
Dr Fabien SIXDENIER

Assistant
professor

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Skills

Teaching in Electrical Engineering (Bachelor and Master degrees).

Research in characterizing and modeling of ferromagnetic materials (NiFe alloys, nanocrystalline, FeCo, FeNi) and design topology of transformers for power electronics

Expérience

Université Claude Bernard Lyon 1/Maître de conférences

2006 to today

- Responsible of OMEGA building (laboratoire AMPERE)
- Responsible of 5 master and 3 bachelor courses
- Co-Responsible of electrotechnical cursus of the electrical engineering master degree.
- Co-director of 7 Phd thesis
- Director of three 3 Phd thesis
- Reviewer pour les revues IEEE Power electronics, Transactions on Magnetics, Journal of magnetism and magnetic materials
- Associate member of Supergrid Institute (5%)

Université Claude Bernard Lyon 1/Phd Student

2002 to 2005

“Prédictions de signatures électriques en prenant en compte les lois de matériaux” : Modelling of electromagnetic systems by coupling finite elements method and reluctance network methods

Formation

Université Claude Bernard Lyon 1/Habilitation to direct research activities
2014

"De l'apport de la modélisation des matériaux magnétiques doux aux applications du génie électrique" (benefits from modelling magnetic materials for electrical engineering applications)

Université Claude Bernard Lyon 1/Phd Thesis

2005

"Prédiction de signatures électriques dans un actionneur en prenant en compte les lois de matériaux", Université Claude Bernard Lyon 1

Université Claude Bernard Lyon 1/Master degree in Electrical Engineering

2002

Distinctions

- Best paper award, conférence EPEC 2015, [Comparison between numerical and analytical methods of AC resistance evaluation for medium frequency transformers : Validation on a prototype transformer.](#)

5 most relevant publications

1	https://doi.org/10.1109/TMAG.2018.2858743	Accurate models of proximity losses in transformers
2	https://doi.org/10.1108/COMPEL-12-2018-0535	Temperature dependent hysteresis model
3	https://doi.org/10.1109/TPEL.2014.2330952	Accurate model of core losses in DC/DC converter
4	https://dx.doi.org/10.1109/TMAG.2013.2285274	Statistical study of magnetic performances of nanocrystalline cores

5	https://doi.org/10.1109/APEC.2019.8722279	Design of a low-Capacitance Planar Transformer for a 4 kW/500 kHz DAB Converter