

Hari Prasad Rimal

PERSONAL PROFILE

Proactive and creative researcher.

Experienced in working independently.

Ability to meet deadlines, and accurate recording and analysis.

RESEARCH POSITION

University of Perugia, Italy.

Research Fellow.

Year: Nov. 2019-Oct.2020.

EDUCATION

University of Perugia, Italy.

PhD in industrial and information engineering.

Year: 2016-2019

Scientific sector discipline: Elettrotecnica.

Dissertation: Lightning indirect effects in the Avionic Environment: Innovative protection techniques for safety improvement in the avionic transportation systems.

Perugia, Italy.

Tribhuvan University, Institute of Engineering

Msc. Electrical Engineering with specialization in power system.

Year: 2012-2016

Distinction Division.

Dissertation: Interleaved VSCs for Improved operation of PMSG based Wind energy conversion system.

Lalitpur, Nepal.

Tribhuvan University, Institute of Engineering

Bachelor in Electrical Engineering.

Year: 2007-2011

Lalitpur, Nepal.

TEACHING EXPERIENCE

Tribhuvan University, Institute of Engineering

Teaching Assistant at the Department of electrical engineering. Year: 2012-2014

Lecturer at the Department of electrical engineering. Year: 2016

Lalitpur, Nepal.

PROFESSIONAL ASSOCIATIONS

Nepal Engineers Association (NEA).

They Need Blood, NGO, Nepal.

IEEE member.

SCIENTIFIC JOURNAL AND CONFERENCE PUBLICATIONS

A. Faba and **H. P. Rimal**, "*Robust Lightning Indirect Effect Protection in Avionic Diagnostics: Combining Inductive Blocking Devices With Metal Oxide Varistors*," in *IEEE Transactions on Industrial Electronics*, vol. 65, no. 8, pp. 6457-6467, Aug. 2018. doi: 10.1109/TIE.2017.2784376.

H. P. Rimal *et al.*, "Protection from Indirect Lightning Effects for Power Converters in Avionic Environment: Modelling and Experimental Validation," in *IEEE Transactions on Industrial Electronics*, doi: 10.1109/TIE.2020.3013794.

H. P. Rimal, S. Q. Antonio, A. Faba and E. Cardelli, "Modeling of Combined Metal Oxide Varistors and Ferrite Core Filters to Augment Avionic Safety During Lightning Transients," in *IEEE Transactions on Electromagnetic Compatibility*, vol. 62, no. 5, pp. 2012-2023, Oct. 2020, doi: 10.1109/TEMPC.2020.2980107.

S. Quondam Antonio, A. Faba, **H. P. Rimal** and E. Cardelli, "On the Analysis of the Dynamic Energy Losses in NGO Electrical Steels Under Non-Sinusoidal Polarization Waveforms," in *IEEE Transactions on Magnetics*, vol. 56, no. 4, pp. 1-15, April 2020, Art no. 6300115, doi: 10.1109/TMAG.2019.2959213.

Rimal, H. P., Antonio, S. Quondam, et al. "Analytical formulation to estimate the dynamic energy loss in electrical steels: Effectiveness and limitations." *Physica B: Condensed Matter* 579 (2020): 411899.

Rimal, H. P., et al. "Modelling of dynamic losses in soft ferrite cores." *Physica B: Condensed Matter* 579 (2020): 411811.

S. Quondam Antonio, F. Riganti Fulginei, **H. P. Rimal** and A. M. Ghanim, "On the Use of Feedforward Neural Networks to Simulate Magnetic Hysteresis in Electrical Steels," 2020

IEEE 20th Mediterranean Electrotechnical Conference (MELECON), Palermo, Italy, 2020, pp. 119-124, doi: 10.1109/MELECON48756.2020.9140585.

A. R. M. Ghanim and **H. Rimal**, "Efficient and Robust Modelling of Vector Magnetic Hysteresis: An Engineering Approach," *2020 IEEE 20th Mediterranean Electro technical Conference (MELECON)*, Palermo, Italy, 2020, pp.114-118, doi: 10.1109/MELECON48756.2020.9140705.

H. P. Rimal, A. M. Ghanim, S. Q. Antonio, A. Faba and E. Cardelli, "Time domain modelling of soft ferrite inductors for power converters applications," *2019 26th IEEE International Conference on Electronics, Circuits and Systems (ICECS)*, Genoa, Italy, 2019, pp. 847-850, doi: 10.1109/ICECS46596.2019.8965083.

A. M. Ghanim, **H. P. Rimal** and F. Cutugno, "Dynamic Losses Prediction in NOG Electrical Steels for Electrical Machines," *2019 IEEE 5th International forum on Research and Technology for Society and Industry (RTSI)*, Florence, Italy, 2019, pp. 415-420, doi: 10.1109/RTSI.2019.8895529.

H. P. Rimal, S. Q. Antonio, A. M. Ghanim and F. Cutugno, "Characterization of Soft Ferrite Cores in Power Electronic Applications," *2019 IEEE 5th International forum on Research and Technology for Society and Industry (RTSI)*, Florence, Italy, 2019, pp. 411-414, doi: 10.1109/RTSI.2019.8895575.

H. P. Rimal, S. Q. Antonio and A. M. Ghanim, "Preisach model identification for the prediction of static hysteresis loops in ferrite cores," *2019 IEEE 5th International forum on Research and Technology for Society and Industry (RTSI)*, Florence, Italy, 2019, pp. 194-197, doi: 10.1109/RTSI.2019.8895564.

G. Ala, **H. P. Rimal** et al., "Design of Soft Ferrite filters for EMI reduction in Power Conversion Systems," *2019 IEEE 5th International forum on Research and Technology for Society and Industry (RTSI)*, Florence, Italy, 2019, pp. 394-399, doi: 10.1109/RTSI.2019.8895566.

H. P. Rimal and A. Faba, "*Lightning indirect effect protection in Avionic Environment*," 2017 IEEE 3rd International Forum on Research and Technologies for Society and Industry (RTSI), Modena, 2017, pp. 1-5. doi: 10.1109/RTSI.2017.8065891.

H. P. Rimal, "*Dynamic Model of Soft Ferrites for Avionic Applications*," 2018 IEEE 4th International Forum on Research and Technology for Society and Industry (RTSI), Palermo, 2018, pp. 1-5. doi: 10.1109/RTSI.2018.8548406.

G. Giglia, G. Ala, L. Mistretta, G. C. Giaconia, S. Q. Antonio and **H. P. Rimal**, "*Design and Assessment of Optimized EMI Filters for Avionic Applications*," 2018 IEEE 4th International Forum on Research and Technology for Society and Industry (RTSI), Palermo, 2018, pp. 1-6. doi: 10.1109/RTSI.2018.8548440.

M. Dionigi and **H. P. Rimal**, "*Shielding Effectiveness and Figure of Merit of Ferrite Shielded Coils*," 2018 IEEE Wireless Power Transfer Conference (WPTC), Montreal, QC, Canada, 2018, pp. 1-4. doi: 10.1109/WPT.2018.8639461.

A. Reatti, F. Corti, S. Q. Antonio and **H. P. Rimal**, "*Design Centering of Wireless Power Transfer Systems for Avionics*," 2018 IEEE 4th International Forum on Research and

Technology for Society and Industry (RTSI), Palermo, 2018, pp. 1-6. doi: 10.1109/RTSI.2018.8548436.

S. Q. Antonio and **H. P. Rimal**, "*Power Losses in Ferromagnetic Steel Sheets for Avionic Environment*," 2018 IEEE 4th International Forum on Research and Technology for Society and Industry (RTSI), Palermo, 2018, pp. 1-6. doi: 10.1109/RTSI.2018.8548458.

H. P. Rimal, M. Brenna, N. R. Karki and A. K. Verma, "*Control of PMSG based wind turbines for renewables based DC distribution*," 2015 9th International Conference on Software, Knowledge, Information Management and Applications (SKIMA), Kathmandu, 2015, pp. 1-7. doi: 10.1109/SKIMA.2015.7400042.

REFERENCE

Antonio Faba,

Assistant Professor, University of Perugia

Email: antonio.faba@unipg.it