

## 研究業績 (2026年3月3日)

長岡技術科学大学  
電気電子情報系  
准教授 日下佳祐

### 【査読付き学術論文 Reviewed papers】 57件

- (1) 日下佳祐, 伊東淳一: 「磁界共振結合による非接触給電の駆動用電源及び受電側整流器に関する一考察」, 電気学会論文誌 D, Vol. 132, No. 8, pp. 849-857 (2012)
- (2) **Keisuke Kusaka**, Jun-ichi Itoh: “Reduction of Reflected Power Loss in an AC-DC Converter for Wireless Power Transfer Systems,” IEEJ Journal of Industry Applications, Vol. 2, No. 4, pp. 195-203 (2013)
- (3) 日下佳祐, 伊東淳一: 「Dual Active Bridge Converter 動作を応用した非共振型非接触給電システムの基礎検証」, 電気学会論文誌 D, Vol. 136, No.2, pp. 189-197 (2016)
- (4) **Keisuke Kusaka**, Koji Oriki, Jun-ichi Itoh, Isamu Hasegawa, Kazunori Morita, Takeshi Kondo: “Galvanic Isolation System with Wireless Power Transfer for Multiple Gate Driver Supplies of Medium-voltage Inverter,” IEEJ Journal of Industry Applications, Vol. 5, No. 3, pp. 206-214 (2016)
- (5) 日下佳祐, 伊東淳一: 「伝送周波数と伝送電力に着目した電磁誘導現象を用いた非接触給電システムの開発動向」, 電気学会論文誌 D, Vol. 137, No. 5, pp. 445-457 (2017)
- (6) Kent Inoue, **Keisuke Kusaka**, Jun-ichi Itoh: “Reduction in Radiation Noise Level for Inductive Power Transfer Systems using Spread Spectrum Techniques,” IEEE Trans. on Power Electronics, Vol. 33, No. 4, pp. 3076-3085 (2017)
- (7) Hiroki Watanabe, Tomokazu Sakuraba, Keita Furukawa, **Keisuke Kusaka**, Jun-ichi Itoh: “Development of DC to Single-Phase AC Voltage Source Inverter with Active Power Decoupling Based on Flying-Capacitor DC/DC Converter,” IEEE Trans. on Power Electronics, Vol. 33, No. 6, pp. 4992-5004 (2018)
- (8) **Keisuke Kusaka**, Jun-ichi Itoh: “Development Trends of Inductive Power Transfer Systems Utilizing Electromagnetic Induction with Focus on Transmission Frequency and Transmission Power,” IEEJ Journal of Industry Applications, Vol. 6, No. 5, pp. 445-457 (2017)
- (9) 日下佳祐, 伊東淳一: 「フライングキャパシタ形 DC-DC コンバータにおける複数個のフライングキャパシタ電圧の独立制御」, 電気学会論文誌 D レター, Vol. 138, No. 5, pp. 471-472 (2018)

- (10) 伊東淳一, 谷向一馬, 河村和輝, 長野剛, 日下佳祐: 「スイッチング素子数を削減した無瞬断巻線切り替えが可能な PWM 整流器」, 電気学会論文誌 D, Vol. 138, No. 5, pp. 433-441 (2018)
- (11) 伊東淳一, 櫻庭友和, レホアイ ナム, 渡辺大貴, 日下佳祐: 「電流不連続モードで動作する昇圧形アクティブバッファを用いた単相系統連系インバータ」, 電気学会論文誌 D, Vol. 138, No. 5, pp. 453-462 (2018)
- (12) Satoshi Nagai, Keisuke Kusaka and Jun-ichi Itoh: “ZVRT Capability of Single-phase Grid-connected Inverter with High-speed Gate-block and Minimized LCL Filter Design,” IEEE Transactions on Industry Applications, Vol. 54, No. 5, pp. 5387-5399 (2018)
- (13) 河内 謙吾, 比嘉隼, 日下佳祐, 伊東淳一: 「3 レベル駆動による Dual Active Bridge コンバータのデッドタイム誤差補償法」, 電気学会論文誌 D レター, Vol. 138, No. 12, pp. 944-945 (2018)
- (14) 比嘉隼, 宅間春介, 日下佳祐, 伊東淳一: 「広い電圧駆動範囲に対して動作モード切り替え法を適用した T-type Dual Active Bridge DC-DC コンバータの開発」, 電気学会論文誌 D, Vol. 139, No. 4, pp. 388-400 (2018)
- (15) Jun-ichi Itoh, Kazuki Kawamura, Keisuke Kusaka, Yoshiya Ohnuma, Hiroyuki Koshikizawa, Kazuyuki Abe, “Control of Starter Generator in a UAV with a Micro Jet Engine,” IEEJ Trans. on Industry Applications, Vol. 8, No. 3, pp. 421-429 (2019)
- (16) Keisuke Kusaka, Kent Inoue, Jun-ichi Itoh, “Inductive Power Transfer System for Excavator by considering Large Load Fluctuation,” IEEJ Trans. on Industry Applications, Vol. 8, No. 3, pp. 413-420 (2019)
- (17) 古川啓太, 日下佳祐, 伊東淳一: 「複数巻線を有するワイヤレス電力伝送システムの等価的な結合係数の改善法」, 電気学会論文誌 D, Vol. 139, No. 7, pp. 612-623 (2019)
- (18) Keisuke Kusaka, Keita Furukawa, Jun-ichi Itoh, “Development of Three-Phase Wireless Power Transfer System with Reduced Radiation Noise,” IEEJ Trans. on Industry Applications, Vol. 8, No. 4, pp. 600-607 (2019)
- (19) Keita Furukawa, Keisuke Kusaka, Jun-ichi Itoh, “General Analytical Model of Inductance Variation by EMF-canceling Coil for Inductive Power Transfer System,” IEEJ Trans. on Industry Applications, Vol. 8, No. 4, pp. 660-668 (2019)
- (20) Jun-ichi Itoh, Kazuki Aoyagi, Keisuke Kusaka, Masakazu Adachi, Keisuke Kusaka, “Development of Solid-State Transformer for 6.6-kV Single-Phase Grid with Automatically Balanced Capacitor Voltage,” IEEJ Trans. on Industry Applications, Vol. 8, No. 5, pp. 795-802 (2019)
- (21) Keisuke Kusaka, Kent Inoue, Jun-ichi Itoh, “Comparative Verification of Radiation Noise Reduction Effect using Spread Spectrum for Inductive Power Transfer System,” World Electric Vehicle Journal, Vol. 10, No. 2, pp. 1-12 (2019)

- (22) 永井悟司, 目下佳祐, 伊東淳一: 「高速な還流モード切り替えを適用した小型連系インダクタを有する単相系統連系インバータの FRT 制御」, 電気学会論文誌 D, Vol. 140, No. 1, pp. 1-14 (2020)
- (23) 宅間春介, 大島涼, 目下佳祐, 伊東淳一: 「インダイレクトマトリックスコンバータを用いた絶縁形 DC-AC コンバータのスイッチング損失低減手法」, 電気学会論文誌 D, Vol. 140, No. 3, pp. 130-139 (2020)
- (24) 河内謙吾, 比嘉隼, 渡辺大貴, 目下佳祐, 伊東淳一: 「デッドタイムに起因する非線形電力誤差の補償法における Dual Active Bridge コンバータの電流実効値低減法」, 電気学会論文誌 D, Vol. 140, No. 3, pp. 175-183 (2020)
- (25) 桐淵岳, 財津俊行, 土井昌志, 目下佳祐, 伊東淳一: 「サーボドライブ DC 給電システムのインピーダンス法による安定性解析」, 電気学会論文誌 D, Vol. 140, No. 3, pp. 184-193 (2020)
- (26) 宅間春介, 大島涼, 目下佳祐, 伊東淳一: 「絶縁型 AC-DC マトリックスコンバータのスイッチングリップルの影響を打ち消す入力電流制御法」, 電気学会論文誌 D レター, Vol. 140, No. 8, pp. 623-624 (2020)
- (27) 古川啓太, 目下佳祐, 伊東淳一: 「ワイヤレス給電コイルのリラクタンسネットワーク解析法を用いたモデリング」, 電気学会論文誌 D レター, Vol. 140, No. 10, pp. 791-792 (2020)
- (28) **Keisuke Kusaka**, Nagisa Takaoka, Tomokazu Sakuraba, Hiroki Watanabe, Jun-ichi Itoh, “Single-phase AC Grid-tied Inverter with Buck-type Active Power Decoupling Circuit Operated in Discontinuous Current Mode,” IEEJ Trans. on Industry Applications, Vol. 10, No. 3, pp. 292-302 (2021)
- (29) 古川啓太, 目下佳祐, 伊東淳一: 「漏洩磁界キャンセルコイルを用いたワイヤレス給電システムのキャンセルコイル短絡電流実効値補償に着目した漏洩磁界低減」, 電気学会論文誌 D, Vol. 141, No. 5, pp. 405-415 (2021)
- (30) 塩井太介, 宮下充, 渡辺大貴, 目下佳祐, 伊東淳一, 中西俊貴, 小林和博: 「電流不連続モードを適用したフライングキャパシタ形マルチポートコンバータによるバッテリマネジメントシステムの開発」, 電気学会論文誌 D, Vol. 141, No. 7, pp. 520-531 (2021)
- (31) 山口正通, 目下佳祐, 伊東淳一: 「短絡治具を用いたシャントスルー法による PCB パターン上の寄生インピーダンス測定法」, 電気学会論文誌 D, Vol. 141, No. 7, pp. 589-590 (2021)
- (32) 橋本裕志, 桐嘉伸, 目下佳祐, 伊東淳一: 「溶接電源に向けた N 相インターリーブ降圧コンバータの制御応答性の検討」, 電気学会論文誌 D, Vol. 141, No. 8, pp. 613-620 (2021)
- (33) 石山柊斗, 目下佳祐, 芳賀仁: 「6in1 パワーモジュールを用いたアクティブパワーデ

- カップリングの一方式」, 電気学会論文誌 D, Vol. 141, No. 9, pp. 747-748 (2021)
- (34) Takahiro Kumagai, Hirotaka Sakurai, Taisuke Shioi, Hirotaka Kato, Jun-ichi Itoh, **Keisuke Kusaka**, Takashi Yamaguchi, Masayuki Nakagawa, Daisuke Sato, “Experimental Evaluation of Switched Reluctance Motor Made by Blanking Amorphous Alloy Foil,” IEEJ Journal of Industry Applications, Vol. 11, No. 1, pp. 117-127 (2022)
- (35) 熊谷崇宏, 伊東淳一, **目下佳祐**, 佐藤大介: 「磁気飽和に着目したスイッチトリラクタンスモータの主要パラメータの自動設計法」, 電気学会論文誌 D, Vol. 141, No. 12, pp. 962-975 (2021)
- (36) 塩井太介, 熊谷崇宏, **目下佳祐**, 伊東淳一: 「コンプレッサ駆動用モータの低振動停止法」, 電気学会論文誌 D, Vol. 142, No. 3, pp. 198-205 (2022)
- (37) **Keisuke Kusaka**, Rintaro Kusui, Jun-ichi Itoh, Daisuke Sato, Shuichi Obayashi, Masaaki Ishida, “A 22kW Three-phase Wireless Power Transfer System in Compliance with CISPR 11 and ICNIRP 2010,” IEEJ Journal on Industry Applications, Vol. 11, No. 4, pp. 594-602 (2022)
- (38) 橋本裕志, 三浦克樹, **目下佳祐**, 伊東淳一: 「ガスシールドアーク溶接の電流制御高速化によるスパッタ低減」, 電気学会論文誌 D, Vol. 142, No. 10, pp. 729-735 (2022)
- (39) 山ノ口皓喜, **目下佳祐**, 伊東淳一: 「マトリックスコンバータを用いた三相ワイヤレス給電システム」, 電気学会論文誌 D, Vol. 142, No. 11, pp. 808-814 (2022)
- (40) 徳井幸輝, 熊谷崇宏, **目下佳祐**, 伊東淳一: 「磁気随伴エネルギーに着目した等価インダクタンスに基づく SRM のトルク制御法」, 電気学会論文誌 D, Vol. 143, No. 3, pp. 166-176 (2022)
- (41) **Keisuke Kusaka**, Ouchi Yosuke, Jun-ichi Itoh, “Self-powered Gate Drive Circuits with Optical Signal Isolation for In-vehicle Marx Circuit of Ozonizer,” IEEE Trans. on Plasma Science, Vol. 50, No. 12, pp. 4882-4888 (2022)
- (42) 橋本裕志, **目下佳祐**, 伊東淳一: 「バイポーラ型インターリーブ降圧回路による溶接スパッタの低減」, 電気学会論文誌 D, Vol. 143, No. 7, pp. 555-556 (2023)
- (43) **Keisuke Kusaka**, Kazuki Yamagata, Jin Katsuya, Tetsu Sato, “Reduction in Leakage Magnetic Flux of Wireless Power Transfer Systems with Halbach Coils,” IEEJ Journal of Industry Applications -letter-, Vol. 12, No. 6, pp. 1-2 (2023)
- (44) 菊地 尚斗, **目下佳祐**, 渡辺 大貴, 伊東 淳一: 「ISOP 型 Solid-State Transformer における PWM 駆動と方形波運転を併用したハイブリッド変調法」, 電気学会論文誌 D, Vol. 143, No. 12, pp. 758-765 (2023)
- (45) Hirotaka Kato, Takahiro Kumagai, Jun-ichi Itoh, **Keisuke Kusaka**, Masakazu Kato, “V/f Control for Switched Reluctance Motor,” IEEJ Journal of Industry Applications, Vol. 13, No. 3 pp. 261-269 (2024)
- (46) 山口正通, 渡辺大貴, **目下佳祐**, 伊東淳一: 「MHz 帯 kW 級連続運転を実現するイン

- バータ実装法」, 電気学会論文誌 D, Vol. 144, No. 5, pp. 399-409 (2024)
- (47) 西川 滉大, 目下 佳祐, 渡辺 大貴, 伊東 淳一, 「セミアープンループ制御による単相連系インバータの外乱抑圧特性向上法」, 電気学会論文誌 D, Vol. 144, No. 5, pp. 418-426 (2024)
- (48) Yang He, Taisei Ishiyama, Xiaojing Ren, Kazuki Nagao, Taichi Sugai, Keisuke Kusaka, Weihua Jiang, “Solid-State Spiker-Sustainer Circuit Consisting of PFN and SOS,” IEEE Trans. on Plasma Science, Vol. 52, No. 1, pp. 120-125 (2024)
- (49) Shunsaku Nomoto, Shinjiro Shimura, Keisuke Kusaka, Takashi Takada, “Splitting Conductors of coils on PCB for AC-resistance Reduction,” IEEJ Journal of Industry Applications, Vol. 13, No. 6, pp. 731-740 (2024)
- (50) Rintaro Kusui, Keisuke Kusaka, Hiroki Watanabe, Jun-ichi Itoh, “Wireless Power Transfer System with Flying Capacitor Converters for Radiated Emission Harmonic Reduction,” IEEJ Journal of Industry Applications, Vol. 14, No. 2, pp. 232-239 (2025)
- (51) 西川滉大, 目下佳祐, 伊東淳一, 小林頌承, 「過充放電時における電解コンデンサの温度特性評価」, 電気学会論文誌 D, Vol. 145, No. 3, pp. 190-191 (2025)
- (52) Keita Ohata, Hiroki Watanabe, Keisuke Kusaka, Jun-ichi Itoh, Masakazu Adachi, “Power Imbalance Compensation of Droop-Based Distributed Control with Wireless Communication in Multi-Cell AC-DC Converters,” IEEE Trans. On Industry Applications, Vol. 61, No. 6, pp. 8966-8977 (2025)
- (53) 目下佳祐, 山縣一輝, 「物理寸法を含めたコイル形状探索に基づく 500kW ワイヤレス給電コイルの設計」, 電気学会論文誌 D, Vol. 145, No. 10, pp. 706-713 (2025)
- (54) Keita Ohata, Hiroki Watanabe, Keisuke Kusaka, Jun-ichi Itoh, Masakazu Adachi, “Power Imbalance Compensation of Droop-Based Distributed Control With Wireless Communication in Multi-Cell AC-DC Converters,” IEEE Trans. On Industry Applications, Vol. 61, No. 6, pp. 8966-8977 (2025)
- (55) 楠居琳太郎, 目下佳祐, 伊東淳一, 「三相 12 コイル非接触給電システムにおける磁気干渉抑制手法」, 電気学会論文誌 D, Vol. 146, No. 2, pp. 97-98 (2026)
- (56) Rintaro Kusui, Keisuke Kusaka, Hiroki Watanabe, Jun-ichi Itoh, “Auxiliary Resonant Commutation Pole Converter for Wireless Power Transfer System with Reduced Radiated Emission,” IEEJ Journal of Industry Applications, Vol. 15, No. 3, pp. xx-yy (2026) (印刷中)
- (57) 徳力雅也, 目下佳祐, 古橋和己, 黒田敏行, 「既存の充電システムに適用可能な電界型非接触給電システムの実機検証」, 電気学会論文誌 D, Vol. 146, No. 6, pp (2026) (印刷中)

### 【解説記事】 5件

- (1) 日下佳祐：「ワイヤレス電力伝送システムの漏えい磁界抑制手法」，月刊車載テクノロジー，技術情報協会，Vol. 6, No. 7, pp. 54-58 (2019)
- (2) 日下佳祐：「パワーエレクトロニクス全般における給電技術と応用展開」，電気設備学会誌，Vol. 39, No. 9, pp. 557-560 (2019)
- (3) 日下佳祐：「ワイヤレス給電用電力伝送コイルの冷却技術」，月刊車載テクノロジー，技術情報協会，Vol. 7, No. 10, pp. 39-42 (2020)
- (4) 日下佳祐：「ワイヤレス電力伝送の電力変換回路」，電気学会誌，Vol. 141, No. 12, pp. 742-745 (2021)
- (5) 日下佳祐：「磁界を用いたワイヤレス給電システムとEV適用へ向けた課題」，月刊車載テクノロジー，技術情報協会，Vol. 9, No. 12, pp. 9-13 (2022)

### 【著書】 5件

- (1) 「EV・HEV向け電子部品、電装品開発とその最新事例」，技術情報協会，ISBN-10: 4861047293, 2018年11月発刊，分担執筆
- (2) 「電気自動車のモーションコントロールと走行中ワイヤレス給電」，株式会社エヌ・ティー・エス，ISBN-10:4860436067, 2019年5月発刊，分担執筆
- (3) 電気学会ワイヤレス電力伝送システムにおけるパワーエレクトロニクス技術調査専門委員会編：「パワーエレクトロニクスにおけるワイヤレス電力伝送技術」，電気学会産業応用部門半導体電力変換技術委員会，Vol. 1495, ISSN:0919-9195, 2020年10月発刊，分担執筆
- (4) 「車載電池の安全性の向上と高容量化，効率的な利用技術」，技術情報協会，ISBN-13: 978-4-86104-992-7, 2023年11月発刊，分担執筆
- (5) 「停車中・走行中ワイヤレス給電技術 ～法規制から最新開発技術、将来展望まで～」，(株)シーエムシー・リサーチ，ISBN-10: 978-4-910581-59-0, 2024年9月発刊，分担執筆

### 【査読付き国際会議論文 International Conference papers】 95件

- (1) **Keisuke Kusaka**, Jun-ichi Itoh, “Experimental Verification of Rectifiers with SiC/GaN for Wireless Power Transfer Using a Magnetic Resonance Coupling”, The 9th IEEE International Conference on Power Electronics and Drive Systems, pp. 1094-1099 (2011)
- (2) **Keisuke Kusaka**, Jun-ichi Itoh, “Proposal of Switched-mode Matching Circuit in Power

- Supply for Wireless Power Transfer Using Magnetic Resonance Coupling”, The Applied Power Electronics Conference and Exposition 2012 (APEC2012), pp. 653-660 (2012)
- (3) **Keisuke Kusaka**, Jun-ichi Itoh, “Input Impedance Matched AC-DC Converter in Wireless Power Transfer for EV Charger”, The 15th International Conference on Electrical Machines and Systems 2012 (ICEMS2012), No. LS2A-2 (2012)
  - (4) **Keisuke Kusaka**, Jun-ichi Itoh, “Experimental Verification and Analysis of AC-DC Converter with an Input Impedance Matching for Wireless Power Transfer Systems”, The 15th European Conference on Power Electronics and Applications (EPE2013), No. 322 (2013)
  - (5) **Keisuke Kusaka**, Jun-ichi Itoh, “Experimental Verifications and Design Procedure of an AC-DC Converter with Input Impedance Matching for Wireless Power Transfer Systems”, IEEE Energy Conversion Congress and Exposition 2013 (ECCE2013), pp. 2574-2581 (2013)
  - (6) Natthaphon Phokhaphan, Krit Choeisai, Kenji Noguchi, Takahiro Araki, **Keisuke Kusaka**, Koji Orikiawa, Jun-ichi Itoh, “Wireless power transfer based on MHz inverter through PCB antenna”, The 1st International Future Energy Electronics Conference (IFEEEC) 2013, pp.126, No. 130, pp. 3-6, (2013)
  - (7) **Keisuke Kusaka**, Koji Orikiawa, Jun-ichi Itoh, Kazuhiro Morita, Kuniaki Hirao, “Isolation System with Wireless Power Transfer for Multiple Gate Driver Supplies of a Medium Voltage Inverter”, The 2014 International Power Electronics Conference (IPEC2014), No. 192-6 (2014)
  - (8) Ayato Sagehashi, **Keisuke Kusaka**, Koji Orikiawa, Jun-ichi Itoh: “Pattern Design Criteria of Main Circuit Using Printed Circuit Boards for Parasitic Inductance Reduction”, The 16th Power Electronics and Motion Control Conference and Exposition 2014, No. 195, pp. 677-682 (2014)
  - (9) **Keisuke Kusaka**, Masakazu Kato, Koji Orikiawa, Jun-ichi Itoh, Isamu Hasegawa, Kazunori Morita, Takeshi Kondo, “Galvanic Isolation System for Multiple Gate Drivers with Inductive Power Transfer — Drive of Three-phase Inverter —”, IEEE Energy Conversion Congress and Exposition 2015 (ECCE2015), pp. 4525-4532 (2015)
  - (10) Ayato Sagehashi, **Keisuke Kusaka**, Koji Orikiawa, Jun-ichi Itoh: “Current Source Gate Drive Circuits with Low Power Consumption for High Frequency Power Converters”, The 9th International Conference on Power Electronics, No. WeH1-1 (2015)
  - (11) Hiroki Watanabe, **Keisuke Kusaka**, Keita Furukawa, Jun-ichi Itoh: “DC to Single-phase AC Voltage Source Inverter with Power Decoupling Circuit Based on Flying Capacitor Topology for PV System”, The Applied Power Electronics Conference and Exposition (APEC) 2016, No. T27.1, pp. 1336-1343 (2016)
  - (12) **Keisuke Kusaka**, Kent Inoue, Jun-ichi Itoh: “Reduction in Radiation Noise Level for

Inductive Power Transfer System with Spectrum Spread”, EVTeC & APE Japan 2016, No. 20169063 (2016)

- (13) Jun-ichi Itoh, Tomokazu Sakuraba, **Keisuke Kusaka**, Hiroki Watanabe, Keita Furukawa: “Comparison of Circuit Topologies for Active Power Decoupling toward High Power Density”, The 8th International Power Electronics and Motion Control Conference 2016, pp. 421-428 (2016)
- (14) Jun-ichi Itoh, Tomokazu Sakuraba, Hoai Nam Le, **Keisuke Kusaka**: “Requirements for Circuit Components of Single-Phase Inverter Applied with Power Decoupling Capability toward High Power Density”, 18th European Conference on Power Electronics and Applications 2016 (2016)
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**【特許】 7 件**

- |                                 |                |               |
|---------------------------------|----------------|---------------|
| (1) 「電力変換回路」                    | 特願 2019-126222 | 特許第 6991491 号 |
| (2) 「マルクス回路」                    | 特開 2021-035159 | 特許第 7253739 号 |
| (3) 「電子回路および無線電力伝送装置」           | 特開 2021-027672 | 特許第 7249236 号 |
| (4) 「設計支援装置, 設計支援方法及び設計支援プログラム」 |                |               |
|                                 | 特開 2020-120573 | 特許第 7420347 号 |
| (5) 「放電装置及びその制御方法」              | 特開 2021-175332 | 特許第 7444369 号 |
| (6) 「電源装置」                      | 特開 2022-148112 | 特許第 7611746 号 |
| (7) 「電源回路及び電源装置」                | 特開 2023-025822 | 特許第 7738427 号 |

**【特許 (出願中)】 9 件**

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|-----------------------------------|----------------|----------------|
| (1) 「電力変換システム」                    | 特願 2022-000646 | 特開 2023-100161 |
| (2) 「電力変換装置及び電力変換システム」            | 特願 2022-130988 | 特開 2024-027847 |
| (3) 「電源装置」                        | 特願 2022-137035 | 特開 2024-033454 |
| (4) 「コイル装置、非接触給電装置、非接触受電装置、及び移動体」 |                |                |
|                                   | 特願 2023-130002 |                |
| (5) 「コイルの設計手法」                    | 特願 2025-137078 |                |
| (6) 「電力供給装置」                      | 特願 2025-186202 |                |
| (7) 「電力供給装置」                      | 特願 2024-201285 |                |
| (8) 「可変インダクタ及び電力変換装置」             | 特願 2025-401913 |                |
| (9) 「可変インダクタ及び電力変換装置」             | 特願 2025-401914 |                |

**【受賞歴】 14 件**

- 2012 年 8 月 電気学会優秀論文発表賞 A
- 2013 年 4 月 電気関係学会関西連合大会奨励賞
- 2014 年 8 月 電気学会優秀論文発表賞 A
- 2015 年 3 月 電子情報通信学会無線電力伝送研究会若手奨励賞
- 2015 年 8 月 電気学会優秀論文発表賞
- 2016 年 3 月 長岡技術科学大学学長賞
- 2016 年 3 月 自動車技術会大学院研究奨励賞
- 2016 年 9 月 IEEE Energy Conversion Congress & Exposition 2016, Best Paper Award
- 2018 年 5 月 The 2018 International Power Electronics Conference IPEC-Niigata 2018, The Second Prize Paper Award
- 2019 年 8 月 自動車技術会 技術部門貢献賞
- 2020 年 12 月 2020 IEEE 9<sup>th</sup> International Power Electronics and Motion Control Conference (IPEMC 2020-ECCE Asia), Best Paper Award
- 2021 年 3 月 電気学会優秀論文発表賞
- 2022 年 8 月 電気学会産業応用部門 論文査読促進賞
- 2025 年 5 月 The 7<sup>th</sup> International Electric Vehicle Technology Conference, Young Investigators Award

以上