Dr. Hoang Trung-Kien

Energy Department, University of Science and Technology of Hanoi (USTH) [Ver. 04/2019]

Personal Information

Date of birth: 24/08/1985
Place of birth: Quang Ninh, Vietnam
Nationality: Vietnamese
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Address: 18 Hoang Quoc Viet, Cau Giay, Hanoi

Research Interests

Design and optimization of electrical machines, electric vehicles, renewable energy.

Working Experiences

University of Science & Technology of Hanoi, Vietnam — Nov. 2017 - Present

Lecturer & researcher on Electrical engineering and Renewable energies

CentraleSupélec, Gif-sur-Yvette, France — Dec. 2016 - Nov. 2017

Postdoctoral researcher, Electrical engineering

- Topic: *Design of a 20 MW fully superconducting wind turbine generator*

Japanese Gasoline Company, Vietnam — Jun. 2011 - Dec. 2012

Electrical engineer

- Proposal preparation.
- Basic and detailed designs: earthing & lightning protection, lighting, power supply and telecom systems.

Education

ENS Cachan, Cachan, France — Oct. 2013 - Nov. 2016

Ph.D., Electrical engineering

- Topic: *Study of Double Excitation Synchronous Machine in Railway Traction*
- Advisors: Prof. Mohamed Gabsi, Prof., Dr. Lionel Vido, and Dr. Frédéric Gillon

University of Science & Technology, Deajeon, South Korea — Mar. 2009 - Feb. 2011

M.S., Energy and power conversion engineering

- Topic: *Torque Ripple Reduction in Transverse Flux Rotary Machine with Surface Mounted Permanent Magnet Type of Rotor*
- Advisor: Dr. Kang Do-Hyun

Korea Electrotechnology Research Institute, Changwon, South Korea

Internship — Nov. 2008 - Mar. 2009

- Topic: *Modeling of linear transverse flux machines*
- Advisor: Dr. Kang Do-Hyun

Hanoi University of Science & Technology, Hanoi, Vietnam — Sept. 2003 - Jun. 2008

B.S., Power system engineering

- Topic: *Partial Discharge Diagnostic in Electrical Apparatus*
- Advisor: Dr. Pham Hong-Thinh

Peer-reviewed journal articles

1. **Trung-Kien Hoang**, Lionel Vido, Frédéric Gillon, and Mohamed Gabsi "Structural optimization to maximize the flux control range of a double excitation synchronous machine", *Mathematics and Computers in Simulation*, vol. 158, pp. 235-247, 2019.
2. **K. Hoang**, L. Quéval, L. Vido, and C. Berriaud "Design of a 20 MW fully superconducting wind turbine generator to minimize the levelized cost of energy", *IEEE Transactions on Applied Superconductivity*, vol. 28, no. 4, pp.1-5, Jun. 2018. Art. no. 5206705.
3. **K. Hoang**, L. Vido, M. Gabsi, and F. Gillon "Flux control range broadening and torque ripple minimization of a double excitation synchronous motor" *IEEE Transactions on Magnetics*, vol. 53, no. 1, pp.1-10, Jan. 2017. Art. no. 8100510.
4. **Trung-Kien Hoang**, Do-Hyun Kang and Ji-Young Lee, "Comparison between various designs of transverse flux linear motor in terms of thrust force and normal force", *IEEE Transactions on Magnetics*, vol.46, pp.3975-3801, Oct. 2010.

International conference articles

1. **K. Hoang**, L. Quéval, L. Vido, and C. Berriaud "Design of a 20 MW fully superconducting wind turbine generator to minimize the levelized cost of energy", *European Conference on Applied Superconductivity (EUCAS2017)*, Geneva, Switzerland, Sept. 2017.
2. **K. Hoang**, L. Vido, F. Gillon, and M. Gabsi "Thermal analysis of a double excitation synchronous machine", *Electrimacs international conference*, Toulouse, France, Jul. 2017.
3. **K. Hoang**, L. Vido, F. Gillon, and M. Gabsi "Geometry optimization to increase the flux control range of a double excitation synchronous motor", *Electrimacs international conference*, Toulouse, France, Jul. 2017.
4. **Trung-Kien Hoang**, Loïc Quéval, Lionel Vido, and Christophe Berriaud "Impact of the rotor blade technology on the levelized cost of energy of an offshore wind turbine", *International Conference on Optimization of Electrical and Electronic Equipment & International Aegean Conference on Electrical Machines and Power Electronics (OPTIM-ACEMP) Proceeding*, pp.623-629, Brasov, Romania, May 2017.
5. **K. Hoang**, M. Gabsi, L. Vido, and F. Gillon "Comparison between a double excitation synchronous machine and a permanent magnet synchronous machine according to various constant power speed ranges", *Twelfth International Conference on Ecological Vehicles and Renewable Energies (EVER)*, pp.1-7, Monaco, Apr. 2017.
6. **K. Hoang**, L. Vido, F. Gillon, and M. Gabsi "Modeling of double excitation synchronous motors using nodal based - generalized equivalent magnetic circuit", *Symposium on Electromagnetic Fields (ISEF) Proceeding*, Valencia, Spain, Sep. 2015.
7. **K. Hoang**, L. Vido, M. Gabsi, and F. Gillon "3D modeling of double excitation synchronous motor with reluctance network", *The International Conference on Electrical Machines (ICEM) Proceeding*, pp.2598-2604, Berlin, Germany, Sep. 2014.
8. **Trung-Kien Hoang** and Do-Hyun Kang, "Designing of transverse flux machine considering magnetic saturation", *LDIA Proceeding*, pp.377-380, Seoul, South Korea, Sep. 2009.
9. Ji-Young Lee, Ji-Won Kim, Byung-Chul Woo, Do-Hyun Kang, Kwang-Woon Kim and **Trung-Kien Hoang**, "Characteristic analysis of permanent magnet transverse flux linear motor spiral core", *Japanese-Mediterranean Workshop on Applied Electromagnetics Engineering for Magnetic, Superconducting Multifunctional and Nanomaterials (JAPMED) Proceeding*, pp.177-178, Bucharest, Romania, Jul. 2009.

Local conference articles

1. **Trung-Kien Hoang**, Ji-Young Lee, Ji-Won Kim, Do-Kwan Hong, Shi-Uk Chung and Byung-Chul Woo, "Magnetic sensor design for linear machine", *the Korean Institute of Electrical Engineers (KIEE) Proceeding*, Busan, South Korea, Jul. 2010.
2. **Trung-Kien Hoang**, Ji-Young Lee, Ji-Won Kim, Seung-Ryul Moon, Do-Kwan Hong and Byung-Chul Woo, "Transverse flux rotary machine with orthogonal lamination stator core", *the Korean Institute of Electrical Engineers (KIEE) Proceeding*, Busan, South Korea, Jul. 2010.
3. E.S. Choi, **Hoang Trung-Kien**, G.H. Rim and C.S. Kim, "Promotion policy for popularization and economic evaluation of electric vehicles", *the Korean Institute of Electrical Engineers (KIEE) Proceeding*, pp.949-950, Muju, South Korea, 2009.
4. Ji-Young Lee, Ji-Won Kim, Byung-Chul Woo and **Trung-Kien Hoang**, "Characteristic analysis using equivalent magnetic circuit network method for permanent magnet excited transverse flux linear motor with spiral core in a mover", *the Korean Institute of Electrical Engineers (KIEE) Proceeding*, pp.794-795, Muju, South Korea, 2009.

Awards

- Best paper award, *Twelfth International Conference on Ecological Vehicles and Renewable Energies (EVER)*, Monaco. Apr. 2017
- Excellent award for the outstanding achievement of scholarly works and excellent results from research works, UST. Feb. 2011

Languages

- Vietnamese (Native)
- English (IELTS 6.5)
- French (Beginner)

Computer MATLAB, ANSYS, Autodesk, Origin, LaTeX, MS Office, etc.