M. Evzelman, M. Ur Rehman, K. Hathaway, R. Zane, D. Costinett, D. Maksimovic, "Active Balancing System for Electric Vehicles with Incorporated Low Voltage Bus," *IEEE Trans. Power Electron*., Vol.31, No.11, pp. 7887-7895, Nov 2016.

33. H. Chen, K. Sabi, H. Kim, T. Harada, R. Erickson, and D. Maksimovic, "A 98.7% efficient composite converter architecture with application-tailored efficiency characteristic," *IEEE Trans. Power Electron*., Vol.31, No.1, Jan 2016.

34. R. Ling, D. Maksimovic, R. Leyva, "Second-Order Sliding-Mode Controlled Synchronous Buck DC–DC Converter," *IEEE Trans. Power Electron*., vol.31, no.3, pp.2539-2549, March 2016.

35. K. Doubleday, B. Choi, D. Maksimovic, C. Deline, C. Olalla, "Recovery of inter-row shading losses using differential power-processing submodule DC–DC converters," *Solar Energy*, Elsevier, Vol. 135, pp. 512-517, Oct. 2016.

36. B.C.Farhar, D.Maksimovic, W.Tomax, T.C.Coburn, "A field study of human factors and vehicle performance associated with PHEV adoption," *Energy Policy*, Elsevier, Vol. 93C, pp. 265-277, 2016.

37. I. Ramos, L.M.N.Ruiz, J.A.Garcia, D.Maksimovic, Z.Popovic, "GaN Microwave DC–DC Converters," *IEEE Trans. Microwave Theory and Tech.*, vol.63, no.12, pp.4473-4482, Dec. 2015

38. N. Hien, R. Zane, D. Maksimovic, "ON/OFF Control of a Modular DC–DC Converter Based on Active-Clamp LLC Modules," *IEEE Trans. Power Electron*., vol.30, no.7, pp.3748-3760, July 2015.

39. A. Brissette, D. Maksimovic, Y. Levron, "Distributed Series Static Compensator Deployment Using a Linearized Transmission System Model," *IEEE Trans. on Power Delivery*, Vol. 30, Issue: 3, Pages: 1269 – 1277, May 2015.

40. D. Costinett, D. Maksimovic, R. Zane, "Circuit-Oriented Treatment of Nonlinear Capacitances in Switched-Mode Power Supplies," *IEEE Trans. Power Electron*. vol.30, no.2, pp.985-995, Feb. 2015.

41. C. Olalla, C. Deline, D. Clement, Y. Levron, M. Rodriguez, D. Maksimovic, "Performance of Power-Limited Differential Power Processing Architectures in Mismatched PV Systems," *IEEE Trans. Power Electron*., vol.30, no.2, pp.618-631, Feb. 2015. Transactions Second Prize Paper Award, IEEE Power Electronics Society, 2016

42. A. Hoke, A. Brissette, K. Smith, A. Pratt, D. Maksimovic, "Accounting for Lithium-Ion Battery Degradation in Electric Vehicle Charging Optimization," *IEEE J. on Emerging and Selected Topics in Power Electronics*, vol.2, no.3, pp.691-700, Sept. 2014

43. M.Rodriguez, Y. Zhang, D. Maksimovic, "High-Frequency PWM Buck Converters Using GaN-on-SiC HEMTs," *IEEE Trans. Power Electron*., vol.29, no.5, pp.2462-2473, May 2014

44. Rodriguez, M.; Roberg, M.; Zai, A.; Alarcon, E.; Popovic, Z.; Maksimovic, D., “Resonant Pulse-Shaping Power Supply for Radar Transmitters,” *IEEE Trans. Power Electron*., vol.29, no.2, pp.707-718, Feb. 2014

45. Olalla, C.; Deline, C.; Maksimovic, D., "Performance of Mismatched PV Systems With Submodule Integrated Converters," *IEEE Journal of Photovoltaics*, vol.4, no.1, pp.396-404, Jan. 2014

46. Corradini, L.; Seltzer, D.; Bloomquist, D.; Zane, R.; Maksimovic, D.; Jacobson, B., “Zero Voltage Switching Technique for Bidirectional DC/DC Converters,” *IEEE Trans. Power Electron*., vol.29, no.4, pp.1585-1594, April 2014.

47. D. Costinett, M. Rodriguez, D. Maksimovic, “Simple Digital Pulse Width Modulator Under 100 ps Resolution Using General-Purpose FPGAs,” *IEEE Trans. Power Electron*., *Letters*, vol.28, no.10, pp.4466-4472, Oct. 2013

48. D. Costinett, D. Maksimovic, R. Zane, "Design and Control for High Efficiency in High Step-Down Dual Active Bridge Converters Operating at High Switching Frequency," *IEEE Trans. Power Electron*., vol.28, no.8, pp.3931-3940, Aug. 2013.

49. C. Olalla, D. Clement, M. Rodriguez, D. Maksimovic, "Architectures and control of submodule integrated DC-DC converters for photovoltaic applications," *IEEE Trans. Power Electron*., Special Issue on Power Electronics in Photovoltaic Power Systems, vol.28, no.6, pp.2980-2997, June 2013.

50. J. Traube, F. Lu, D. Maksimovic, "Mitigation of solar irradiance intermittency in photovoltaic power systems with integrated electric-vehicle charging functionality," *IEEE Trans. Power Electron*., Special Issue on Power Electronics in Photovoltaic Power Systems, vol.28, no.6, pp.3058-3067, June 2013.

51. M. Rodriguez, G. Stahl, L. Corradini, D. Maksimovic, "Smart DC power management system based on software-configurable power modules," *IEEE Trans. Power Electron*., vol.28, no.4, pp.1571-1586, April 2013

52. M. Rodriguez, V. M. Lopez, F. J. Azcondo, J. Sebastian, D. Maksimovic, "Average Inductor Current Sensor for Digitally Controlled Switched-Mode Power Supplies," *IEEE Trans. Power Electron*., vol.27, no.8, pp.3795-3806, Aug. 2012.

53. S. H. Kang, D. Maksimovic, I. Cohen, "Efficiency optimization in digitally controlled Flyback DC–DC converters over wide ranges of operating conditions," *IEEE Trans. Power Electron*., vol.27, no.8, pp.3734-3748, Aug. 2012

54. C. Olalla, R. Leyva, I. Queinnec, D. Maksimovic, "Robust gain-scheduled control of switched-mode DC–DC converters," *IEEE Trans. Power Electron*., vol.27, no.6, pp.3006-3019, June 2012.

55. J. Hoversten, S. Schafer, M. Roberg, M. Norris, D. Maksimovic, Z. Popovic, "Codesign of PA, supply, and signal processing for linear supply-modulated RF transmitters," *IEEE Trans. Microwave Theory and Technique*, vol.60, no.6, pp.2010-2020, June 2012

56. M. Roberg, M. Rodriguez, D. Maksimovic, Z. Popovic, "Efficient and linear amplification of spectrally confined pulsed AM radar signals," *IEEE Microwave and Wireless Components Letters*, vol.22, no.6, pp.279-281, June 2012

57. M. Rodriguez, P.F. Miaja, J. Sebastián, D. Maksimovic, "Mismatch-error shaping-based digital multiphase modulator," *IEEE Trans. Power Electron*., vol.27, no.4, pp.2055-2066, April 2012

58. Y. Li, K. R. Vannorsdel, A. J. Zirger, M. Norris, D. Maksimovic, "Current mode control for Boost converters with constant power loads," *IEEE Trans. Circ. Syst. I* (Regular Papers), vol.59, no.1, pp.198-206, Jan. 2012

59. L. Corradini, D. Seltzer, D. Bloomquist, R. Zane, D. Maksimovic, B. Jacobson, "Minimum current operation of bi-directional dual-bridge series resonant DC/DC converters," *IEEE Trans. Power Electron*., 2011.

60. S. Moon, L. Corradini, D. Maksimovic, "Autotuning of digitally controlled boost power factor correction rectifiers," *IEEE Trans. Power Electron*., vol. 26, no. 10, pp. 3006-3018, Oct. 2011.

61. L. Corradini, A. Bjeletic, R. Zane, D. Maksimovic, "Fully digital hysteretic modulator for DC–DC switching converters," *IEEE Trans. Power Electron*., vol.26, no.10, pp.2969-2979, Oct. 2011.

62. B. A. Mather, D. Maksimovic, "A simple digital power-factor correction Rectifier controller," *IEEE Trans. Power Electron*., vol.26, no.1, pp.9-19, Jan. 2011

63. D. Maksimovic, R. Zane, L. Corradini, "Advances in digital control for high-frequency switched-mode power converters," *invited*, in *Power Electronics monthly*, sponsored by Xi'an Power Electronics Research Institute, China, vol.44, no.12, pp.2-19, serial no.217, Dec.2010.

64. Fu-Zen Chen, D. Maksimovic, "Digital control for improved efficiency and reduced harmonic distortion over wide load range in boost PFC rectifiers," *IEEE Trans. Power Electron*., vol.25, no.10, pp.2683-2692, Oct. 2010.

65. R. Paul, L. Sankey, L. Corradini, Z. Popovic, D. Maksimovic, "Power management of wideband code division multiple access RF power amplifiers with antenna mismatch," *IEEE Trans. Power Electron*., vol. 25, no. 4, pp. 981-991, April 2010.

66. L. Corradini, A. Babazadeh, A. Bjeletic, D. Maksimovic, "Current-limited time-optimal response in digitally controlled DC–DC converters," *IEEE Trans. Power Electron*., vol.25, no.11, pp.2869-2880, Nov. 2010.

67. Xu Zhang, D. Maksimovic, "Multimode digital controller for synchronous buck converters operating over wide ranges of input voltages and load currents," *IEEE Trans. Power Electron*., vol. 25, no. 8, pp.1958-1965, Aug. 2010.

68. A. Babazadeh, D. Maksimovic, "Hybrid digital adaptive control for fast transient response in synchronous buck DC–DC converters," *IEEE Trans. Power Electron*., vol. 24, no. 11, pp. 2625 – 2638, Nov. 2009.

69. M. Shirazi, R. Zane, D. Maksimovic, "An autotuning digital controller for DC–DC power converters based on online frequency-response measurements," *IEEE Trans. Power Electron*., vol. 24, no. 11, pp. 2578 – 2588, Nov. 2009.

70. J. Morroni, R. Zane, D. Maksimovic, "Adaptive tuning of switched-mode power supplies operating in discontinuous and continuous conduction modes," *IEEE Trans. Power Electron*., vol. 24, no. 11, pp. 2603 – 2648, Nov. 2009.

71. J. Morroni, L. Corradini, R. Zane, D. Maksimovic, "An online stability margin monitor for digitally controlled switched-mode power supplies," *IEEE Trans. Power Electron*., vol. 24, no. 11, pp. 2639 – 2611, Nov. 2009.

72. J. Morroni, R. Zane, D. Maksimovic, "Design and implementation of an adaptive tuning system based on desired phase margin for digitally controlled DC–DC converters," *IEEE Trans. Power Electron*., vol. 24, no. 2, pp. 559 – 564, Feb 2009.

73. M. Shirazi, J. Morroni, A. Dolgov, R. Zane, D. Maksimovic, "Integration of frequency response measurement capabilities in digital controllers for DC–DC converters," *IEEE Trans. Power Electron*., vol. 23, no. 5, pp. 2524-2535, Sept. 2008.

74. T. Carosa, R. Zane, D. Maksimović, "Scalable digital multiphase modulator," *IEEE Trans. Power Electron., Lett*., vol. 23, no. 4, pp. 2201-2205, Jul. 2008.

75. M. Ilic, D. Maksimović, "Digital average current-mode controller for DC–DC converters in physical vapor deposition applications," *IEEE Trans. Power Electron*., vol. 23, no. 3, pp. 1428 -1436, May 2008.

76. V. Yousefzadeh, A. Babazadeh, B. Ramachandran, E. Alarcon, L. Pao and D. Maksimović, "Proximate time-optimal digital control for synchronous buck DC-DC converters, *IEEE Trans. Power Electron*, vol. 23, no. 4, pp. 2018-2026, July 2008.

77. H. Hu, V. Yousefzadeh and D. Maksimović, "Non-uniform A/D quantization for improved dynamic responses of digitally controlled DC-DC converters," *IEEE Trans. Power Electron*., vol. 23, no. 4, pp. 1998-2005, July 2008.

78. M. Ilic, D. Maksimovic, "Interleaved Zero Current Transition Buck Converter," *IEEE Trans. Ind. Appl.*, pp. 1619-1627, Nov.2007.

79. D. Maksimović, R. Zane, "Small-signal discrete-time modeling of digitally controlled DC-DC converters," *IEEE Trans. Power Electron.*, *Lett*., Nov. 2007.

80. H. Peng, A. Prodić, E. Alarcon, D. Maksimović, "Modeling of quantization effects in digitally controlled DC–DC converters," *IEEE Trans. Power Electron.*, vol.22, no.1, Jan. 2007, pp. 208-215.

81. V. Yousefzadeh, E. Alarcón, D. Maksimović, "Three-level buck converter for envelope tracking applications," *IEEE Trans. Power Electron.*, vol.21, no.2, March 2006, pp. 549-552.

82. A. Prodić, D. Maksimović, R. W. Erickson, "Dead-zone digital controllers for improved dynamic response of low harmonic rectifiers," *IEEE Trans. Power Electron.*, vol.21, no.1, Jan. 2006, pp. 173-181.

83. V. Yousefzadeh, N. Wang, Z. Popović, D. Maksimović, "A digitally controlled DC-DC converter for an RF power amplifier," *IEEE Trans. Power Electron.*, vol.21, no.1, Jan. 2006, pp. 164-172.

84. V. Yousefzadeh, D. Maksimović, "Sensorless optimization of dead times in DC-DC converters with synchronous rectifiers," *IEEE Trans. Power Electron.*, vol.21, no.4, July 2006, pp. 994-1002.

85. J. Chen, D. Maksimović, R. W. Erickson, "Analysis and design of a low-stress buck-boost converter in universal-input PFC applications," *IEEE Trans. Power Electron.*, vol.21, no.2, March 2006, pp. 320-329.

86. B. Miao, R. Zane, D. Maksimović, "System identification of power converters with digital control through cross-correlation methods," *IEEE Trans. Power Electron.*, vol.20, no.5, Sept. 2005, pp. 1093-1099.

87. N. Wang, X. Peng, V. Yousefzadeh, D. Maksimović, S. Pajić, Z. Popović, "Linearity of X-band class-E power amplifiers in EER operation," *IEEE Trans. Microw. Theory Tech.*, vol.53, no.3, March 2005, pp. 1096-1102.

88. P. Athalye, D. Maksimović, R. Erickson, "Variable-frequency predictive digital current mode control," *IEEE Trans. Power Electron., Lett.*, vol.2, no.4, Dec. 2004, pp. 113-116.

89. Y. Zhang, R. Zane, R. Erickson, D. Maksimović, A. Prodić, "On-line calibration of MOSFET switch on-state resistance for precise current sensing," *IEEE Trans. Power Electron., Lett.*, vol.2, no.3, Sept. 2004, pp. 100-103.

90. N. Wang, V. Yousefzadeh, D. Maksimovic, Z. Popović, "60% efficient 10-GHz power amplifier with dynamic drain bias control," *IEEE Trans. Microw. Theory Tech.*, vol.52, no.3, March 2004, pp. 1077-1081.

91. P. Athalye, D. Maksimović, and R. Erickson, "High-performance front-end converter for avionics applications," *IEEE Trans. Aerosp. Elect. Sys.*, vol.39, no.2, April 2003, pp. 462-470.

92. B. Patella, A. Prodić, A. Zirger, D. Maksimović, "High-frequency digital PWM controller IC for DC-DC converters," *IEEE Trans. Power Electron.*, special issue on digital control of power electronic systems, vol.18, no.1, Jan 2003, pp. 438-446.

93. A. Prodić, J. Chen, R. W. Erickson, D. Maksimović, "Self-tuning digitally controlled low-harmonic rectifier having fast dynamic response," *IEEE Trans. Power Electron.*, special issue on digital control of power electronic systems, vol.18, no.1, Jan 2003, pp. 420-428.

94. J. Chen, A. Prodić, R. W. Erickson, D. Maksimović, "Predictive digital current programmed control," *IEEE Trans. Power Electron.*, special issue on digital control of power electronic systems, vol.18, no.1, Jan 2003, pp. 411-419.

95. D. Maksimović, A. M. Stanković, V. J. Thottuvelil, G. C. Verghese, "Modeling and simulation of power electronic converters," *Proc. of the IEEE*, vol.89, no.6, Jun 2001, pp.898-912.

96. D. Maksimović, "Computer-aided small-signal analysis based on impulse response of DC/DC switching power converters," *IEEE Trans. Power Electron.*, vol.15, no.6, Nov 2000, pp.1183-1191.

97. D. Maksimović, V. Oklobdzija, B. Nikolić, W. Current, "Clocked CMOS adiabatic logic with integrated single-phase power-clock supply," *IEEE Trans. VLSI Sys.*, vol.8, no.4, Aug 2000, pp.460-463.

98. D. Maksimović, R. Erickson, C. Griesbach, "Modeling of cross-regulation in converters containing coupled inductors," *IEEE Trans. Power Electron.*, vol.15, no.4, Jul 2000, pp.607-615.

99. S. Djukić, D. Maksimović, Z. Popović, "A planar 4.5GHz DC-DC power converter," *IEEE Trans. Microw. Theory Tech.*, vol.47, no.8, Aug 1999, pp.1457-1460.

100. B. Arntzen, D. Maksimović, "Switched-capacitor dc-dc converters with resonant gate drive," *IEEE Trans. Power Electron.*, vol.13, no.5, Sep 1998, pp.892-902.

101. R. Zane, D. Maksimović, "Nonlinear-carrier control for high-power-factor rectifiers based on up-down converters," *IEEE Trans. Power Electron.*, vol.13, no.2, Mar 1998, pp.213-221.

102. B. Arbetter, D. Maksimović, "Feedforward pulse-width modulators for switching power converters," *IEEE Trans. Power Electron.*, vol.12, no.2, Mar 1997, pp.361-368.

103. K. W. Current, V. G. Oklobdzija, D. Maksimović, "On adiabatic multiple valued logic circuits," *Multiple Valued Logic: An International Journal*, 1997.

104. V. G. Oklobdzija, D. Maksimović, F. Lin, "Pass-transistor adiabatic logic using single power-clock supply," *IEEE Trans. Circ. Sys.*, Part II, vol.44, no.10, Oct 1997, pp.842-846.

105. P. Pejović, D. Maksimović, "An algorithm for solving piecewise-linear networks that include elements with discontinuous characteristics," *IEEE Trans. Circ. Sys.*, Part I, vol.43, no.6, Jun 1996, pp.453-460.

106. D. Maksimović, Y. Jang, R. Erickson, "Nonlinear-carrier control for high power factor boost rectifiers," *IEEE Trans. Power Electron.*, vol.11, no.4, Jul 1996, pp.578-584.

107. Dragan Maksimović, "Design of the clamped-current high-power-factor boost rectifier," *IEEE Trans. Indust. Appl.*, vol.31, no.5, Sep/Oct 1995, pp.986-992.

108. P. Pejović, D. Maksimović, "A new algorithm for simulation of power electronic systems using piecewise-linear device models," *IEEE Trans. Power Electron.*, vol.10, no.3, May 1995, pp.340-348.

109. D. Maksimović, B. Arbetter, “Feed-forward pulse-width modulator for boost DC-DC power converters,” *Electronics Letters*, Vol. 31, No. 7, March 1995, pp. 513-514.

110. J. Hong, D. Maksimović, R. Erickson, I. Khan, “Half-cycle control of the parallel resonant converter operated as a high power factor rectifier,” *IEEE Trans. Power Electron.*, vol.10, no.1, Jan 1995, pp.1-8.

111. P. Pejović, D. Maksimović, “A method for fast time-domain simulation of networks with switches,” *IEEE Trans. Power Electron.*, vol.9, no.4, Jul 1994, pp.449-456.

112. D. Maksimović, S. Cuk, “A general approach to synthesis and analysis of quasi-resonant converters,” *IEEE Trans. Power Electron.*, vol.6, no.1, Jan 1991, pp.127-140.

113. D. Maksimović, S. Cuk, “Switching converters with large range of DC conversion ratios,” *IEEE Trans. Power Electron.*, vol.6, no.1, Jan 1991, pp.151-157.

114. D. Maksimović, S. Cuk, “Constant-frequency control of quasi-resonant converters,” *IEEE Trans. Power Electron.*, vol.6, no.1, Jan 1991, pp.141-150.

115. D. Maksimović, S. Cuk, “A unified analysis of PWM converters in discontinuous modes,” *IEEE Trans. Power Electron.*, vol.6, no.3, Jul 1991, pp.476-490.

Conference Proceedings:

1. S. Iyer, S. Paul, D. Maksimović and L. Corradini, "A Simple Active Balancing Technique for 5-Level Flying Capacitor Converters with Reduced Sensing Requirements," 2024 IEEE International Communications Energy Conference (INTELEC), Bengaluru, India, 2024, pp. 1-6.
2. S. Iyer, S. Paul, D. Maksimović and L. Corradini, "A Low-Complexity Balancing Technique for Flying-Capacitor Odd-Level Converters," 2024 IEEE Workshop on Control and Modeling for Power Electronics (COMPEL), Lahore, Pakistan, 2024, pp. 1-8.
3. S. Iyer, S. Paul, D. Maksimović and L. Corradini, "A Scalable Passive Balancing Approach for Flying-Capacitor Odd-Level Converters," 2024 IEEE Workshop on Control and Modeling for Power Electronics (COMPEL), Lahore, Pakistan, 2024, pp. 1-8.
4. A. Zade, S. Gurudiwan, M. Mansour, B. Hesterman, D. Maksimović and R. Zane, "High-Bandwidth Control of a 21 kW Unfolding-Based AC-DC Converter Using Extra Element Theorem and Current Emulation Technique," 2024 IEEE Applied Power Electronics Conference and Exposition (APEC), Long Beach, CA, USA, 2024, pp. 698-705.
5. B. Sauter, S. Reese, S. Sinha, J. Haddon, T. Byrd and D. Maksimovic, "Integrating Equation-Based Methods with Random Forest Regression for Improved Accuracy of Magnetic Core Loss Modeling," 2024 IEEE Applied Power Electronics Conference and Exposition (APEC), Long Beach, CA, USA, 2024, pp. 410-415.
6. Abdelmaksoud R, Diebold J, Hota SK, Lee K-L, Sinha S, Maksimovic D. "Development of Ceramic Pulsating Heat Pipes for Medium-Voltage Power Electronics." ASME 2023 International Technical Conference and Exhibition on Packaging and Integration of Electronic and Photonic Microsystems.
7. C. Suthar, V. I. Kumar, V. Yousefzadeh, M. Doshi and D. Maksimović, "A Composite Converter based Automotive LED Driver," 2023 IEEE 24th Workshop on Control and Modeling for Power Electronics (COMPEL), 2023, pp. 1-6.
8. S. Narula, L. Corradini and D. Maksimović, "Unified Sliding-Mode Control of Non-Inverting Buck-Boost Converters," 2023 IEEE 24th Workshop on Control and Modeling for Power Electronics (COMPEL), pp. 1-7.
9. S. Sinha, B. Majmunović and D. Maksimović, "48V to 1V Active-Clamp Stacked Direct Forward Converter," 2023 IEEE 24th Workshop on Control and Modeling for Power Electronics (COMPEL), 2023, pp. 1-8.
10. A. Cheshire, A. Bharathan and D. Maksimović, "Flying Capacitor Four-Level Supply Modulator with Active Balancing for RF Power Amplifier Applications," 2023 IEEE 24th Workshop on Control and Modeling for Power Electronics (COMPEL), 2023, pp. 1-7.

11. U. P. S. Tanwar, C. Suthar, P. A. Kyaw, I. K. Vedula and D. Maksimovic, "Resonant Gate Drive for High Frequency Active-Bridge Power Converters," 2023 IEEE 24th Workshop on Control and Modeling for Power Electronics (COMPEL), 2023, pp. 1-6.

12. M. Chawla, D. Maksimović and A. Kamineni, "Nearly Constant Power Tuning Network for Wireless Inductive Power Transfer Systems," 2023 IEEE Wireless Power Technology Conference and Expo (WPTCE), San Diego, CA, USA, 2023, pp. 1-6.

13. C. Suthar, V. I. Kumar and D. Maksimović, "Estimator-Based Step-Load Transient Improvements in a Digitally Controlled Synchronous Buck Converter," 2023 IEEE Applied Power Electronics Conference and Exposition (APEC), Orlando, FL, USA, 2023, pp. 1189-1194.

14. S. Reese et al., "Loss estimation and design of dc-dc converters using physics- and data-based component models," 2023 IEEE Applied Power Electronics Conference and Exposition (APEC), Orlando, FL, USA, 2023, pp. 82-89.

15. A. Sivakumar, K. R. A. G and D. Maksimović, "Dynamic Modeling of Peak Current Mode Controlled Two-phase PWM Converters with Coupled Inductors," 2023 IEEE Applied Power Electronics Conference and Exposition (APEC), Orlando, FL, USA, 2023, pp. 2721-2727.

16. T. Martin, B. Majmunović, V. I. Kumar, M. Ilic and D. Maksimović, "Modular Series-Stacked Bidirectional AC/DC Architecture for 3-Phase Grid-Tied Applications," 2023 IEEE Applied Power Electronics Conference and Exposition (APEC), Orlando, FL, USA, 2023, pp. 984-988.

17. B. Majmunović, Y. Gao, I. K. Vedula, S. Khandelwal and D. Maksimović, "400V-to-48V Transformer-Isolated Stacked Active Bridge Converter with Integrated Magnetics," 2023 IEEE Applied Power Electronics Conference and Exposition (APEC), Orlando, FL, USA, 2023, pp. 2177-2181.

18. S. Reese, T. Byrd, J. Haddon and D. Maksimovic, "Machine Learning-based Component Figures of Merit and Models for DC-DC Converter Design," 2022 IEEE Design Methodologies Conference (DMC), Bath, United Kingdom, 2022, pp. 1-6.

19. R. Mallik, B. Majmunović, S. Dutta, G. . -S. Seo, D. Maksimovic and B. Johnson, "A Lyapunov-based Generalized Dc-Side Controller Design for PV-Connected Systems," 2022 IEEE Energy Conversion Congress and Exposition (ECCE), Detroit, MI, USA, 2022, pp. 1-8.

20. D. H. Zhou, J. Celikovic, Y. Elasser, D. Maksimovic and M. Chen, "Balancing Limits of Flying Capacitor Voltages in Coupled Inductor FCML Converters," 2022 IEEE 23rd Workshop on Control and Modeling for Power Electronics (COMPEL), Tel Aviv, Israel, 2022, pp. 1-8.

21. S. Reese and D. Maksimovic, "An Approach to DC-DC Converter Optimization using Machine Learning-based Component Models," 2022 IEEE 23rd Workshop

on Control and Modeling for Power Electronics (COMPEL), Tel Aviv, Israel, 2022, pp. 1-8.

22. C. Suthar, V. I. Kumar, V. Yousefzadeh, M. Doshi and D. Maksimović, "A Family of Two-Module Composite DC-DC Converters," 2022 IEEE 23rd Workshop on Control and Modeling for Power Electronics (COMPEL), Tel Aviv, Israel, 2022.
23. J. Celikovic et al., "Digital Autotuning for Integrated Switched-Mode Battery Chargers," 2022 IEEE 23rd Workshop on Control and Modeling for Power Electronics (COMPEL), Tel Aviv, Israel, 2022, pp. 1-6.
24. C. Suthar, V. I. Kumar, F. Alskran and D. Maksimović, "Estimator-Based Time-Optimal Control of Flying Capacitor Multilevel (FCML) Converters," 2022 IEEE 23rd Workshop on Control and Modeling for Power Electronics (COMPEL), Tel Aviv, Israel, 2022.
25. T. Xie, J. Zhu, T. Byrd, D. Maksimovic and H. -P. Le, "A 0.66 W/mm2 Power Density, 92.4% Peak Efficiency Hybrid Converter with nH-Scale Inductors for 12 V System," 2022 IEEE Custom Integrated Circuits Conference (CICC), 2022.
26. S. Mukherjee and D. Maksimović, "Application of Orthogonal Airgaps in High Frequency Coupled Inductors," 2022 IEEE Applied Power Electronics Conference and Exposition (APEC), 2022, pp. 619-624.
27. D. M. Riley, R. A. Clawson, D. Maksimovic, B. A. Myers, I. Santiago, N. A. Stites, J. L. Taylor, "Developing Engineering Formation Systems for Sustainability," 2021 Annual Conference and Exposition, American Society for Engineering Education.
28. C. Suthar, V. I. Kumar, F. Alskran and D. Maksimović, "Proximate Time-Optimal Control of Flying-Capacitor Multi-Level Converters Using a Fixed Frequency PID Framework," 2021 IEEE Energy Conversion Congress and Exposition (ECCE), Vancouver, BC, Canada, 2021, pp. 2825-2832
29. S. Mukherjee and D. Maksimović, "A Transformerless Composite Step-Down DC-DC Converter with Wide Input Voltage Range," 2021 IEEE Energy Conversion Congress and Exposition (ECCE), Vancouver, BC, Canada, 2021, pp. 1966-1972
30. K. J. Goodrick, A. Butler, T. Byrd and D. Maksimović, "Efficient Design and Optimization of Large DC Distribution Architectures Using Descent Based Methods," 2021 IEEE Design Methodologies Conference (DMC), Bath, United Kingdom, 2021, pp. 1-8
31. K. J. Goodrick, A. Butler, T. Byrd and D. Maksimović, "Machine Learning Estimators for Power Electronics Design and Optimization," 2021 IEEE Design Methodologies Conference (DMC), Bath, United Kingdom, 2021, pp. 1-8.
32. S. Dutta et al., "Grid-connected Self-synchronizing Cascaded H-Bridge Inverters with Autonomous Power Sharing," 2021 IEEE Energy Conversion Congress and Exposition (ECCE), 2021, pp. 2806-2813

33. S. Mukherjee, B. Majmunovic, G.S. Seo, S. Dutta, R. Mallik, B. Johnson, D. Maksimovic, "A High-Frequency Planar Transformer with Medium-Voltage Isolation," 2021 IEEE Applied Power Electronics Conference and Exposition (APEC), June 2021, pp. 2065-2070.

34. J. Celikovic, A. Arguello, W. Alhoor, S. Abedinpour and D. Maksimovic, "Sliding Mode Control with Minimum-Deviation Transient Response for Non-Inverting Buck-Boost DC-DC Converters," 2021 IEEE Applied Power Electronics Conference and Exposition (APEC), 2021, pp. 482-486.

35. K. J. Goodrick, E. Dall'Anese and D. Maksimović, "Systematic Design and Optimization of Large DC Distribution Architectures Using Simulated Annealing," 2021 IEEE Applied Power Electronics Conference and Exposition (APEC), 2021, pp. 134-141.

36. S. Dutta et al., "A Novel Decentralized PWM Interleaving Technique for Ripple Minimization in Series-stacked DC-DC Converters," 2021 IEEE Applied Power Electronics Conference and Exposition (APEC), 2021, pp. 487-493.

37. S. Mukherjee, A. Kumar and D. Maksimović, "Efficiency-Optimized Current-Source Resonant Converter for USB-C Power Delivery," 2021 IEEE Applied Power Electronics Conference and Exposition (APEC), 2021, pp. 500-505.

38. C. Suthar, V. I. Kumar, F. Alskran and D. Maksimović, "An Arbitrary Waveform Generator based on an Eight-Level Flying-Capacitor Multilevel Converter," 2021 IEEE Applied Power Electronics Conference and Exposition (APEC), 2021, pp. 1008-1014.

39. M. Rasheed et al., "Composite Hybrid Energy Storage System utilizing Capacitive Coupling for Hybrid and Electric Vehicles," 2021 IEEE Applied Power Electronics Conference and Exposition (APEC), 2021, pp. 939-946.

40. S. Mukherjee, A. Sepahvand, V. Yousefzadeh, M. Doshi and D. Maksimović, "A Two-Stage Multiple-Output Automotive LED Driver Architecture," 2020 IEEE Energy Conversion Congress and Exposition (ECCE), Detroit, MI, USA, 2020, pp. 1492-1498.

41. J. Celikovic, P. Cavallini, S. Abedinpour and D. Maksimovic, "Minimum-Deviation Transient Response in Non-Inverting Buck-Boost DC-DC Converters," 2020 IEEE 21st Workshop on Control and Modeling for Power Electronics (COMPEL), Aalborg, Denmark, 2020, pp. 1-8

42. Y. Gao, V. Sankaranarayanan, R. W. Erickson and D. Maksimovic, "Soft Startup Strategies for DAB-Based DCX in Composite Converters," 2020 IEEE Energy Conversion Congress and Exposition (ECCE), Detroit, MI, USA, 2020, pp. 6130-6135.

43. J. Zhu and D. Maksimovic, "48 V-to-1 V Transformerless Stacked Active Bridge Converters with Merged Regulation Stage," 2020 IEEE 21st Workshop on Control and Modeling for Power Electronics (COMPEL), Aalborg, Denmark, 2020, pp. 1-6

44. S. Dutta et al., "Decentralized Control of Cascaded H-Bridge Inverters for Medium-Voltage Grid Integration," 2020 IEEE 21st Workshop on Control and Modeling for Power Electronics (COMPEL), Aalborg, Denmark, 2020, pp. 1-6

45. K. J. Goodrick et al., "LCOE Design Optimization Using Genetic Algorithm with Improved Component Models for Medium-Voltage Transformerless PV Inverters," 2020 IEEE Energy Conversion Congress and Exposition (ECCE), Detroit, MI, USA, 2020, pp. 2262-2267.

46. M. Bossart, R. W. Kenyon, D. Maksimovic and B. -M. Hodge, "The Effect of Power Electronic Loads on Western Interconnection Stability," 2020 IEEE Power & Energy Society General Meeting (PESGM), Montreal, QC, 2020, pp. 1-5

47. Y. Gao, V. Sankaranarayanan, R. W. Erickson and D. Maksimovic, "Analysis and Attenuation of Differential-Mode Resonances due to Winding Capacitances in High-Power Planar Transformers," 2020 IEEE Applied Power Electronics Conference and Exposition (APEC), New Orleans, LA, USA, 2020, pp. 1411-1417.

48. V. Sankaranarayanan, Y. Gao, R. W. Erickson and D. Maksimovic, "Online Efficiency Optimization of a Closed-Loop Controlled SiC-Based Boost Converter," 2020 IEEE Applied Power Electronics Conference and Exposition (APEC), New Orleans, LA, USA, 2020, pp. 285-291.

49. S. Mukherjee, A. Sepahvand, V. Yousefzadeh, M. Doshi and D. Maksimović, "Optimal Control of a Wide Range Resonant DC-DC Converter," 2020 IEEE Applied Power Electronics Conference and Exposition (APEC), New Orleans, LA, USA, 2020, pp. 940-945.

50. B. Majmunović et al., "Soft Switching Over the Entire Line Cycle for a Quadruple Active Bridge DCX in a DC to Three-Phase AC Module," 2020 IEEE Applied Power Electronics Conference and Exposition (APEC), New Orleans, LA, USA, 2020, pp. 3464-3471.

51. M. Kamel, V. Sankaranarayanan, R. Zane and D. Maksimovic, "State-of-Charge Control with Series Output Connected DC-DC Modules in Active Battery Management Systems," 2020 IEEE Applied Power Electronics Conference and Exposition (APEC), New Orleans, LA, USA, 2020, pp. 3081-3086.

52. M. Khatua et al., "Closed-Loop Control of LCL-T Resonant DC-DC Converter Operating as Automotive LED Driver," 2019 IEEE Energy Conversion Congress and Exposition (ECCE), Baltimore, MD, USA, 2019, pp. 860-865.

53. G. Seo et al., "Levelized-Cost-of-Electricity-Driven Design Optimization for Medium-Voltage Transformerless Photovoltaic Converters," 2019 IEEE Energy Conversion Congress and Exposition (ECCE), Baltimore, MD, USA, 2019, pp. 6973-6980.

54. J. Zhu, R. Scheuss and D. Maksimovic, "Ladder Transformerless Stacked Active Bridge Converters," 2019 IEEE Energy Conversion Congress and Exposition (ECCE), Baltimore, MD, USA, 2019, pp. 151-156.

55. S. Mukherjee, A. Sepahvand, V. Yousefzadeh, M. Doshi and D. Maksimović, "Automotive LED Driver based on Resonant DC-DC Converter with Wide Input and Output Voltage Ranges," 2019 20th Workshop on Control and Modeling for Power Electronics (COMPEL), Toronto, ON, Canada, 2019, pp. 1-6.

56. S. Mukherjee, A. Sepahvand, V. Yousefzadeh, M. Doshi and D. Maksimović, "Automotive LED Driver based on Resonant DC-DC Converter with Wide Input and Output Voltage Ranges," 2019 20th Workshop on Control and Modeling for Power Electronics (COMPEL), Toronto, ON, Canada, 2019, pp. 1-6.

57. R. Das, J. Celikovic, S. Abedinpour, M. Mercer, D. Maksimovic and H. Le, "Demystifying Capacitor Voltages and Inductor Currents in Hybrid Converters," 2019 20th Workshop on Control and Modeling for Power Electronics (COMPEL), Toronto, ON, Canada, 2019, pp. 1-8.

58. M. Kamel, R. Zane and D. Maksimovic, "Voltage Sharing of Series Connected Battery Modules in a Plug-and-Play DC Microgrid," 2019 20th Workshop on Control and Modeling for Power Electronics (COMPEL), Toronto, ON, Canada, 2019.

59. S. Mukherjee et al., "AC Resistance Reduction Using Orthogonal Air Gaps in High Frequency Inductors," 2019 20th Workshop on Control and Modeling for Power Electronics (COMPEL), Toronto, ON, Canada, 2019, pp. 1-6.

60. V. Sankaranarayanan, M. Shirazi, Y. Gao, A. Ghosh, R. W. Erickson and D. Maksimovic, "Controller Hardware-in-the-Loop Validation of a Modular Control Architecture for a Composite DC-DC Converter," 2019 20th Workshop on Control and Modeling for Power Electronics (COMPEL), Toronto, ON, Canada, 2019, pp. 1-7.

61. S. Dutta et al., "Decentralized Carrier Interleaving in Cascaded Multilevel DC-AC Converters," 2019 20th Workshop on Control and Modeling for Power Electronics (COMPEL), Toronto, ON, Canada, 2019, pp. 1-6.

62. J. Zhu, R. Schuess and D. Maksimovic, "General Properties and Synthesis of Transformerless Stacked Active Bridge Converters," 2019 20th Workshop on Control and Modeling for Power Electronics (COMPEL), Toronto, ON, Canada, 2019, pp. 1-6.

63. J. Celikovic, R. Das, H. Le and D. Maksimovic, "Modeling of Capacitor Voltage Imbalance in Flying Capacitor Multilevel DC-DC Converters," 2019 20th Workshop on Control and Modeling for Power Electronics (COMPEL), Toronto, ON, Canada, 2019, pp. 1-8.

64. Y. Gao, V. Sankaranarayanan, E. M. Dede, A. Ghosh, D. Maksimovic and R. W. Erickson, "Drive-Cycle Optimized 99% Efficient SiC Boost Converter Using Planar Inductor with Enhanced Thermal Management," 2019 20th Workshop on Control and Modeling for Power Electronics (COMPEL), Toronto, ON, Canada, 2019, pp. 1-7.

65. R. Das, G. Seo, D. Maksimovic and H. Le, "An 80-W 94.6%-Efficient Multi-Phase Multi-Inductor Hybrid Converter," 2019 IEEE Applied Power Electronics Conference and Exposition (APEC), Anaheim, CA, USA, 2019, pp. 25-29.

66. T. Xie, R. Das, G. Seo, D. Maksimovic and H. Le, "Multiphase Control for Robust and Complete Soft-charging Operation of Dual Inductor Hybrid Converter," 2019 IEEE Applied Power Electronics Conference and Exposition (APEC), Anaheim, CA, USA, 2019, pp. 1-5.

67. J. Zhu and D. Maksimović, "A Family of Transformerless Stacked Active Bridge Converters," 2019 IEEE Applied Power Electronics Conference and Exposition (APEC), Anaheim, CA, USA, 2019, pp. 19-24.

68. M. Kamel, M. M. Ur Rehman, F. Zhang, R. Zane and D. Maksimovic, "Control of Independent-Input, Parallel-Output DC/DC Converters for Modular Battery Building Blocks," 2019 IEEE Applied Power Electronics Conference and Exposition (APEC), Anaheim, CA, USA, 2019, pp. 234-240.

69. P. K. Achanta, B. B. Johnson, G. Seo and D. Maksimovic, "A Multilevel DC to Three-Phase AC Architecture for Photovoltaic Power Plants," in IEEE Transactions on Energy Conversion, vol. 34, no. 1, pp. 181-190, March 2019.

70. Y. Liu, A. Kumar, D. Maksimovic and K. K. Afridi, "A High-Power-Density High-Efficiency Three-Level Buck Converter for Cellphone Battery Charging Applications," 2018 IEEE Energy Conversion Congress and Exposition (ECCE), Portland, OR, 2018, pp. 5265-5270.

71. M. Khatua et al., "High-Performance Megahertz-Frequency Resonant DC-DC Converter for Automotive LED Driver Applications," 2018 IEEE Energy Conversion Congress and Exposition (ECCE), Portland, OR, 2018, pp. 2186-2192.

72. M. Khatua, A. Kumar, D. Maksimović and K. K. Afridi, "A High-Frequency LCLC Network Based Resonant DC-DC Converter for Automotive LED Driver Applications," 2018 IEEE 19th Workshop on Control and Modeling for Power Electronics (COMPEL), Padova, Italy, 2018, pp. 1-7.

73. J. Zhu and D. Maksimović, "Dynamic Modeling of a Hybrid Switched-Capacitor-Based Converter with Phase-Shift Control," 2018 IEEE 19th Workshop on Control and Modeling for Power Electronics (COMPEL), Padova, Italy, 2018, pp. 1-6.

74. K. J. Goodrick and D. Maksimović, "Systematic Optimization of Multiple Voltage Domain DC Distribution Architectures," 2018 IEEE 19th Workshop on Control and Modeling for Power Electronics (COMPEL), Padova, Italy, 2018, pp. 1-8.

75. U. Anwar and D. Maksimović, "A Unified Approach to Modeling High-Frequency Effects in Current Mode Controlled Pulse Width Modulated Switching Converters," 2018 IEEE 19th Workshop on Control and Modeling for Power Electronics (COMPEL), Padova, Italy, 2018, pp. 1-9.

76. P. Achanta, M. Sinha, B. Johnson, S. Dhople and D. Maksimovic, "Self-synchronizing Series-connected Inverters," 2018 IEEE 19th Workshop on Control and Modeling for Power Electronics (COMPEL), Padova, Italy, 2018, pp. 1-6.

77. P. K. Achanta, D. Maksimovic and M. Ilic, "Decentralized control of series stacked bidirectional DC-AC modules," 2018 IEEE Applied Power Electronics Conference and Exposition (APEC), San Antonio, TX, 2018, pp. 1008-1013.

78. P. Achanta, D. Maksimovic and B. Johnson, "Cascaded quadruple active bridge structures for multilevel DC to three-phase AC conversion," 2018 IEEE Applied Power Electronics Conference and Exposition (APEC), San Antonio, TX, 2018, pp. 156-160.

79. S. Mukherjee, A. Sepahvand and D. Maksimović, "High-frequency LC3L resonant DC-DC converter for automotive LED driver applications," 2018 IEEE Applied Power Electronics Conference and Exposition (APEC), San Antonio, TX, 2018, pp. 797-802.

80. J. Zhu, H. Kim, H. Chen, R. Erickson and D. Maksimović, "High efficiency SiC traction inverter for electric vehicle applications," 2018 IEEE Applied Power Electronics Conference and Exposition (APEC), San Antonio, TX, 2018, pp. 1428-1433.

81. F. Zhang, M. M. U. Rehman, R. Zane and D. Maksimović, "Hybrid balancing in a modular battery management system for electric-drive vehicles," 2017 IEEE Energy Conversion Congress and Exposition (ECCE), Cincinnati, OH, 2017, pp. 578-583.

82. B. Weiss et al., "Substrate biasing effects in a high-voltage, monolithically-integrated half-bridge GaN-Chip," 2017 IEEE 5th Workshop on Wide Bandgap Power Devices and Applications (WiPDA), Albuquerque, NM, 2017, pp. 265-272.

83. U. Anwar, D. Maksimović and K. K. Afridi, "A simple control architecture for four-switch buck-boost converter based power factor correction rectifier," 2017 IEEE 18th Workshop on Control and Modeling for Power Electronics (COMPEL), Stanford, CA, 2017, pp. 1-6.

84. A. Sepahvand et al., "Current control and PWM dimming in an automotive LED driver based on a Ćuk converter," 2017 IEEE 18th Workshop on Control and Modeling for Power Electronics (COMPEL), Stanford, CA, 2017, pp. 1-8.

85. Y. Liu, A. Kumar, S. Pervaiz, D. Maksimovic and K. K. Afridi, "A high-power-density low-profile DC-DC converter for cellphone battery charging applications," 2017 IEEE 18th Workshop on Control and Modeling for Power Electronics (COMPEL), Stanford, CA, 2017, pp. 1-6.

86. R. Dyche Anderson, R. Zane, G.Plett, D. Maksimovic, K.Smith, M.Scott Trimboli, “Life Balancing – A Better Way to Balance Large Batteries,” SAE International, 2017-01-1210, published 03/28/2017.

87. H. Kim et al., "SiC-MOSFET composite boost converter with 22 kW/L power density for electric vehicle application," 2017 IEEE Applied Power Electronics Conference and Exposition (APEC), Tampa, FL, 2017, pp. 134-141.

88. M. M. U. Rehman, F. Zhang, R. Zane and D. Maksimovic, "Control of bidirectional DC/DC converters in reconfigurable, modular battery systems," 2017 IEEE Applied Power Electronics Conference and Exposition (APEC), Tampa, FL, 2017, pp. 1277-1283.

89. A. Sepahvand, M. Doshi, V. Yousefzadeh, J. Patterson, K. K. Afridi and D. Maksimović, "High-frequency ZVS Ćuk converter for automotive LED driver applications using planar integrated magnetics," 2017 IEEE Applied Power Electronics Conference and Exposition (APEC), Tampa, FL, 2017, pp. 2467-2474.

90. U. Anwar, R. Erickson, D. Maksimović and K. K. Afridi, "A control architecture for low current distortion in bridgeless boost power factor correction rectifiers," 2017 IEEE Applied Power Electronics Conference and Exposition (APEC), Tampa, FL, 2017, pp. 82-87.

91. R. Bonache-Samaniego, C. Olalla, L. Martínez-Salamero and D. Maksimović, "6.78 MHz self-oscillating parallel resonant converter based on GaN technology," 2017 IEEE Applied Power Electronics Conference and Exposition (APEC), Tampa, FL, 2017, pp. 1594-1599.

92. A. Sepahvand, M. Doshi, J. Patterson, V. Yousefzadeh, K. Afridi and D. Maksimovic, "Automotive LED Driver Based On High Frequency Zero Voltage Switching Integrated Magnetics Cuk Converter, IEEE ECCE 2016.

93. M. M. Rehman, F. Zhang, M. Evzelman, R. Zane, K. Smith and D. Maksimovic, "Advanced Cell-level Control for Extending Electric Vehicle Battery Pack Lifetime," IEEE ECCE 2016.

94. U. Anwar, H. Kim, H. Chen, R. Erickson, D. Maksimovic, and K. Afridi, "A High Power Density Drivetrain-Integrated Electric Vehicle Charger," IEEE ECCE 2016.

95. H. Kim, H. Chen, R. Erickson and D. Maksimovic, "Boost Composite Converter Design Based On Drive Cycle Weighted Losses in Electric Vehicle Powertrain Applications," IEEE ECCE 2016.

96. Y. Zhang, J. Strydom, M. de Rooij and D. Maksimović, "Envelope tracking GaN power supply for 4G cell phone base stations," 2016 IEEE Applied Power Electronics Conference and Exposition (APEC), Long Beach, CA, 2016, pp. 2292-2297.

97. A. Sepahvand, Y. Zhang and D. Maksimovic, "High efficiency 20–400 MHz PWM converters using air-core inductors and monolithic power stages in a normally-off GaN process," 2016 IEEE Applied Power Electronics Conference and Exposition (APEC), Long Beach, CA, 2016, pp. 580-586.

98. P. K. Achanta, D. C. Jones, D. Maksimovic, S. M. Zhak, B. Miwa and C. Arnold, "Second order sliding mode controlled point of load power supply," 2016 IEEE

Applied Power Electronics Conference and Exposition (APEC), Long Beach, CA, 2016, pp. 3273-3278.

99. Y. Liu, A. Kumar, J. Lu, D. Maksimovic and K. K. Afridi, "New design methdology for megahertz-frequency resonant dc-dc converters using impedance control network architecture," 2016 IEEE Applied Power Electronics Conference and Exposition (APEC), Long Beach, CA, 2016, pp. 1392-1397.
100. C. McHugh et al., "A high power density single-phase inverter using stacked switched capacitor energy buffer," 2016 IEEE Applied Power Electronics Conference and Exposition (APEC), Long Beach, CA, 2016, pp. 1947-1953.
101. U. Anwar, D. Maksimović and K. K. Afridi, "Generalized hybrid feedforward control of pulse width modulated switching converters," 2016 IEEE 17th Workshop on Control and Modeling for Power Electronics (COMPEL), Trondheim, 2016, pp. 1-7.
102. H. Kim, H. Chen, J. Zhu, D. Maksimović and R. Erickson, "Impact of 1.2kV SiC-MOSFET EV traction inverter on urban driving," 2016 IEEE 4th Workshop on Wide Bandgap Power Devices and Applications (WiPDA), Fayetteville, AR, USA, 2016, pp. 78-83.
103. B. Weiss et al., "Soft-switching 3 MHz converter based on monolithically integrated half-bridge GaN-chip," 2016 IEEE 4th Workshop on Wide Bandgap Power Devices and Applications (WiPDA), Fayetteville, AR, USA, 2016, pp. 215-219.
104. M. Muneeb Ur Rehman, F. Zhang, R. Zane and D. Maksimovic, "Design and control of an integrated BMS/DC-DC system for electric vehicles," 2016 IEEE 17th Workshop on Control and Modeling for Power Electronics (COMPEL), Trondheim, 2016, pp. 1-7.
105. Maksimovic, D.; Yuanzhe Zhang; Rodriguez, M., "Monolithic very high frequency GaN switched-mode power converters," in Custom Integrated Circuits Conference (CICC), 2015 IEEE , vol., no., pp.1-4, 28-30 Sept. 2015, *invited paper*.
106. Hyeokjin Kim; Hua Chen; Maksimovic, D.; Erickson, R., "Design of a high efficiency 30 kW boost composite converter," in Energy Conversion Congress and Exposition (ECCE), 2015 IEEE , vol., no., pp.4243-4250, 20-24 Sept. 2015
107. Fan Zhang; Rehman, M.M.U.; Zane, R.; Maksimovic, D., "Improved steady-state model of the dual-active-bridge converter," in Energy Conversion Congress and Exposition (ECCE), 2015 IEEE , vol., no., pp.630-636, 20-24 Sept. 2015
108. Hoke, A.; Muljadi, E.; Maksimovic, D., "Real-time photovoltaic plant maximum power point estimation for use in grid frequency stabilization," in Control and Modeling for Power Electronics (COMPEL), 2015 IEEE 16th Workshop on , vol., no., pp.1-7, 12-15 July 2015
109. Sepahvand, A.; Yuanzhe Zhang; Maksimovic, D., "100 MHz isolated DC-DC resonant converter using spiral planar PCB transformer," in Control and

Modeling for Power Electronics (COMPEL), 2015 IEEE 16th Workshop on , vol., no., pp.1-8, 12-15 July 2015

110. Rehman, M.M.U.; Fan Zhang; Evzelman, M.; Zane, R.; Maksimovic, D., "Control of a series-input, parallel-output cell balancing system for electric vehicle battery packs," in Control and Modeling for Power Electronics (COMPEL), 2015 IEEE 16th Workshop on , vol., no., pp.1-7, 12-15 July 2015

111. Fan Zhang; Muneeb Ur Rehman, M.; Hongjie Wang; Levron, Y.; Plett, G.; Zane, R.; Maksimovic, D., "State-of-charge estimation based on microcontroller-implemented sigma-point Kalman filter in a modular cell balancing system for Lithium-Ion battery packs," in Control and Modeling for Power Electronics (COMPEL), 2015 IEEE 16th Workshop on , vol., no., pp.1-7, 12-15 July 2015

112. Fenglong Lu; Beomseok Choi; Maksimovic, D., "Autonomous control of series-connected low voltage photovoltaic microinverters," in Control and Modeling for Power Electronics (COMPEL), 2015 IEEE 16th Workshop on , vol., no., pp.1-6, 12-15 July 2015

113. Schultheis, F.; Maksimovic, D., "Modeling and control of a step-down composite DC-DC converter," in Control and Modeling for Power Electronics (COMPEL), 2015 IEEE 16th Workshop on , vol., no., pp.1-6, 12-15 July 2015

114. Sepahvand, A.; Kumar, A.; Afridi, K.; Maksimovic, D., "High power transfer density and high efficiency 100 MHz capacitive wireless power transfer system," in Control and Modeling for Power Electronics (COMPEL), 2015 IEEE 16th Workshop on , vol., no., pp.1-4, 12-15 July 2015

115. Doubleday, K.; Deline, C.; Olalla, C.; Maksimovic, D., "Performance of differential power-processing submodule DC-DC converters in recovering inter-row shading losses," in Photovoltaic Specialist Conference (PVSC), 2015 IEEE 42nd , vol., no., pp.1-5, 14-19 June 2015

116. Ramos, I.; Ruiz, M.N.; Garcia, J.A.; Maksimovic, D.; Popovic, Z., "A planar 75% efficient GaN 1.2-GHz DC-DC converter with self-synchronous rectifier," in Microwave Symposium (IMS), 2015 IEEE MTT-S International , vol., no., pp.1-4, 17-22 May 2015

117. Jensen, S.; Maksimovic, D.; Friedrichs, D.; Gilbert, J., "Fast tracking electrosurgical generator using GaN switches," in Applied Power Electronics Conference and Exposition (APEC), 2015 IEEE , vol., no., pp.1404-1408, 15-19 March 2015

118. Brissette, A.; Hoke, A.; Maksimovic, D., "A constant duty cycle control, single-phase inverter design for distributed static series compensators," in Applied Power Electronics Conference and Exposition (APEC), 2015 IEEE , vol., no., pp.1787-1794, 15-19 March 2015

119. Yuanzhe Zhang; Rodriguez, M.; Maksimovic, D., "Output filter design in high-efficiency wide-bandwidth multi-phase buck envelope amplifiers," in Applied Power Electronics Conference and Exposition (APEC), 2015 IEEE , vol., no., pp.2026-2032, 15-19 March 2015

120. Sepahvand, A.; Scandolat, L.; Yuanzhe Zhang; Maksimovic, D., "Voltage regulation and efficiency optimization in a 100 MHz series resonant DC-DC converter," in Applied Power Electronics Conference and Exposition (APEC), 2015 IEEE , vol., no., pp.2097-2103, 15-19 March 2015

121. Olalla, C.; Deline, C.; Maksimovic, D., "Modeling and simulation of conventionally wired photovoltaic systems based on differential power processing SubMIC-enhanced PV modules," Control and Modeling for Power Electronics (COMPEL), 2014 IEEE 15th Workshop on , vol., no., pp.1,9, 22-25 June 2014

122. Beomseok Choi; Clement, D.; Maksimovic, D., "A CMOS controller for submodule integrated converters in photovoltaic systems," Control and Modeling for Power Electronics (COMPEL), 2014 IEEE 15th Workshop on , vol., no., pp.1,6, 22-25 June 2014

123. Yuanzhe Zhang; Rodriguez, M.; Maksimovic, D., "High-frequency integrated gate drivers for half-bridge GaN power stage," Control and Modeling for Power Electronics (COMPEL), 2014 IEEE 15th Workshop on , vol., no., pp.1,9, 22-25 June 2014

124. Ur Rehman, M.M.; Evzelman, M.; Hathaway, K.; Zane, R.; Plett, G.L.; Smith, K.; Wood, E.; Maksimovic, D., "Modular approach for continuous cell-level balancing to improve performance of large battery packs," Energy Conversion Congress and Exposition (ECCE), 2014 IEEE , vol., no., pp.4327,4334, 14-18 Sept. 2014

125. Thummala, P.; Zhe Zhang; Andersen, M.A.E.; Maksimovic, D., "Digital control of a high-voltage (2.5 kV) bidirectional DC-DC converter for driving a dielectric electro active polymer (DEAP) based capacitive actuator," Energy Conversion Congress and Exposition (ECCE), 2014 IEEE , vol., no., pp.3435,3442, 14-18 Sept. 2014

126. Challa, S.R.; Maksimovic, D.; Kastha, D.; Patra, A., "Monolithic implementation of phase shifted switched capacitor step-down DC-DC converter for portable power applications," Control and Modeling for Power Electronics (COMPEL), 2014 IEEE 15th Workshop on , vol., no., pp.1,7, 22-25 June 2014

127. Jones, D.C.; Maksimovic, D., "Second order sliding mode control of a buck converter with output capacitor ESR and ESL," Control and Modeling for Power Electronics (COMPEL), 2014 IEEE 15th Workshop on , vol., no., pp.1,10, 22-25 June 2014

128. Costinett, D.; Zane, R.; Maksimovic, D., "Discrete time modeling of output disturbances in the dual active bridge converter," Applied Power Electronics Conference and Exposition (APEC), 2014 Twenty-Ninth Annual IEEE , vol., no., pp.1171,1177, 16-20 March 2014

129. Azcondo, F.J.; Zane, R.A.; Maksimovic, D.; Costinett, D., "A framework to share courses among universities: The case of a course on power electronics for electric vehicles," Tecnologias Aplicadas a la Ensenanza de la Electronica (Technologies

Applied to Electronics Teaching) (TAEE), 2014 XI , vol., no., pp.1,8, 11-13 June 2014

130. Leyva, R.; Maksimovic, D.; Rui Ling, "Second-order sliding-mode controller for higher-order DC-DC converters," Control and Modeling for Power Electronics (COMPEL), 2014 IEEE 15th Workshop on , vol., no., pp.1,7, 22-25 June 2014

131. Costinett, D.; Hathaway, K.; Rehman, M.U.; Evzelman, M.; Zane, R.; Levron, Y.; Maksimovic, D., "Active balancing system for electric vehicles with incorporated low voltage bus," Applied Power Electronics Conference and Exposition (APEC), 2014 Twenty-Ninth Annual IEEE , vol., no., pp.3230,3236, 16-20 March 2014

132. Yuanzhe Zhang; Rodriguez, M.; Maksimovic, D., "100 MHz, 20 V, 90% efficient synchronous buck converter with integrated gate driver," Energy Conversion Congress and Exposition (ECCE), 2014 IEEE , vol., no., pp.3664,3671, 14-18 Sept. 2014

133. Ranzani, L.; Ramos, I.; Popovic, Z.; Maksimovic, D., "Microfabricated transmission-line transformers with DC isolation," Radio Science Meeting (USNC-URSI NRSM), 2014 United States National Committee of URSI National , vol., no., pp.1,1, 8-11 Jan. 2014

134. Hua Chen; Sabi, K.; Hyeokjin Kim; Harada, T.; Erickson, R.; Maksimovic, D., "A 98.7% efficient composite converter architecture with application-tailored efficiency characteristic," Energy Conversion Congress and Exposition (ECCE), 2014 IEEE , vol., no., pp.5774,5781, 14-18 Sept. 2014

135. C. Olalla, D. Clement, Beom Seok Choi, D. Maksimovic, “A branch and bound algorithm for high-granularity PV simulations with power limited SubMICs,” in Proc. *IEEE Workshop on Control and Modeling for Power Electronics* (COMPEL), pp.6, 23-26 June 2013.

136. Costinett, D.; Maksimovic, D.; Zane, R.; Rodriguez, A.; Vazquez, A., “Comparison of reverse recovery behavior of silicon and wide bandgap diodes in high frequency power converters,” in Proc. *IEEE Workshop on Control and Modeling for Power Electronics* (COMPEL), pp.8, 23-26 June 2013.

137. Dongxue Li; Rodriguez, M.; Zai, A.; Sardin, D.; Maksimovic, D.; Popovic, Z., “RFPA supply modulator using wide-bandwidth linear amplifier with a GaN HEMT output stage,” in Proc. *IEEE Workshop on Control and Modeling for Power Electronics* (COMPEL), pp.6, 23-26 June 2013.

138. Hien Nguyen; Maksimovic, D.; Zane, R., “On/off control of a modular DC-DC converter based on active-clamp LLC modules,” in Proc. *IEEE Workshop on Control and Modeling for Power Electronics* (COMPEL), pp.6, 23-26 June 2013.

139. Beomseok Choi; Maksimovic, D., “Loss modeling and optimization for monolithic implementation of the three-level buck converter,” in Proc. *IEEE Energy Conversion Congress and Exposition* (ECCE), pp. 5574-5579, 15-19 Sept. 2013.

140. Rui Ling; Maksimovic, D.; Leyva, R., "State-machine realization of second-order sliding-mode control for synchronous buck DC-DC converters," in Proc. *IEEE Energy Conversion Congress and Exposition* (ECCE), pp. 125-132, 15-19 Sept. 2013.

141. Levron, Y.; Clement, D.; Maksimovic, D.; Olalla, C., "Nonlinear control design for the photovoltaic isolated-port architecture with submodule integrated converters," in Proc. *IEEE Energy Conversion Congress and Exposition* (ECCE), pp. 2398-2405, 15-19 Sept. 2013.

142. Yuanzhe Zhang; Rodriguez, M.; Maksimovic, D., "High frequency synchronous Buck converter using GaN-on-SiC HEMTs," in Proc. *IEEE Energy Conversion Congress and Exposition* (ECCE), pp. 488-494, 15-19 Sept. 2013.

143. Hoke, A.; Brissette, A.; Maksimovic, D.; Kelly, D.; Pratt, A.; Boundy, D., "Maximizing lithium ion vehicle battery life through optimized partial charging," in Proc. *IEEE PES Innovative Smart Grid Technologies* (ISGT), pp.5, 24-27 Feb. 2013.

144. Olalla, C.; Clement, D.; Maksimovic, D.; Deline, C., "A cell-level photovoltaic model for high-granularity simulations," in Proc. IEEE 15th *European Conference on Power Electronics and Applications* (EPE), 2-6 Sept. 2013, pp.10

145. Hoke, A.; Maksimovic, D., "Active power control of photovoltaic power systems," in Proc. IEEE *Conference on Technologies for Sustainability* (SusTech), pp.8, 1-2 Aug. 2013.

146. Brissette, A.; Hoke, A.; Traube, J.; Fenglong Lu; Maksimovic, D., "Study on the effect of solar irradiance intermittency mitigation on electric vehicle battery lifetime," in Proc. IEEE *Conference on Technologies for Sustainability* (SusTech), pp.262-267, 1-2 Aug. 2013

147. Hoke, A.; Brissette, A.; Chandler, S.; Pratt, A.; Maksimovic, D., "Look-ahead economic dispatch of microgrids with energy storage, using linear programming," in Proc. IEEE *Conference on Technologies for Sustainability* (SusTech) pp.154-161, 1-2 Aug. 2013.

148. Costinett, D.; Seltzer, D.; Maksimovic, D.; Zane, R., "Inherent volt-second balancing of magnetic devices in zero-voltage switched power converters," in Proc. *IEEE Appl. Power Electron. Conf. Expo.* (APEC), pp.9-15, 17-21 March 2013.

149. Nguyen, Hien; Maksimovic, Dragan; Zane, Regan, "Active clamp LLC resonant converter for point-of-load applications," in Proc. *IEEE Appl. Power Electron. Conf. Expo.* (APEC), pp.1406-1412, 17-21 March 2013.

150. F. Lu, L. Shang, D. Maksimovic, Q. Lv, "A large-scale study of PHEV charging," in Proc. Power System Technology (POWERCON) 2012, pp.1-6.

151. J. Traube, F. Lu, D. Maksimovic, "Photovoltaic power system with integrated electric vehicle DC charger and enhanced grid support," pp.7, in Proc. IEEE EPE-PEMC ECCE Europe 2012. Best Student Paper Award.

152. D. Costinett, M. Rodriguez, D. Maksimovic, "Simple digital pulse width modulator with 60 picoseconds resolution using a low-cost FPGA," pp.7, in Proc. IEEE EPE-PEMC ECCE Europe 2012.

153. M. Rodriguez, M. Roberg, R. Pack, P. Fernandez, E. Alarcon, Z. Popovic D. Maksimovic, "Resonant Pulse-Shaping Power Supply for Radar Transmitters", pp.7, in Proc. IEEE EPE-PEMC ECCE Europe 2012.

154. L. Marco, A. Poveda, F. Guinjoan, D. Maksimovic, E. Alarcon, "A design-oriented optimization framework for envelope trackers: application to a Sliding-mode Control Buck Converter for EDGE," pp.7, in Proc. IEEE EPE-PEMC ECCE Europe 2012.

155. D. Costinett, R. Zane, D. Maksimovic, "Circuit-oriented modeling of nonlinear device capacitances in switched mode power converters," in Proc. *IEEE Workshop on Control and Modeling for Power Electronics* (COMPEL), pp.8, 10-13 June 2012.

156. C. Olalla, M. Rodriguez, D. Clement, J. Wang, D. Maksimovic, "Architecture and control of PV modules with submodule integrated converters," in Proc. *IEEE Workshop on Control and Modeling for Power Electronics* (COMPEL), pp.6, 10-13 June 2012.

157. M. Rodriguez, G. Stahl, D. Costinett, D. Maksimovic, "Simulation and characterization of GaN HEMT in high-frequency switched-mode power converters," in Proc. *IEEE Workshop on Control and Modeling for Power Electronics* (COMPEL), pp.6, 10-13 June 2012.

158. D. Costinett, R. Zane, D. Maksimovic, "Discrete-time small-signal modeling of a 1 MHz efficiency-optimized dual active bridge converter with varying load," in Proc. *IEEE Workshop on Control and Modeling for Power Electronics* (COMPEL), pp.7, 10-13 June 2012. 3rd Best Paper Award.

159. D. Seltzer, D. Bloomquist, R. Zane, D. Maksimovic, "Gain-scheduled control of multi angle phase shift modulated dual active bridge series resonant DC/DC converters," in Proc. *IEEE Workshop on Control and Modeling for Power Electronics* (COMPEL), pp.7, 10-13 June 2012.

160. M. Rodriguez, L. Corradini, C. Olalla, D. Maksimovic, "Average current-mode control of Boost converters with bidirectional power transfer capabilities," in Proc. *IEEE Workshop on Control and Modeling for Power Electronics* (COMPEL), pp.7, 10-13 June 2012.

161. J. Mossoba, M. Kromer, P. Faill, S. Katz, B. Borowy, S. Nichols, L. Casey, D. Maksimovic, J. Traube, F. Lu, "Analysis of solar irradiance intermittency mitigation using constant DC voltage PV and EV battery storage," in Proc. *IEEE Transportation Electrification Conference and Expo* (ITEC), pp.1-6, 18-20 June 2012

162. D. Costinett, R. Zane, D. Maksimovic, "Automatic voltage and dead time control for efficiency optimization in a Dual Active Bridge converter," in Proc. *IEEE Appl. Power Electron. Conf. Expo.* (APEC), pp.1104-1111, 5-9 Feb. 2012

163. M. Norris, D. Maksimovic, "10 MHz large signal bandwidth, 95% efficient power supply for 3G-4G cell phone base stations," in Proc. *IEEE Appl. Power Electron. Conf. Expo.* (APEC), pp.7-13, 5-9 Feb. 2012

164. J. Traube, F. Lu, D. Maksimovic, "Electric vehicle DC charger integrated within a photovoltaic power system," in Proc. *IEEE Appl. Power Electron. Conf. Expo.* (APEC), pp.352-358, 5-9 Feb. 2012

165. S. H. Kang, D. Maksimovic, "Simplified sensing and A/D conversion for digitally controlled flyback DC-DC converters with on-line efficiency optimization," in Proc. *IEEE Appl. Power Electron. Conf. Expo.* (APEC), pp.1075-1082, 5-9 Feb. 2012

166. G. Stahl, M. Rodriguez, D. Maksimovic, "A high-efficiency bidirectional buck-boost DC-DC converter," in Proc. *IEEE Appl. Power Electron. Conf. Expo.* (APEC), pp.1362-1367, 5-9 Feb. 2012

167. A. Brissette, A. Hoke, D. Maksimovic, A. Pratt, "A microgrid modeling and simulation platform for system evaluation on a range of time scales," in Proc. *IEEE Energy Conv. Congress and Expo.* (ECCE), pp.968-976, 17-22 Sept. 2011.

168. D. Seltzer, L. Corradini, D. Bloomquist, R. Zane, D. Maksimovic, "Small signal phasor modeling of dual active bridge series resonant DC/DC converters with multi-angle phase shift modulation," in Proc. *IEEE Energy Conv. Congress and Expo.* (ECCE), pp.2757-2764, 17-22 Sept. 2011.

169. L. Corradini, D. Seltzer, D. Bloomquist, R. Zane, D. Maksimovic, B. Jacobson, "Zero voltage switching technique for bi-directional DC/DC converters," in Proc. *IEEE Energy Conv. Congress and Expo.* (ECCE), pp.2215-2222, 17-22 Sept. 2011.

170. S. Jensen, L. Corradini, M. Rodriguez, D. Maksimovic, "Modeling and digital control of LCLC resonant inverter with varying load," in Proc. *IEEE Energy Conv. Congress and Expo.* (ECCE), pp.3823-3829, 17-22 Sept. 2011

171. A. Hoke, A. Brissette, D. Maksimovic, A. Pratt, K. Smith, "Electric vehicle charge optimization including effects of lithium-ion battery degradation," in Proc. *IEEE Vehicle Power and Prop. Conf.*, (VPPC), Sept. 2011.

172. A. Bjeletic, L. Corradini, D. Maksimovic, R. Zane, "Specifications-driven design space boundaries for point-of-load converters," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, pp.1166-1173, 6-11 March 2011

173. D. Costinett, Hien Nguyen, R. Zane, D. Maksimovic, "GaN-FET based dual active bridge DC-DC converter," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, pp.1425-1432, 6-11 March 2011

174. Sang Hee Kang, D. Maksimovic, I. Cohen, "On-line efficiency optimization in flyback dc-dc converters over wide ranges of operating conditions," in Proc. *IEEE Appl. Power Electron. Conf. Expo.* (APEC), pp.1417-1424, 6-11 March 2011

175. J. Marchán, E. Barba, L. Marco, D. Maksimovic, E. Alarcón, "Circuit/system design space characterization of EER-based transmitter for 802.11a WLAN

standard," in Proc. *IEEE Int. Symp on Circ. and Sys.* (ISCAS), pp.881-884, May 30 2010-June 2 2010.

176. M. Rodríguez, J. Sebastián, D. Maksimovic, "Average inductor current sensor for digitally-controlled switched-mode power supplies," in Proc. *IEEE Energy Conv. Congress and Expo.* (ECCE), pp.780-787, 12-16 Sept. 2010

177. Sungwoo Moon, L. Corradini, D. Maksimovic, "Accurate mode boundary detection in digitally controlled boost power factor correction rectifiers," in Proc. *IEEE Energy Conv. Congress and Expo.* (ECCE), pp.1212-1217, 12-16 Sept. 2010

178. Sang Hee Kang, Hien Nguyen, D. Maksimovic, I. Cohen, "Efficiency characterization and optimization in flyback DC-DC converters," in Proc. *IEEE Energy Conv. Congress and Expo.* (ECCE), pp.527-534, 12-16 Sept. 2010

179. R. Paul, L. Corradini, D, Maksimovic, "Adaptive non-inverting buck-boost IC with on-chip sigma-delta ADC for portable applications," in Proc. *IEEE Workshop on Control and Modeling for Power Elec.* (COMPEL), 28-30 June 2010

180. Sungwoo Moon, L. Corradini, D. Maksimovic, "Auto-tuning of digitally controlled boost power factor correction rectifiers operating in continuous conduction mode," in Proc. *IEEE Workshop on Control and Modeling for Power Elec.* (COMPEL), pp.8, 28-30 June 2010.

181. M. Rodríguez, P. F. Miaja, J. Sebastián, D. Maksimovic, "Mismatch-error noise-shaping based digital multiphase modulator," in Proc. *IEEE Workshop on Control and Modeling for Power Elec.* (COMPEL), pp.8, 28-30 June 2010

182. F.Z. Chen, D. Maksimovic, "Digital control for efficiency improvements in interleaved boost PFC rectifiers," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, Palm Springs, CA, Feb. 2010.

183. L. Corradini, D. Maksimovic, "A digital pulse-width modulator for phase-shift operation of full-bridge isolated DC-DC converters," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, Palm Springs, CA, Feb. 2010

184. S. M. Ahsanuzzaman, A. Parayendeh, A. Prodic, D. Maksimovic, "Load-interactive steered-inductor DC-DC converter with minimized output filter capacitance," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, Palm Springs, CA, Feb. 2010.

185. K. Li, J. Wu, Y. Jiang, Z. Hassan, Q. Lv, L. Shang, D. Maksimovic, "Large-scale battery system modeling and analysis for emerging electric-drive vehicles," in Proc. 16th *ACM/IEEE Int. Symp. on Low Power El. and Design*, 2010.

186. X. Zhang, L. Corradini, D. Maksimovic, "Digitally controlled distributed multiphase DC-DC converters," in Proc. *IEEE Energy Conv. Cong. Expo.*, San Jose, CA, Sept. 2009, pp. 36-42.

187. L. Corradini, A. Bjeletic, R. Zane, D. Maksimovic, "Fully digital hysteretic modulator for DC-DC switching converters," in Proc. *IEEE Energy Conv. Cong. Expo.*, San Jose, CA, Sept. 2009, pp. 3312-3319.

188. A. Babazadeh, L. Corradini, D. Maksimovic, "Near time-optimal transient response in DC-DC buck converters taking into account the inductor current limit," in Proc. *IEEE Energy Conv. Cong. Expo.*, San Jose, CA, Sept. 2009, pp. 3328-3335.

189. B. Mather, D. Maksimovic, "Single comparator based A/D converter for output voltage sensing in power factor correction rectifiers," in Proc. *IEEE Energy Conv. Cong. Expo.*, San Jose, CA, Sept. 2009, pp. 1331-1338.

190. J. Morroni, R. Zane, D. Maksimovic, "Robust adaptive tuning of digitally controlled switched-mode power supplies," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, Washington, DC, Feb. 2009, pp. 240-246.

191. B. A. Mather, D. Maksimovic and I. Cohen, "Input power measurement techniques for single-phase digitally controlled PFC rectifiers," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, Washington, DC, Feb. 2009, pp. 767-773.

192. F. Chen, D. Maksimović, "Digital control for improved efficiency and reduced harmonic distortion over wide load range in boost PFC rectifiers," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, Washington, DC, Feb. 2009, pp. 760-766.

193. R. Paul, L. Corradini and D. Maksimović, "Σ-Δ modulated digitally controlled non-inverting buck-boost converter for WCDMA RF power amplifiers," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, Washington, DC, Feb. 2009, pp. 533-539.

194. X. Zhang, L. Corradini, D. Maksimović, "Sensorless current sharing in digitally controlled two-phase buck DC-DC converters," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, Washington, DC, Feb. 2009, pp. 70-76.

195. J. Hoversten, M. Norris, Z. Popovic, D. Maksimovic, Optimal-PAE polar split for efficient and linear drain modulated power amplifiers," In Proc. *IEEE Power Amplifiers for Wireless Communications Symposium*, San Diego, CA, Jan. 2009.

196. K. Nakamura, T. Naka, Y. Kamata, T. Taguchi, T. Shimizu, Y. Ikeda, A. Nakagawa, D. Maksimovic, "10A 12V 1 chip digitally-controlled DC/DC converter IC with high resolution and high frequency DPWM," in Proc. *IEEE Power Elect. and Motion Control Conf.*, EPE-PEMC 2008, Poznan, Poland, pp. 498 -503

197. Norris, M.; Platon, L.M.; Alarcon, E.; Maksimovic, D.;, Quantization noise shaping in digital PWM converters, Power Electronics Specialists Conference, 2008. PESC 2008. IEEE 15-19 June 2008 Page(s):127 – 133

198. Mather, B.A.; Maksimovic, D., Quantization effects and limit cycling in digitally controlled single-phase PFC rectifiers, Power Electronics Specialists Conference, 2008. PESC 2008. IEEE 15-19 June 2008 Page(s):1297 – 1303

199. Paul, R.; Maksimovic, D., Analysis of PWM nonlinearity in non-inverting buck-boost power converters, Power Electronics Specialists Conference, 2008. PESC 2008. IEEE, 15-19 June 2008 Page(s):3741 – 3747

200. Babazadeh, A.; Maksimovic, D., Hybrid digital adaptive control for synchronous buck DC-DC converters, Power Electronics Specialists Conference, 2008. PESC 2008. IEEE, 15-19 June 2008 Page(s):1263 – 1269

201. Meola, M.; Xu Zhang; Maksimovic, D., Digital PFM controller with adaptive on time based on load current estimation, Power Electronics Specialists Conference, 2008. PESC 2008. IEEE 15-19 June 2008 Page(s):3695 – 3700

202. J. Morroni, R. Zane, D. Maksimovic, "Adaptive tuning of digitally controlled switched mode power supplies based on desired phase margin," in Proc. IEEE Power Electron. Specialists Conf., Athens, Greece, June 2008, pp. 1250 – 1256.

203. J. Morroni, R. Zane, D. Maksimovic, "An online phase margin monitor for digitally controlled switched-mode power supplies," in Proc. IEEE Power Electron. Specialists Conf., Athens, Greece, June 2008, pp. 859 – 865.

204. Paul, R.; Maksimovic, D.; Smooth transition and ripple reduction in 4-switch non-inverting buck-boost power converter for WCDMA RF power amplifier, Circuits and Systems, 2008. ISCAS 2008. IEEE International Symposium on 18-21 May 2008 Page(s):3266 – 3269

205. X. Zhang, D. Maksimovic, "Digital PWM/PFM controller with input voltage feed-forward for synchronous buck converters," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, Washington, DC, Feb. 2008, pp. 523-528.

206. Lopez, N.D.; Xufeng Jiang; Maksimovic, D.; Popovic, Z., A high-efficiency linear polar transmitter for EDGE, Radio and Wireless Symposium, 2008 IEEE 22-24 Jan. 2008 Page(s):199 - 202

207. V. Yousefzadeh, A. Babazadeh, B. Ramachandran, E. Alarcon, L. Pao, D. Maksimovic, "Proximate time-optimal digital control for DC-DC converters," in Proc. *IEEE Power Electron. Specialists Conf.*, Orlando, FL, Jun. 2007, pp. 124 – 130.

208. L. Corradini, P. Mattavelli, D. Maksimovic, "Robust relay-feedback based autotuning for DC-DC converters," in Proc. *IEEE Power Electron. Specialists Conf.*, Orlando, FL, Jun. 2007, pp. 2196 – 2202.

209. J. Morroni, A. Dolgov, R. Zane, D. Maksimović, "Online health monitoring in digitally controlled power converters," in Proc. *IEEE Power Electron. Specialists Conf.*, Orlando, FL, Jun. 2007, pp. 112 – 118.

210. N. Wang, N. Lopez, V. Yousefzadeh, J. Hoversten, D. Maksimovic, Z. Popovic, "Linearity of X-band class-E power amplifiers in a digital polar transmitter," in Proc. *IEEE/MTT-S Int. Microw. Symp*. June 2007, pp.1083-1086.

211. V. Yousefzadeh, M. Shirazi, D. Maksimovic, "Minimum phase response in digitally controlled boost and flyback converters," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, Feb. 2007, pp.865-870.

212. B. Mather, B. Ramachandran, D. Maksimovic, "A digital PFC controller without input voltage sensing," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, Anaheim, CA, Feb. 2007, pp.198-204.

213. M. Shirazi, L. Corradini, R. Zane, P. Mattavelli, D. Maksimović, "Autotuning techniques for digitally controlled point-of-load converters with wide range of capacitive loads," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, Anaheim, CA, Feb. 2007, pp.14-20.

214. M. Ilic, D. Maksimovic, "Phase-shifted full bridge DC-DC converter with energy recovery clamp and reduced circulating current," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, Anaheim, CA, Feb. 2007, pp.969-975.

215. D. Maksimovic, R. Zane, "Small-signal discrete-time modeling of digitally controlled DC-DC converters," in Proc. *IEEE Workshop Comput. Power Electron.* (*COMPEL*), Troy, NY, 16-19 July 2006, pp.231-235.

216. A. Dolgov, B. Miao, R. Zane, D. Maksimovic, "GUI-based laboratory architecture for teaching and research in digital control of SMPS," in Proc. *IEEE Workshop Comput. Power Electron.* (*COMPEL*), Troy, NY, 16-19 July 2006, pp.236-239.

217. Vahid Yousefzadeh, Toru Takayama, Dragan Maksimović, Hybrid DPWM with Digital Delay-Locked Loop, in Proc. *IEEE Workshop Comput. Power Electron.* (*COMPEL*), Troy, NY, 16-19 July 2006.

218. T.Takayama, D.Maksimovic, Digitally controlled 10 MHz monolithic buck converter, in Proc. *IEEE Workshop Comput. Power Electron.* (*COMPEL*), 16-19 July 2006, pp.154-158.

219. T. Carosa, R. Zane, D. Maksimovic, "Implementation of a 16 phase digital modulator in a 0.35um process," in Proc. *IEEE Workshop Comput. Power Electron.* (*COMPEL*), Troy, NY, 16-19 July 2006, pp.159-165.

220. X. Zhang, Y. Zhang, R. Zane, D. Maksimovic, "Design and implementation of a wide-bandwidth digitally controlled 16-phase converter," in Proc. *IEEE Workshop Comput. Power Electron.* (*COMPEL*), Troy, NY, 16-19 July 2006, pp.106-111.

221. H.Peng, D.Maksimovic, "Overload protection for digitally controlled DC-DC converters," in Proc. *IEEE Power Electron. Specialists Conf.*, 18-22 June 2006, pp.6.

222. Y.Zhang, X.Zhang, R.Zane, D.Maksimovic, "Wide-bandwidth digital multi-phase controller," in Proc. *IEEE Power Electron. Specialists Conf.*, 18-22 June 2006, pp. 7.

223. A.Carosa, R.Zane, D.Maksimovic, "Digital multiphase modulator – a power D/A perspective," in Proc. *IEEE Power Electron. Specialists Conf.*, 18-22 June 2006, pp.6.

224. M.Ilic, D.Maksimovic, "Digital average current-mode controller for DC-DC converters in physical vapor deposition applications," in Proc. *IEEE Power Electron. Specialists Conf.*, 18-22 June 2006, pp. 7.

225. H.Hu, D.Maksimovic, "Nonlinear control for improved dynamic response of digitally-controlled DC-DC converters," in Proc. *IEEE Power Electron. Specialists Conf.*, 18-22 June 2006, pp. 7.

226. T.Takayama, D.Maksimovic, "A power stage optimization method for monolithic DC-DC converters," in Proc. *IEEE Power Electron. Specialists Conf.*, 18-22 June 2006, pp.7.

227. V.Yousefzadeh, E.Alarcon, D.Maksimovic, "Band separation and efficiency optiimization in linear-assisted switching power amplifeirs," in Proc. *IEEE Power Electron. Specialists Conf.*, 18-22 June 2006, pp. 7.

228. X.Jiang, N.Lopez, D.Maksimovic, "A switched mode envelope tracker for polar EDGE transmitter," in Proc. *IEEE Power Electron. Specialists Conf.*, 18-22 June 2006, pp. 7.

229. Y.Zhang, R.Zane, D.Maksimovic, "System modeling and digital control in modular masterless multiphase DC-DC converters," in Proc. *IEEE Power Electron. Specialists Conf.*, 18-22 June 2006, pp.7.

230. N.D. Lopez, X. Jiang, D. Maksimovic, Z. Popovic, "Class-E Power Amplifier in a Polar EDGE Transmitter," in Proc. *International Microwave Symposium Digest*, June 2006, pp.785-788.

231. L. Marco, A. Poveda, E. Alarcon, D. Maksimovic, "Bandwidth limits in PWM switching amplifiers," *IEEE ISCAS* 2006, 21-24 May 2006, pp. 4.

232. L. Marco, E. Alarcon, D. Maksimovic, "Effects of switching power converter nonidealities in Envelope Elimination and Restoration technique," *IEEE ISCAS* 2006, 21-24 May 2006, pp. 4.

233. M. Ilic, B. Hesterman, D. Maksimovic, "Interleaved zero current transition three-level buck converter," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, 19-23 March 2006, pp.7.

234. E. Alarcon, D. Maksimovic, "Powering ICs: Trends in on-chip switching power regulators," invited paper, *National Power Electronics Conference*, IIT, Dec. 2005.

235. D. Maksimovic, R. Zane, R. Erickson, "Advances in practical high-performance digital control," *Digital Power Forum*, September 2005.

236. B. Miao, R. Zane, D. Maksimovic, "Practical identification of DC-DC converter dynamic responses and automated digital controller design," *Digital Power Forum*, September 2005.

237. V. Yousefzadeh, E. Alarcon, D. Maksimovic, "Efficiency optimization in linear-assisted switching power converters for envelope tracking in RF power amplifiers, in Proc. *IEEE International Symposium on Circuits and Systems*, ISCAS 2005, vol. 2, pp. 1302-1305.

238. Y. Li, D. Maksimovic, "High efficiency wide bandwidth power supplies for GSM and EDGE RF power amplifiers," in Proc. *IEEE International Symposium on Circuits and Systems*, ISCAS 2005, Vol. 2, pp. 1314-1317.

239. M. Ilic, D. Maksimovic, "Averaged switch modeling of the interleaved zero current transition buck converter," in Proc. *IEEE Power Electron. Specialists Conf.,* 2005.

240. B. Miao, R. Zane, D. Maksimovic, "Automated digital controller design for switching converters," in Proc. *IEEE Power Electron. Specialists Conf.,* 2005.

241. F. J. Azcondo, Ch. Brañas, R. Casanueva, D. Maksimovic, "Approaches to modeling converters with current programmed control," in Proc. *IEEE Power Electron. Specialists Conf.,* 2005.

242. Y. Zhang, R. Zane, D. Maksimovic, "Current sharing in digitally controlled masterless multiphase DC-DC converters," in Proc. *IEEE Power Electron. Specialists Conf.,* 2005.

243. B. Miao, R. Zane, D. Maksimovic, "Active identification and automated digital controller design in DC-DC power converters," in Proc. *Space Power Workshop*, April 2005.

244. V. Yousefzadeh, E. Alarcon, D. Maksimovic, "Three-level buck converter for envelope tracking in RF power amplifiers," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, vol.3, 6-10 March 2005, pp.1588-1594.

245. V. Yousefzadeh, D. Maksimovic, "Sensorless optimization of dead times in DC-DC converters with synchronous rectifiers," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, vol.2, 6-10 March 2005, pp. 911-917.

246. B. Miao, R. Zane, D. Maksimovic, "Detection of instability and adaptive compensation of digitally controlled switched-mode power supplies," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, vol.2, 6-10 March 2005, pp. 1265-1271.

247. B. Miao, R. Zane, D. Maksimovic, "Practical on-line identification of power converter dynamic responses," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, Vol. 1, 6-10 March 2005, pp. 57-62.

248. H. Peng, D. Maksimovic, "Digital current-mode controller for DC-DC converters," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, vol.2, 6-10 March 2005, pp. 899-905.

249. M. Ilic, D. Maksimovic, "Interleaved zero current transition buck converter," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, Vol. 2, 6-10 March 2005, pp. 1265-1271.

250. P. Athalye, D. Maksimovic, R. Erickson, "Improving efficiency of the active-clamped SEPIC rectifier at high line frequencies," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, Vol. 2, 6-10 March 2005, pp. 1152-1157.

251. P. Athalye, D. Maksimovic, R. Erickson, "DSP implementation of a single-cycle predictive current controller in a boost PFC rectifier," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, vol.2, 6-10 March 2005, pp. 837-842.

252. B. Miao, R. Zane, D. Maksimovic, "Active system identification of a DC-DC converter using digital control," in Proc. *American Institute of Aeronautics and Astronautics (AIAA) International Energy Conversion Engineering Conference* (IECEC), Aug. 2004.

253. A. Syed, E. Ahmed, E. Alarcon, D. Maksimovic, "Digital pulse-width modulator architectures," in Proc. *IEEE Power Electron. Specialists Conf.,* 2004.

254. A. Prodic, D. Maksimovic, "Stability of the fast voltage loop in power factor correctors," in Proc. *IEEE Power Electron. Specialists Conf.,* 2004.

255. H. Peng, A. Prodic, E. Alarcon, D. Maksimovic, "Modeling of quantization effects in digitally controlled dc-dc converters," in Proc. *IEEE Power Electron. Specialists Conf.,* 2004.

256. D. Maksimovic, R. Zane, R. Erickson, "Impact of digital control in power electronics," invited plenary-session paper, in Proc. 16th *IEEE International Symposium on Power Semiconductor Devices & ICs*, ISPSD 2004.

257. Y. Zhang, A. Prodic, R. Zane, D. Maksimovic, "On-line calibration of lossless current sensing," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, February 2004.

258. A. Syed, E. Ahmed, D. Maksimovic, "Digital PWM controller with feed-forward compensation," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, February 2004.

259. V. Yousefzadeh, N. Wang, D. Maksimovic, Z. Popovic, "Digitally controlled DC-DC converter for RF power amplifier," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, February 2004.

260. A. Prodic, D. Maksimovic, R. Erickson, "Dead-zone digital controller for improved dynamic response of power factor preregulators," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, February 2003.

261. A. Prodic, D. Maksimovic, R. Erickson, "Digital controller chip set for isolated DC power supplies," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, February 2003.

262. D. Maksimovic, R. Zane, "Scalable digital control for switching power converters," in Proc. *Intel Technology Symposium*, Seattle, August 2002.

263. A. Prodic, J. Chen, D. Maksimovic, R. W. Erickson, "Digitally controlled low-harmonic rectifier having fast dynamic responses," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, Vol.1, March 2002, pp.476-482.

264. B. Patella, A. Prodic, A. Zirger, D. Maksimovic, "High-frequency digital controller IC for DC/DC converters," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, Vol. 1, March 2002, pp. 374-380.

265. A. Prodic, D. Maksimovic, "Design of a digital PID regulator based on look-up tables," in Proc. *IEEE Workshop Comput. Power Electron.* (*COMPEL*), June 2002.

266. A. Prodic, D. Maksimovic, “Mixed-signal simulation of digitally controlled switching converters,” in Proc. *IEEE Workshop Comput. Power Electron.* (*COMPEL*), June 2002.

267. S. Dhar, D. Maksimovic, B. Kranzen, “Closed-loop adaptive voltage scaling controller for standard-cell ASICs,” in Proc. *IEEE Symposium on Low-Power Electronics and Design*, ISLPED'02, August 2002.

268. P. Athalye, R. Erickson, D. Maksimovic, “A High-Performance Front-End for Avionics Applications,” in Proc. *High-Frequency Power Conversion* conference, August 2001.

269. P. Athalye, D. Maksimovic, R. Erickson, “Averaged switch modeling of active-clamped converters,” in Proc. 27th *Annual Conference of the IEEE Industrial Electronics Society*, IECON 2001, Vol. 2, pp. 1078-1083.

270. K. Changtong, R. Erickson, D. Maksimovic, “A comparison of ladder and full-order magnetics models,” in Proc. *IEEE Power Electron. Specialists Conf.*, Vol. 4, 2001, pp. 2067-2071.

271. J. Chen, D. Maksimovic, R. Erickson, “Buck-boost PWM converters having two independently controlled switches,” in Proc. *IEEE Power Electron. Specialists Conf.*, Vol. 2, 2001, pp. 736-741.

272. J. Chen, D. Maksimovic, R. Erickson, “A new low-stress buck-boost converter for universal-input PFC applications,” in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, 2001, pp. 343-349.

273. S. Dhar, D. Maksimovic, “Low power digital filtering using multiple voltage distribution and adaptive voltage scaling,” in Proc. *International Symposium on Low Power Electronics*, 2000.

274. A. Prodic, D. Maksimovic, “Digital PWM controller and current estimator for a low power swithing converter,” in Proc. *IEEE Workshop Comput. Power Electron.* (*COMPEL*), 2000.

275. D. Maksimovic, S. Dhar, “Switched-capacitor DC-DC converters for low-power on-chip applications,” in Proc. *IEEE Power Electron. Specialists Conf.*, June 1999, pp. 54-59.

276. R. Zane, D. Maksimovic, “A mixed-signal ASIC power-factor correction (PFC) controller for high frequency switching rectifiers,” in Proc. *IEEE Power Electron. Specialists Conf.*, June 1999, pp. 117-122.

277. D. Maksimovic, R. Erickson, “Modeling of cross-regulation in multiple-output flyback converters,” in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, 1999, pp. 1066-1072.

278. R. Erickson, D. Maksimovic, “A multiple-winding magnetics model having directly measurable parameters,” in Proc. *IEEE Power Electron. Specialists Conf.*, May 1998, pp. 1472-1478.

279. D. Maksimovic, R. Erickson, C. Griesbach, “Modeling of cross-regulation in converters containing coupled inductors,” in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, 1998, pp. 350-356.

280. B. Arbetter, D. Maksimovic, “DC-DC converter with fast transient response and high efficiency for low-voltage microprocessor loads,” in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, 1998, pp. 156-162.

281. N. Jayaram, D. Maksimovic, “Power factor correctors based on coupled-inductor Sepic and Cuk converters with nonlinear-carrier control,” in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, 1998, pp. 468-474.

282. D. Maksimovic, “Automated small-signal analysis of switching converters using a general-purpose time-domain simulator,” in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, 1998.

283. D. Maksimovic, V. G. Oklobdzija, B. Nikolic, K. W. Current, “Clocked adiabatic logic with integrated single-phase power-clock supply: experimental results,” in Proc. 1997 *International Symposium on Low Power Electronics and Design*, pp. 323-327.

284. D. Maksimovic, “Automated steady-state analysis of switching power converters using a general-purpose simulation tool,” in Proc. *IEEE Power Electron. Specialists Conf.*, 1997, pp.1352-1358.

285. S. Pavljasevic, D. Maksimovic, “Subharmonic oscillations in converters with current-mode programming under large parameter variations,” in Proc. *IEEE Power Electron. Specialists Conf.*, 1997, pp.1323-1329.

286. B. Arbetter, D. Maksimovic, “Control method for low-voltage DC power supplies in battery-powered systems with power management,” in Proc. *IEEE Power Electron. Specialists Conf.*, 1997.

287. P. Pejovic, D. Maksimovic, “PETS - a simulation tool for power electronics,” in Proc. *IEEE Workshop Comput. Power Electron.* (*COMPEL*), August 11-14, 1996, Portland, Oregon, pp.8

288. P. Pejovic, D. Maksimovic, “PETS - a new time-domain simulator for power electronics,” in Proc. 7th *International Power Electronics & Motion Control Conference*, PEMC'96.

289. K. W. Current, V. G. Oklobzija, D. Maksimovic, “Low-energy logic circuit techniques for multiple-valued logic,” in Proc. 26th *International Symposium on Multiple Valued Logic*, 1996.

290. R. Zane, D. Maksimovic, “Modeling of high power factor rectifiers based on switching converters with nonlinear-carrier control,” in Proc. *IEEE Power Electron. Specialists Conf.*, Baveno, Italy, June 23-27, 1996, pp. 1105-1111.

291. B. Arntzen, D. Maksimovic, “Switched-capacitor dc-dc converter with resonant gate drive,” in Proc. *IEEE Power Electron. Specialists Conf.*, Baveno, Italy, June 23-27, 1996, pp. 414-420.

292. R. Zane, D. Maksimovic, "Nonlinear-carrier control for high-power-factor rectifiers based on flyback, Cuk or Sepic converters," in Proc. . *IEEE Appl. Power Electron. Conf. Expo.*, March 3-7, 1996, San Jose, CA, pp. 814-820.

293. C. Oliveira, D. Maksimovic, "Zero-current-transition converters for high-power-factor ac/dc applications," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, San Jose, CA, March 3-7, 1996, pp. 159-165.

294. D. Maksimovic, V. G. Oklobdzija, "Clocked CMOS adiabatic logic with single ac power supply," in Proc. 21st *European Solid-State Circuits Conference*, ESSCIRC'95, 19-21 September 1995, Lille, France.

295. P. Pejovic, D. Maksimovic, "Determination of network state in switching power converters," in Proc. *IEEE Power Electron. Specialists Conf.*, Atlanta, GA, June 18-22, 1995, pp. 816-822.

296. B. Arbetter, D. Maksimovic, "Feed-forward pulse-width modulators for switching power converters," in Proc. *IEEE Power Electron. Specialists Conf.*, Atlanta, GA, June 18-22, 1995, pp. 601-607.

297. D. Maksimovic, V. G. Oklobdzija, "Integrated Power Clock Generators for Low Energy Logic," in Proc. *IEEE Power Electron. Specialists Conf.*, Atlanta, GA, June 18-22, 1995, pp. 61-67.

298. M. S. Makowski, D. Maksimovic, "Performance Limits of Switched-Capacitor DC-DC Converters," in Proc. *IEEE Power Electron. Specialists Conf.*, Atlanta, GA, June 18-22, 1995, pp. 1215-1221.

299. B. Arbetter, R. Erickson, D. Maksimovic, "DC-DC Converter Design for Battery Operated Systems," in Proc. *IEEE Power Electron. Specialists Conf.*, Atlanta, GA, June 18-22, 1995, pp. 103-109.

300. D. Maksimovic, R. W. Erickson, "Universal-input, high-power-factor, boost doubler rectifiers," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, Dallas, TX, March 5-9, 1995, pp. 459-465.

301. D. Maksimovic, Y. Jang and R. Erickson, "Nonlinear-carrier control for high power factor boost rectifiers," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, Dallas, TX, March 5-9, 1995, pp. 635-641.

302. R. Erickson and D. Maksimovic, "High-Efficiency DC-DC Converters for Battery-Operated Systems with Energy Management," *Wireless Communication Issue, Annual Reviews on Telecommunications*, 1995.

303. D. Maksimovic and M. S. Makowski, "Bounds on synthesis of switched-capacitor DC-DC voltage multipliers," in Proc. *International Conference on Power Electronics and Motion Control*, PEMC'94, September 1994, Warsaw, Poland.

304. Dragan Maksimovic, "Design of the clamped-current high-power-factor boost rectifier," in Proc. *IEEE Appl. Power Electron. Conf. Expo.*, 1994, pp. 556-562.

305. J. Hong, D. Maksimovic, R. Erickson, and I. Khan, “Half-cycle control of the parallel resonant converter operated as a high power factor rectifier,” in Proc. *IEEE Appl. Power Electron. Conf. Expo.* , 1994, pp. 556-562.

306. D. Maksimovic, “Design of the zero-voltage-switching quasi-square-wave resonant switch,” in Proc. *IEEE Power Electron. Specialists Conf.*, 1993 Record, pp. 323-329.

307. D. Maksimovic, “A MOS gate drive with resonant transitions,” in Proc. *IEEE Power Electron. Specialists Conf.*, 1991, pp. 527-532.

308. S. Pavljasevic, D. Maksimovic, “Using a discrete-time model for large-signal analysis of a current-programmed boost converter,” in Proc. *IEEE Power Electron. Specialists Conf.*, 1991, pp. 715-721.

309. D. Maksimovic, S. Cuk, Z. Zhang, “A high-power density VHSIC power supply,” in Proc. *IEEE Appl. Power Electron. Conf. Expo.,* 1990.

310. D. Maksimovic and S. Cuk, “A general approach to synthesis and analysis of quasi-resonant converters,” in Proc. *IEEE Power Electron. Specialists Conf.*, 1989, pp. 713-727.

311. D. Maksimovic and S. Cuk, “General properties and synthesis of PWM DC-to-DC converters,” in Proc. *IEEE Power Electron. Specialists Conf.*, 1989, pp. 515-525.

312. D. Maksimovic and S. Cuk, “Switching converters with large range of DC conversion ratios,” in Proc. *High Frequency Power Conversion Conference*, 1989, pp. 217-225.

313. D. Maksimovic and S. Cuk, “Constant-frequency control of quasi-resonant converters,” in Proc. *High Frequency Power Conversion Conference*, 1989, pp. 241-253.

314. D. Maksimovic and S. Cuk, “A unified analysis of PWM converters in discontinuous modes,” in Proc. *PCI Conference*, Munich, Germany, June 1989, pp. 61-78.

315. S. Cuk and D. Maksimovic, “Integrated-magnetics quasi-resonant Cuk DC-to-DC converter,” in *Recent Developments in Resonant Power Conversion*, edited by K. Kit Sum, Intertec Communications, Inc., 1988.

PATENTS:

1. Satyaki Mukherjee, Branko Majmunovic, Dragan Maksimovic, Brian B. Johnson, Planar Transformers With Interleaved Windings And High Voltage Isolation, 2022 application, US20220399153A1.
2. Dragan Maksimovic, Faleh Alskran, V. Inder Kumar, Chandan Suthar, Voltage converter with feedback using variable proportional gain, 2022 application, US20220393589A1.
3. Mohamed Ahmed Kamel Ahmed, Regan A. Zane, Dragan Maksimovic, State-of-charge balancing with parallel and series output connected battery power modules, 2021 application, US20220393485A1.
4. Mohamed Ahmed Kamel Ahmed, Regan A. Zane, Dragan Maksimovic, Voltage sharing of series connected battery modules in a plug-and-play dc microgrid, 2021 application, US20210399352A1.
5. Feng Zhou, Yuqing Zhou, Ercan Mehmet DEDE, Robert Erickson, Dragan Maksimovic, Vivek SANKARANARAYANAN, Yucheng GAO, Double-sided cooling cold plates with overhanging heat sinks and through body busbar for high-power density power electronics, 2021 application, US20220386509A1.
6. Jianglin ZHU, Dragan Maksimovic, Transformerless Stacked Active Bridge Power Converters And Methods For Operating The Same, 2021 application, US20210288581A1.
7. Feng Zhou, Ercan Mehmet DEDE, Hiroshi UKEGAWA, Robert Erickson, Dragan Maksimovic, Vivek SANKARANARAYANAN, Yucheng GAO, 2021 application, US11596088B2.
8. D. Maksimovic, P. Achanta, B. Johnson, M. Rodriguez, V. Gevorgian, Modular scalable power conversion, US 10,855,203, granted Dec. 1, 2020.
9. M. Ilic, D. Maksimovic, M. Nuotio, Modular extra low voltage electric vehicle power system, 10,554,164, 2020.
10. U. Anwar, K. Afridi, D. Maksimovic, Hybrid feedforward control architecture and related techniques, 10,536,068, 2020.
11. A. Sepahvand, D. Maksimovic, K. Afridi, DC-to-DC drivers with high resolution dimming, 10,461,633, 2019.
12. H. Chen, R.W. Erickson, D. Maksimovic, T. Harada, Modular DC-DC converter including a DC transformer module, 10,348,202, 2019
13. A. Sepahvand, D. Maksimovic, K. Afridi, Resonant DC-to-DC drivers, 10,327,292, 2019.
14. K. Afridi, A. Kumar, Z. Popovic, D. Maksimovic, C.K. Chang, G.G. Da Silva, S. Pervaiz, Wireless power transfer, 10,298,058, 2019.

15. M.S. Trimboli, G. Plett, R. Zane, K. Smith, D. Maksimovic, M. Evzelman, D. Costinett, R. D. Anderson, Model predictive control and optimization for battery charging and discharging, 10,298,026, 2019.
16. R. Zane, M. Evzelman, D. Costinett, D. Maksimovic, R. D. Anderson, K. Smith, M.S. Trimboli, G. Plett, Autonomous battery control and optimization, 10,277,041, 2019.
17. R. Zane, M. Evzelman, D. Costinett, D. Maksimovic, R. D. Anderson, K. Smith, M.S. Trimboli, G. Plett, G. Loren, Battery control, 10,063,066, 2019.
18. R. Zane, D. Seltzer, D.Maksimovic, B.Jacobson, D.Desrosiers, Assisted zero voltage switching for a dc-dc converter, US patent 9,712,066, 2017.
19. H.Chen, R.W.Erickson, D.Maksimovic, T.Harada, Modular dc-dc converter including a dc transformer module, US patent 9,614,442, 2017
20. R.Zane, D.Seltzer, D.Maksimovic, B.Jacobson, D.Desrosiers, Zero voltage switching operation of a minimum current trajectory for a dc-dc converter, US patent 9,595,873, 2017.
21. R.Zane, D.Seltzer, D.Maksimovic, B.Jacobson, D.Desrosiers, Multi-mode control for a dc-dc converter, US patent 9,584,029, 2017.
22. D. Maksimovic, R. Zane, A. Carosa, Multi-phase modulator, US patent 8,384,365, 2013.
23. D. Maksimovic, V. Yousefzadeh, E. Alarcon, Method, Apparatus & System for Extended Switched-Mode Controller, US patent 8,319,486, 2012.
24. D. Maksimovic, Digital PFC Controller, US patent 8,130,522, 2012.
25. M. Hartman, J. T. Doyle, D. Maksimovic, P. Salmi, J. Pennanen, S. Dhar, System and method for providing multi-point calibration of an adaptive voltage scaling system, US patent 8,151,125, 2012.
26. J. Morroni, R. Zane, D. Maksimovic, Monitoring and control of power converters, US patent 7,956,592, 2011.
27. D.Maksimovic, V.Yousefzadeh, A.Carosa, T.Takayama, Digital pulse-width-modulator with discretely adjustable delay line, US patent 7,977,994
28. D. Maksimovic, V. Yousefzadeh, "Determining dead times in switched-mode DC-DC converters," US patent 7,456,620.
29. D. Maksimovic, A.Syed, E.Ahmed, "Digital pulse-width modulator," US patent 7,271,754.
30. D. Maksimovic, H. Peng, "Differential delay line analog-to-digital converter," US patent 7,315,270.
31. D. Maksimovic, H.Peng, "Digital current mode controller," US patent 7,902,803
32. R. Zane, D. Maksimovic, Y. Zhang, "Active current sharing multiphase DC-DC converter," US patent 7,479,772.

33. D. Maksimovic, J. Chen, A. Prodic, R. Erickson, “Predictive Digital Current Controllers for Switching Power Converters,” US patent 7,148,669.

34. D. Maksimovic, B. Patella, A. Prodic, “Digital Controller for High Frequency Switching Power Supplies,” US patent 7,595,686.

35. M. Hartman, J.T.Doyle, D. Maksimovic, P. Salmi, J. Pennanen, S. Dhar, System and method for providing multi-point calibration of an adaptive voltage scaling system, US patent 7,581,120.

36. J.T.Doyle, D.Maksimovic, Method and system for minimizing power consumption in mobile devices using cooperative adaptive voltage and threshold scaling, US patent 7,493,149.

37. D. Maksimovic, Dhar; Sandeep, Kranzen; Bruno, Ambatipudi; Ravindra, Adaptive voltage scaling digital processing component and method of operating the same, US patent 7,117,378.

38. Maksimovic; Dragan, Dhar; Sandeep, Ambatipudi; Ravindra, Kranzen; Bruno, Adaptive voltage scaling power supply for use in a digital processing component and method of operating the same, US patent 7,106,040.

39. Maksimovic; Dragan, Doyle; James Thomas , Serial digital communication superimposed on a digital signal over a single wire, US patent 7,079,589.

40. Maksimovic; Dragan, Dhar; Sandeep, Method and system for providing self-calibration for adaptively adjusting a power supply voltage in a digital processing system, US patent 7,024,568.

41. D. Maksimovic, S. Dhar, “Adaptive Voltage Regulator for Powered Digital Devices,” US patent 7,061,292.

42. M. Vincent, D. Maksimovic, “Matched delay line voltage converter,” US patent 7,196,526.

43. D. Maksimovic, S. Dhar, System for adjusting a power supply level of a digital processing component and method of operating the same, US patent 6,985,025

44. M. Vincent, D. Maksimovic, “Matched delay line voltage converter,” US patent 6,958,721.

45. B. Kranzen, D. Maksimovic: Adaptive voltage scaling clock generator for use in a digital processing component and method of operating the same, US Patent 6,944,780.

46. J. T. Doyle, D. Maksimovic, Y. Li: Method and system for providing power management in a radio frequency power amplifier using adaptive envelope tracking, US Patent 6,914,487.

47. J. T. Doyle, D. Maksimovic, Y. Li: Method and system for providing power management in a radio frequency power amplifier by dynamically adjusting supply and bias conditions, US Patent 6,900,697

48. D. Maksimovic, S. Dhar, B. Kranzen, R. Ambatipudi: Adaptive voltage scaling digital processing component and method of operating the same, US Patent 6,868,503

49. D. Maksimovic, S. Dhar, R. Ambatipudi, B. Kartzen: Adaptive voltage scaling power supply for use in a digital processing component and method of operating the same, U.S. Patent 6,548,991.

50. D. Maksimovic, R. Erickson, "Universal-Input Rectifiers with High-Power-Factor Boost Doublers," U.S. Patent 5,383,109.

51. D. Maksimovic, R. Erickson, Y. Jang, "Nonlinear-Carrier Controllers for High-Power-Factor Rectifiers," U.S. patent No. 5,867,379.

SELECTED INVITED PRESENTATIONS AND PROFESSIONAL SEMINARS:

- Stacked Active Bridge Converters – A Family of High-Density, High-Efficiency Hybrid Power Converters, Distinguished Speaker, ShanghaiTech SIST Lecture, Oct. 28, 2022.
- SiC-Based High-Density Composite Electric Drivetrain Converters, IEEE PELS San Francisco Bay Area Chapter Seminar, May 26, 2022
- Stacked Active Bridge Converters – A Family of High-Density, High-Efficiency Hybrid Power Converters, Cirrus Logic seminar, July 26, 2022.
- ASPIRE NSF Engineering Research Center, E-Mobility Forum, October 6-7, 2022.
- Machine Learning Estimators for Power Electronics Design and Optimization, ECPE Workshop on Steps towards Design Automation & Artificial Intelligence in Power Electronics, December 2-3, 2021, Graz, Austria.
- Optimization of a 125 kW SiC Composite Converter for Electric Drivetrain Applications, PowerAmerica Webinar, October 28, 2021.
- Impact of Wide Bandgap Semiconductors and Innovations in Converter Architectures on Power Electronics Applications, XIII CEI Annual Meeting, June 23, 2021.
- High-Efficiency, High-Density Composite Converters for Electric Drivetrain Applications, Princeton University and Philadelphia IEEE PELS Chapter Seminar, November 15, 2021
- High-Efficiency, High-Density Hybrid DC-DC Converters, NVIDIA seminar, December 2021.
- High-Efficiency High-Density Power Converters based on Modular and Composite Architectures, The Korean Institute of Power Electronics Winter Seminar, January 28, 2021
- Advances in Power Electronics Enabled by Converter Architectures, Soft Switching Techniques, and Wide Bandgap Semiconductors, invited keynote at CPES/PES conference, September 2, 2020.
- PELS Podcast - A Fireside Chat with Dragan Maksimovic, https://ieeetv.ieee.org/ieeetv-specials/pels-podcast-03-a-fireside-chat-with-dragan-maksimovic
- Power Electronics: Fundamentals, Impact, Directions, invited seminar at ETH Zurich, January 28-29, 2020.
- Advances in Power Electronics Enabled by Converter Topologies, Soft Switching Techniques, and Wide Bandgap Semiconductors, invited seminar at the University of Washington Clean Energy Institute, February 7, 2019

- High Frequency Power Electronics using GaN Devices, invited keynote presentation, EE 2017, Novi Sad, Serbia, October 2017.
- Advanced in Switched-Mode Power Converters Enabled by Converter Topologies, Soft Switching Techniques, and Wide Bandgap Semiconductors, invited Grainger Seminar, University of Illinois, Urbana-Champaign.
- High-Efficiency, High-Density Power Electronics for xEV Applications, SELECT seminar, August 16, 2017.
- Power Electronics for Electric-Drivetrain Vehicles, invited 5-day seminar at IIT Kharagpur, India, December 12-16, 2016.
- Advances in Switched-Mode Power Converters Enabled by Wide Bandgap Semiconductors, Soft Switching Techniques, and Converter Topologies, invited PELS Distinguished Lecturer presentation, IIT Kharagpur, India, December 13, 2016.
- 100 MHz GaN Power Conversion, invited keynote presentation at IEEE CIPS 2016, Nuremberg, Germany, 3/10/2016.
- Monolithic High Frequency GaN Switched-Mode Power Converters, invited PELS Distinguished Lecturer presentation, UC Berkeley, Feb.1, 2016.
- Advances in Switched-Mode Power Converters Enabled by Wide Bandgap Semiconductors, invited PELS Distinguished Lecturer presentation, University of Pittsburgh, PA, Jan.27, 2016.
- Monolithic Very High Frequency GaN Switched-Mode Power Converters, invited presentation at IEEE CICC 2015, 9/25/2015
- Monolithic Very High Frequency GaN Switched-Mode Power Converters, invited presentation at Fraunhofer Institute, Freiburg, Germany, 6/2/2015.
- Modeling and Control of Switched-Mode Power Converters, invited short course sponsored by the Gordon Foundation, Tel-Aviv University, May 25-28, 2015.
- GaN-based High-Frequency Integrated Switched-Mode Power Converters, invited presentation at GOMAC Tech 2015, 3/26/2015 (slides co-authored by Z.Popovic, Y.Zhang, D.Sardin)
- A Disruptive Approach to Electric Vehicle Power Electronics, presentation at NREL Advanced Power Electronics and Electric Motors (slides co-authored by R.W.Erickson and K.Afridi), 3/2/2015.
- Distributed Power Electronics in Photovoltaic Power Systems, invited presentation at University of Southern California, 2/19/2015.
- Very High Switching Frequency Converters using Integrated GaN Power Stages, invited presentation at National Chiao Tung University, Taiwan, 1/14/2015
- Very High Switching Frequency Converters using Integrated GaN Power Stages, invited presentation at National Tsing Hua University, 1/12/2015.

- Advances in Automotive Power Electronics, presentation given at Toyota Motor Corporation in conjunction with the final project report, 1/10/2015.
- Integration of GaN Supply Modulators and RF Power Amplifiers, invited presentation at IEEE PwrSOC 2014.
- Power Conversion Fundamentals and Technology, invited short course at IEEE CSICS 2014.
- Advances in Power Electronics for Photovoltaic Power Systems, invited seminar at CINVESTAV-IPN, Guadalajara, Mexico, January 2014.
- Integration of Supply Modulators with X-band GaN MMIC PAs, seminar at IEEE IMS 2014.
- Advances in Power Electronics for Photovoltaic Power Systems, invited seminar at University of British Columbia, Vancouver, Canada, November 2013.
- Advanced in Digital Control of Switched-Mode Power Converters, invited plenary session talk at Chinese Power Electronics Conference, 2008.
- Digital Power Control: A Researcher's Perspective, invited plenary session talk at IEEE APEC 2007
- Digital Control in SMPS, CoPEC Short Summer Course, 2006 (with R.Zane)
- Digital Control of DC-DC Converters, invited short course at the Polytechnic University of Catalonia, July 2006
- Digital Control of high-frequency SMPS, seminar presented at IEEE APEC 2006
- Digital Control in SMPS, CoPEC Short Summer Course, 2005 (with R.Zane)
- Seminar "System-Level and IC Implementation Techniques for Power Management in Battery-Powered Portable Electronics," Mead course in Power Management, March 2005.
- Invited Seminar "Digital Control of Switched-Mode Power Converters," Toshiba, Japan, May 2004.
- Seminar "System-Level and IC Implementation Techniques for Power Management in Battery-Powered Portable Electronics," Mead course in Power Management, March 2004.
- Tutorial seminar "Digital control of high-frequency switching power converters," IEEE Applied Power Electronics Conference, February 2004., with A. Prodic and R. Zane.
- R. Erickson, D. Maksimovic, and R. Zane, "Advancing Digital Control of Switched-Mode Converters," invited presentation in the special session on current topics in power electronics research, IEEE Applied Power Electronics Conference, February 2004.

- Invited lecture "Custom IC blocks for enabling digital control in switching power converters," IEEE solid-state circuits society, Denver chapter, July 2003 (with R. Zane).
- Invited presentation "Digital control in switching converters," Space power workshop, 2003, (with R. Zane).
- D. Maksimovic, R. Zane, "Scalable digital control for switching power converters," Intel Technology Symposium, Seattle, August 2002.
- R. Zane, D. Maksimovic, "Intelligent control in power converters and systems," DARPA workshop on integrated smart power, November 2002.
- Tutorial seminar "A primer on simulation, modeling and design of the control loops of switching regulators," IEEE APEC 2003, with R. W. Erickson.
- Invited tutorial "Power management model and implementation of power management ICs for next generation wireless applications," IEEE Symposium on Circuits and Systems, ISCAS'02, May 2002.
- Invited seminar on analysis, modeling and design of power factor correctors, University of Salerno, Italy, June 2000.
- Invited seminar on control of power factor correctors, IEEE Vancouver Chapter, April 2000.
- Tutorial seminar on averaged switch modeling and simulation, IEEE Power Electronics Specialists Conference, Charleston, SC, June 1999, with R. W. Erickson.
- Tutorial seminar on cross-regulation in switching power converters, IEEE Applied Power Electronics Conference, 1999, with R. W. Erickson.
- Invited seminar on synthesis and analysis of PWM and quasi-resonant switching power converters at the University of Padova, Italy, 1990.
- Invited seminar on resonant-switch power converters at the High-Frequency Power Conversion Conference, Naples, Florida, 1989.
- Invited seminar at the PCI Conference, Munich, Germany, 1989.

SERVICE AND PROFESSIONAL ACTIVITIES:

- ECEE Department
  - Associate Chair for Faculty and Staff, 2022-current
  - Director, Colorado Power Electronics Center (Co-Director with R. Erickson)
  - Chair of the ECEE Strategic Planning Committee, 2020-2022
  - Member of the ECEE Graduate Committee, 2012-2020
  - Member of the Faculty Search Committee, 2015-2016
  - Chair of the Power Search Committee, 2013
  - Chair of the Optics Search Committee, Fall 2006-Spring 2007
  - Member of the Curriculum Committee, 2003-2011
  - Chair of the ECEN3250 core course review team, Fall 2004
  - Member of the Hiring Committee, Fall2004-Spring2005
  - Chair of the ad-hoc comprehensive review committee (R.Zane), Fall 2004
  - Member of the ad-hoc comprehensive review committee (D.Filipovic), Fall 2005
- College of Engineering
  - Member of the First Level Review Committee, 2016-2017
- Professional organizations (IEEE):
  - Editor for *IEEE Journal of Emerging and Selected Topics in Power Electronics*, 2013 (foundation)-2023
  - Associate Editor for *IEEE Transactions on Power Electronics*, 2003-2023.
  - Distinguished Lecturer of the IEEE Power Electronics Society, 2012-2016
  - General Chair, Twelfth IEEE Workshop on Control and Modeling for Power Electronics (COMPEL 2010)
  - Vice-Chair for DC-DC systems, ECCE 2009, ECCE 2010, ECCE 2011
  - Co-Chair of the IEEE PELS Technical Committee on DC Power Systems, 2008-2015
  - Member of the Technical Program Committee, IEEE ECCE, 2009-yearly.
  - Member of the Technical Program Committee, IEEE Applied Power Electronics Conference, 1993-yearly
  - Member of the Technical Program Committee, IEEE Power Electronics Specialists Conference, 1993-2008.
  - Member of the Technical Program Committee, IEEE COMPEL, 1999-yearly.
  - Session Chair, IEEE Applied Power Electronics Conference, yearly
  - Session Chair, IEEE ECCE, yearly
  - Session Chair, IEEE COMPEL, yearly
  - Session Chair, IEEE Power Electronics Specialists Conference
  - Reviewer:
    - IEEE Transactions on Power Electronics
    - IEEE Journal on Selected and Emerging Topics in Power Electronics
    - IEEE Transactions on Aerospace and Electronic Systems
    - IEEE Transactions on Industrial Electronics

        - IEEE Transactions on Industry Applications
        - IEEE Transactions on Circuits and Systems
        - IEEE Transactions on Solid-State Circuits
- National Science Foundation
    - Member of the Panel Proposal Review, 2017, 2020, 2022, 2024
    - Member of the NSF I/U CRC panel review, December 2005.
    - Member of the Site Visit Review Team for the NSF ERC Center for Power Electronics Systems, Seventh-Year Renewal Review, April 21-23, 2005.
    - Member of the Site Visit Review Team for the NSF ERC Center for Power Electronics Systems, Sixth-Year Renewal Review, April 21-23, 2004.