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Department of Energy Conversion Engineering

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1. Personal data:

Date of birth : January 1, 1971

Place of birth : Pontianak, Indonesia

Sex : Male

Religion : Islam

Marital Status : Married

2. Educational Qualifications:

1. Doctor of Engineering, Energy and Environment Science Program, Department of Electrical Engineering, Nagaoka University of Technology, Japan, August 2005.
2. Master of Engineering, Department of Electrical Engineering, Bandung Institute of Technology (ITB), Indonesia, February 2000.
3. Bachelor of Engineering, Department of Electrical Engineering, University of Tanjungpura, Indonesia, January 1995.

3. Professional Association:

1. Member of Institute of Electrical and Electronic Engineers (MIEEE).
2. Member of IEEE Power Engineering Society.
3. Member of IEEE Industry Application Society.
4. Member of American Institute of Aeronautics and Astronautics (MAIAA).

5. Working Experience:

Academic

1. Senior Lecturer at Department of Energy Conversion Engineering, Faculty of Electrical Engineering, University of Technology Malaysia, 2008 – present.
2. Lecturer at Department of Energy Conversion Engineering, Faculty of Electrical Engineering, Universiti Teknologi Malaysia, 2006 – 2008.
3. Visiting Researcher, Department of Advanced Energy, University of Tokyo, March 2006.

4. Lecturer at Department of Electrical Engineering, University of Tanjungpura, Indonesia, 1995 – 2006.

Management

1. Head of Basic Machines Laboratory, Department of Energy Conversion Engineering, Faculty of Electrical Engineering, University of Technology Malaysia, December 2006 – present.

5. Award/Scholarships:

1. Ministry of Education, Sport, Culture, Science and Technology, Japan (Monbukagakusho) scholarship, September 2002 – August 2005.
2. Higher Education Development Support, Japan-International Cooperation Agency (JICA) scholarship, August 1997 –February 2000.
3. Biography inclusion in Who's Who in the World 2008.

6. Interest Field :

1. Energy Conversion
2. Renewable Energy System
3. Electrical Machines and Drives

7. Publications

Journal Papers:

1. Nobuomi Sakamoto, Makbul Anwari, Junichi Kondo and Nobuhiro Harada, "Three-dimensional numerical analyses on magnetohydrodynamic accelerator", *Energy Conversion and Management*, Elsevier UK, Vol. 48, Issue 8, pp. 2407-2415, 2007.
2. Makbul Anwari, Nobuomi Sakamoto, Triwahju Hardianto, Jun-ichi Kondo and Nobuhiro Harada, "Numerical Analysis of Magnetohydrodynamic Accelerator Performance with Diagonal Electrode Connection", *Energy Conversion and Management*, Elsevier UK, Vol. 47, Issue 13-14, pp. 1857-1867, 2006.
3. Makbul Anwari, Satoru Takahashi and Nobuhiro Harada, "Performance Study of A Magnetohydrodynamic Accelerator Using Air-Plasma as Working Gas", *Energy Conversion and Management*, Elsevier UK, Vol. 46, Issue 15-16, pp. 2605-2613, 2005.
4. Makbul Anwari, Satoru Takahashi and Nobuhiro Harada, "Numerical Simulation for Performance of a Magnetohydrodynamic Accelerator", *Trans. of Japan Soc. for Aeronautical and Space Sciences*, Vol. 48, No. 160, August 2005.

Conference Papers:

1. Makbul Anwari, M. Imran Hamid, and Taufik, "Power Quality Behavior of Single Phase Fed Adjustable Speed Drive from Grid of PV Generation", accepted for presentation at the IEEE International Conference on Power and Energy 2008.
2. M. Imran Hamid, Makbul Anwari, Taufik, and Zainal Salam "Load Sharing Characteristic of Single Phase PV Inverter to Three Phase Grid", accepted for presentation at the IEEE International Conference on Power and Energy 2008.
3. Taufik, Erin Matsumoto and Makbul Anwari, "Impact of Multiple Adjustable Speed Drive System to Power System Harmonics", accepted for presentation at the IEEE International Conference on Power and Energy 2008.
4. Sukarsan, Makbul Anwari, and Nobuhiro Harada, "Performance Study of a Diagonal MHD Accelerator for Space Propulsion, accepted for presentation at the IEEE International Conference on Power and Energy 2008.
5. Makbul Anwari, M. Imran Hamid and Taufik, "Modeling and Simulation of a Network of Adjustable Speed Drives", accepted for presentation at the International Conference on Modeling, Simulation and Optimization 2008 in Sharjah, UAE.
6. Makbul Anwari, M. Imran Hamid and Taufik, "Modeling and Simulation of Multi-pulse Rectifier Connected to Adjustable Speed Drive", accepted for presentation at the International Conference on Modeling, Simulation and Optimization 2008 in Sharjah, UAE.
7. Makbul Anwari and Sukarsan, "Effect of Magnetic Field on a Diagonal MHD Accelerator", accepted for presentation at 2008 IEEE Vehicle Power and Propulsion Conference in Harbin, China.
8. Makbul Anwari and Sukarsan, "Performance Characteristic of a Faraday MHD Accelerator: Effect of Magnetic Field to the Thrust", accepted for presentation at 2008 IEEE Vehicle Power and Propulsion Conference in Harbin, China.
9. Taufik, Alejandro Polleri and Makbul Anwari, "Design and Analysis of Paralleled Series-Loaded-Resonant Converter", accepted for presentation at the IEEE PES Conference POWERCON 2008.
10. Makbul Anwari, Rabia Qindeel and Sukarsan, "Overview of Numerical Simulation for Performance of MHD Accelerator using Air-Plasma", The 1st International Meeting on Thermo-Fluid, Johor Bahru, Malaysia, August 2008.
11. Alejandro Polleri, Taufik and Makbul Anwari, "Modeling and Simulation of Paralleled Series-Loaded-Resonant Converter", Proceedings of Asia Modeling Symposium 2008, Kuala Lumpur, Malaysia, May 2008.

12. A. Hernadi, Taufik and Makbul Anwari, "Modeling and Simulation of 6-Pulse and 12-Pulse Rectifiers under Balanced and Unbalanced Conditions with Impacts to Input Current Harmonics", Proceedings of Asia Modeling Symposium 2008, Kuala Lumpur, Malaysia, May 2008.
13. Taufik and Makbul Anwari, "Modeling and Simulation of Current Ripple in DC Link Connecting Two PWM Inverters Using Matlab/Simulink", Proceedings of Asia Modeling Symposium 2008, Kuala Lumpur, Malaysia, May 2008.
14. Nikil Mulakken, Taufik and M. Anwari, "Power Quality Measurements of a DC Motor Drive", Proceedings of IASTED Asia Power and Energy Conference 2008 (AsiaPES 2008), Langkawi, Malaysia, April 2008.
15. C. Mitsui, S. Tu, Taufik and M. Anwari, "Efficiency Study of Adjustable Speed Drive with Dual Motor Connection", Proceedings of International Power Engineering Conference, Singapore, December 2007.
16. Makbul Anwari, "Efficiency Analysis of a Magnetohydrodynamic Accelerator", Proceedings of International Conference on Intelligent and Advanced System, Kuala Lumpur, November 2007.
17. Taufik, Patrick Luther and Makbul Anwari, "Digitally Controlled ZVS Quasi Resonant Boost Converter with M-Type Switch", Proceedings of International Conference on Intelligent and Advanced System, Kuala Lumpur, November 2007.
18. Taufik, Yat Tam and Makbul Anwari, "Comparative Study of Sinusoidal PWM and Hysteresis Modulation in Current Source Inverter", Proceedings of International Conference on Intelligent and Advanced System, Kuala Lumpur, November 2007.
19. Taufik, A. Hernadi, R. Rudianto, and Makbul Anwari, "Performance Study of Power Factor Correction Circuits", Proceedings of International Conference on Electrical Engineering and Informatics, Bandung, Indonesia, June 2007.
20. Taufik, M. Starman and Makbul Anwari, "Digitally Controlled Synchronous Buck Converter", Proceedings of International Conference on Electrical Engineering and Informatics, Bandung, Indonesia, June 2007.
21. Makbul Anwari, Triwahju Hardianto, Nobuomi Sakamoto and Nobuhiro Harada, "Magnetohydrodynamics Accelerator Performance with Equilibrium Air for Space Application", Proceedings of 56th International Astronautical Congress, Fukuoka, Japan, 17-21 October 2005.
22. Makbul Anwari and Nobuhiro Harada, "MHD Energy Conversion Studies for Space Application", Proceedings of Brunei International Conference on Engineering and Technology 2005 (BICET 2005), Bandar Seri Begawan, Brunei, 15-18 August 2005.

23. Triwahju Hardianto, Makbul Anwari, Nobuomi Sakamoto and Nobuhiro Harada, "Performance Study of 1-Dimensional Analyses on an MHD Accelerator and Effect of Non-Equilibrium Plasma", Proceedings of 19th International Conference on Numerical Simulation of Plasmas and 7th Asia Pacific Plasma Theory Conference, 12-15 July 2005, Nara, Japan.
24. Makbul Anwari, Triwahju Hardianto, Nobuomi Sakamoto and Nobuhiro Harada, "Performance Study of Diagonal Type MHD Accelerator", AIAA Paper 2005-0366, 43rd AIAA Aerospace Science and Meeting, Reno, US, January 2005.
25. Nobuomi Sakamoto, Makbul Anwari, Jun-ichi Kondo and Nobuhiro Harada, "Three-dimensional Numerical Analyses of MHD Accelerator", AIAA Paper 2005-4922, 36th AIAA Plasmadynamics and Lasers Conference, Toronto, Canada, 6 - 10 June 2005.
26. Nobuomi Sakamoto, Makbul Anwari, Triwahju Hardianto and Nobuhiro Harada, "Basic Studies on Performance of MHD Accelerator", Proceedings of the XVth International Conference on MHD Energy Conversion, Moscow, Russia, 24-27 May, 2005.
27. Jun-ichi Kondo, Nobuomi Sakamoto, Makbul Anwari and Nobuhiro Harada, "Comparison of One-dimensional and Three-dimensional Numerical Analysis of MHD Accelerator" (in Japanese), IEEJ branch Niigata Seminar, 20 November 2004.
28. Nobuomi Sakamoto, Makbul Anwari and Nobuhiro Harada, "Fundamental Study on Phenomenon of Three-dimensional under the MHD Environment" (in Japanese), IEEJ Technical Meeting on Renewable Energy and Environmental Science, Tsukuba, Japan, September 8 - 10, 2004
29. Makbul Anwari, Satoru Takahashi and Nobuhiro Harada, "Numerical Simulation for Performance of a Magnetohydrodynamic Accelerator", AIAA Paper 2004-2363, 35th AIAA Plasmadynamics and Lasers Conference, Portland, US, 28 June-2 July 2004.
30. Makbul Anwari, Satoru Takahashi and Nobuhiro Harada, "Basic Study of MHD Accelerator Using Air-Plasma", International COE Forum on Plasma Science and Technology, Nagoya, 6-7 April 2004.
31. Satoru Takahashi, Makbul Anwari and Nobuhiro Harada, "Basic study of Magnetohydrodynamic Acceleration" (in Japanese), IEEJ branch Niigata Seminar, 2003.
32. Makbul Anwari, Yanuar Z. Arief and Usman A. Gani, "Analysis and Calculation of Harmonic Current in A Three Phase Rectifier with unbalanced power supply condition", Proceeding of HEDS-JICA on Science and Technology, November 2000.

8. Research Experiences:

1. A proposal on Fuel Cell Energy System has been submitted to Ministry of Science, Technology and Innovation, Malaysia, Head of Project.
2. A Proposal on Wind Energy Power Generation has been submitted to Ministry of Higher Education, Malaysia, Head of Project.
3. Power Quality Study of PV-Inverter System for Distributed Generation Connected to a Network Adjustable Speed Drives, Research funded by Science Fund (Ministry of Science, Technology and Innovation, Malaysia), RM 171,500, August 2007 – July 2009, Head of Project.
(A Collaboration Research with Assoc. Prof. Dr. Taufik, Department of Electrical Engineering, California Polytechnic State University, San Luis Obispo, California, USA)
4. Study on Magnetohydrodynamic Acceleration for Space Propulsion System, Research Funded by FRGS (Ministry of Higher Education, Malaysia), RM 100,000, September 2007 – August 2009, Head of Project.
5. “Analysis of Instantaneous Reactive Power of Induction Motor under Unbalanced Conditions, Research funded by SPP/DPP University of Tanjungpura, Indonesia, 2000, Head of Project.
6. “Analysis and Calculation of Harmonic Current in A Three Phase Rectifier with unbalanced power supply condition”, Research funded by HEDS-JICA, 1999, Member of researcher.
7. “Waterfall Source of Energy for Rural Energy Power Supply – Case Study in West Kalimantan, Indonesia”, Research supported by Department of Mining and Energy Resources, Indonesia, 1997, Member of researcher.

9. Professional Activities

Review:

1. Reviewer for the IEEE International Conference on Power and Energy 2008.
2. Reviewer for the Malaysia – Japan International Symposium on Advanced Technology 2007, Kuala Lumpur, Malaysia.
3. Reviewer for the International Conference on Intelligent and Advanced System (ICIAS 2007), Kuala Lumpur, Malaysia.
4. Reviewer for the *Jurnal ElektriKa*, Published by Universiti Teknologi Malaysia (2007, 2008).

Administrative Work:

1. Graduate Faculty Member, Faculty of Electrical Engineering, University of Technology Malaysia.
2. Member of E-Learning Committee, Faculty of Electrical Engineering, University of Technology Malaysia.
3. Preparation for new Machines Testing Laboratory, Department of Energy Conversion Engineering, Faculty of Electrical Engineering, University of Technology Malaysia.
4. Editor, Jurnal Elekrika, Published by University of Technology Malaysia.
5. Organizing Committee of International Power and Energy Conference (PECON 2008), IEEE PELS, IAS, IES Malaysia Chapter.
6. Member of Task Team for Preparation of Inverter Quality Control Center, Department of Energy Conversion Engineering, Faculty of Electrical Engineering, University of Technology Malaysia, October 2006 - April 2007.
7. Head of Mid and Final Test Committee in Engineering Faculty, University of Tanjungpura, Indonesia, Academic year 2001/2002.
8. Member of Technological and Professional Skills Development Project's, Dept. of Electrical Engineering, University of Tanjungpura, Indonesia, September 2000 - March 2001.
9. Vice Head of Electrical Engineering's Team at Seminar on Preparation of Electrical Engineering Department in Globalization and Autonomy, 2001.
10. Member of Mid and Final Test Committee in Engineering Faculty, University of Tanjungpura, Indonesia, Academic Year 2000/2001.
11. Head of Team "Tracer Study Alumni of Engineering Faculty, University of Tanjungpura, Indonesia, 2001.

12. Teaching/Academic Experiences

1. Subject taught at Department of Energy Conversion Engineering, Faculty of electrical Engineering, University of Technology Malaysia:

Undergraduate Program

SEE 2053 - Electrical Technology, Semester 2, 2006/2007

SEE 2742 - Electrotechnique Laboratory, Semester 2, 2006/2007

SEE 3742 - Electrical Machine Laboratory (SPACE), Semester 2, 2006/2007

SEE 2053 - Electrical Technology, Semester 1, 2007/2008

SEE 1712 - Electrical Practice Laboratory, Semester 1, 2007/2008

SEE 4722 - Power Electronic Laboratory, Semester 1, 2007/2008

SEE 3433 - Electrical Machine (SPACE), Semester 1, 2007/2008

SEE 3433 - Electrical Machine, Semester 2, 2007/2008

SEE 3742 - Electrical Machine Laboratory, Semester 2, 2007/2008
SEE 2053 - Electrical Technology (SPACE), Semester 2, 2007/2008
SEU 2002 - Electrical Technology, Semester 1, 2008/2009
SAB 2032 - Electrical and Mechanical System, Semester 1, 2008/2009
SEE 2742 - Electrotechnique Laboratory, Semester 1, 2008/2009

Master Program

MEP 1652 - Integrated Resource Planning in Energy Sector, Semester 2,
2007/2008

MEP 1652 - Integrated Resource Planning in Energy Sector, Semester 1,
2008/2009

2. Supervisor of Postgraduate students, Faculty of Electrical Engineering, University of Technology Malaysia.
 - 2 Master Students by Research
 - 1 Master Student by Course
 - 1 PhD student
3. Supervisor of student's final project, Undergraduate Program, Department of Energy Conversion, Faculty of Electrical Engineering, University of Technology Malaysia.
 - Undergraduate (Semester 1, 2007/08):
 - a. SEE 4812 (PSM 1) - 5 students.
 - b. SEE 5812/4812 (PSM 1/SPACE) - 1 student
 - Undergraduate (Semester 1, 2008/09):
 - a. SEE 4812 (PSM 1) - 3 students.
4. Examiner of student's final project, Graduate Program, Faculty of Electrical Engineering, University of Technology Malaysia.
5. Examiner of student's final project, Undergraduate Program, Department of Energy Conversion, Faculty of Electrical Engineering, University of Technology Malaysia.
6. Examiner of student's final project, Undergraduate Program (SPACE), Faculty of Electrical Engineering, University of Technology Malaysia.
7. Supervisor and examiner of student's final project (thesis), Department of Electrical Engineering, University of Tanjungpura, Indonesia.
8. Subject taught at Department of Electrical Engineering, University of Tanjungpura, Indonesia:
 - Basic of Energy Conversion
 - Introduction of Power System
 - Engineering Electromagnetic

Engineering Mathematics

Electrical Machines

Analysis of Electrical Machines

Non Conventional Power Plant

Electric Power Station for Rural Electrification,

9. Supervisor of Student's laboratory experiment in Laboratory of Electrical Machinery and Energy Conversion, Department of Electrical Engineering, University of Tanjungpura, Indonesia.
10. Supervisor of Student's Industrial Training, Department of Electrical Engineering, University of Tanjungpura, Indonesia.