

CURRICULUM VITAE

Assoc. Prof. Dr. Nazrul Effendy, M.Eng., P.Eng.

Address:

Intelligent and Embedded System Research Group
Department of Nuclear Engineering & Engineering Physics
Faculty of Engineering, Universitas Gadjah Mada
Jl. Grafika 2, Jogjakarta, Indonesia
Mobile: +62-81391824474
E-mail: nazrul@ugm.ac.id



Educational Background:

- 2009: PhD degree from the sandwich program between Chulalongkorn University (Digital Signal Processing Research Laboratory, Division of Communication, Electrical Engineering Department) and Tokyo Institute of Technology (Furui Laboratory, Computer Science Department)
 - Research Field: pattern recognition
 - Advisor: Ass. Prof. Dr. Somchai Jitapunkul (Chulalongkorn Univ.)
 - Co-advisor: Prof. Dr. Sadaoki Furui (Tokyo Institute of Technology)
 - September 2005-August 2006: Research student at Furui Laboratory, Computer Science and Engineering Department, Tokyo Institute of Technology under the guidance of Prof. Dr. Sadaoki Furui
- 2001, Master of Engineering, Electrical Engineering Study Program, Program of Graduate Studies, Gadjah Mada University, Indonesia
- 1998, Sarjana Teknik (engineer), Instrumentation Engineering, Department of Nuclear Engineering, Gadjah Mada University, Indonesia

Scholarships /Awards

- Staff Exchange Program, machine Learning and Intelligent Optimization (LION) Laboratory, Trento University, Italy, Erasmus Mundus AREAS Scholarship, Nov 3 – Dec 1, 2013
- Staff Exchange Program, Instrumentation, Control and Embedded Systems (ICES) research group, School of Engineering and Digital Arts, Kent University, Erasmus Mundus Lotus Scholarship, Oct 22 – Nov 20, 2011
- Post Doc, Department of Control and Computer Engineering, Politecnico di Torino, Italy, Erasmus Mundus Scholarship, July 3, 2010-May 3, 2011 (10 months)
- Short Term Research Program in Japan, the grant consists of round-trip airfare, local transportation in Japan, accommodation in Japan, Shinoda Laboratory, Tokyo Institute of Technology, Japan, supported by AUN/SEED Net, August 11 – Sept 8, 2009.
- Malaysian Technical Cooperation Program (MTCP) Fellowship, Multimedia University, tuition fee, air travel, and living allowance, May 12 – May 27, 2007

- AUN/SEED-Net (JICA) Scholarships, Doctoral Sandwich Program, Chulalongkorn University-Tokyo Institute of Technology, tuition fee, air travel, book allowance, and living allowance (since 27 October 2003 for 3 years)
- JICA, Research student, Department of Computer Science, Tokyo Institute of Technology, Tokyo, Japan, September 2005 – August 2006.
- URGE Scholarship, tuition fee and living allowance, in persuading master's degree in Gadjah Mada University, 1998-2001
- Danamon Bank Scholarship, Living allowance, in persuading bachelor's degree in Gadjah Mada University, 1997-1998
- Astra Scholarship, living allowance, in persuading bachelor's degree in Gadjah Mada University, 1996-1997
- PPA Scholarship, living allowance, in persuading bachelor's degree in Gadjah Mada University, 1995-1996
- Supersemar Scholarship, living allowance, in persuading bachelor's degree in Gadjah Mada University, 1994-1995

Work Experiences:

- Associate Professor, Engineering Physics Department, Faculty of Engineering, Gadjah Mada University, March 1, 2011 – present
 - The Application of Microprocessor
 - Robotic Instrumentation Systems
 - Sensor Technology
 - Artificial Intelligence (Artificial Neural Networks, Fuzzy Logic and Expert Systems, deep learning, SVM, K-NN)
 - Data Processing
 - The engineering of Instrumentation System of Intelligent Building
 - Mathematics for Engineering Analysis
- Postdoctoral research fellow, Department of Control and Computer Engineering, Politecnico di Torino, Italy, July 3, 2010-May 3, 2011
- Visiting Researcher, Tokyo Institute of Technology, August 11- September 8, 2009

Course/ training:

- Internet of Things (IoT) in oil and Gas Industries, PT Pertamina RU 5, Balikpapan, Okt 2020
- Introduction to data analytics for business, University of Colorado at Boulder (by David Torgerson, Ph.D.), online course, Aug-Nov, 2020
- Introduction to the Internet of Things and Embedded Systems, University California at Irvine, online course, May – June 2020
- How to Win a Data Science Competition: Learn from Top Kagglers, National Research University - Higher School of Economics, online course, May – Aug 2020
- 5G Technology and Internet of Things, DR. Ir. Ismail, MT (Direktur Jenderal Sumber Daya dan Perangkat Pos dan Informatika – Kemenkominfo), June 2020

- AI for Medical Diagnosis, Stanford University and deeplearning.ai, 3-week online course, April - May 2020
- Applied AI with DeepLearning, IBM, 4-week online course, Apr - May 2020
- Advanced Machine Learning and Signal Processing, IBM, 4-week online courses, Apr - May 2020
- Training on Greenship Professional, Green Building Council Indonesia, Yogyakarta, Jan - Feb 2019
- Workshop on Basic to Advance Microscopy Techniques and Live Cell Imaging Solution, facilitator: Clement Khaw, Ph.D (Nicon Singapore), Yogyakarta, Oct 11, 2018
- Practical AI, from strategy to execution, general lecture by On Lee (CTO and CEO of GDP Labs, CTO of GDP Venture), Yogyakarta, Sep 14, 2018
- Global Water Security: Challenges and Opportunities, general lecture by Prof. Roger Falconer (School of Engineering, Cardiff University), Sep 6, 2018
- Training on Building Energy Analysis, delivered by Prof Moncef Krarti (University of Colorado Boulder, <https://www.colorado.edu/ceae/moncef-krarti>), Yogyakarta, Aug 20-21, 2018
- Training of PV and Smart Grid, Centre for Development of Sustainable Region (CDSR), UGM, Yogyakarta, May 11-13, 2018 (supported by USAID)
- Training on Greenship Associate, Green Building Council Indonesia, Jakarta, Nov 25-26 2016
- ESEA Green Boiler Technology Course, Training of the Trainers Workshop. Jakarta, Indonesia Oct 28-29, 2013 (supported by UNIDO)
- Workshop on Developing education through research, facilitators: Ariel B. Lindner, Dusan Misevic, Antoine Decrulle, Stephane Douady, Luping Xu, Eva-Maria Schoetz (Center for researches and Interdisciplinary – Paris), held in Gadjah Mada University, Dec 20-23, 2011
- Energy for Sustainable Development in Asia, delivered by energy experts including Mr. Sivanappan Kumar (AIT), Ms. Christina Aristanti (Dian Desa, ENERGIA), Mr. V.K. Vijay (IIT), Mr. Bundit Funtamasan (JGSEE), Mr. Tetsuo Tezuka (Kyoto U), Mr. Hideaki Ohgaki (Kyoto U), Mr. Keichi Ishihara (Kyoto U), Mr. Low Seow Chay (Nanyang Tech U), Mr. Yanjia Wang (Tsinghua U), Mr. P.Ravindra (U Malaysia Sabah) and Mr. Hubert Gijzen (UNESCO), Feb 10 – Apr 7, 2011 (supported by UNESCO)
- Renewable Energy Policy & Planning for Sustainable Development, delivered by energy experts including Mr. Sivanappan Kumar (AIT), Dr. Abdul Salam (AIT) and Dr. Charles Marpaung (AIT), Mar 10 - Apr 5, 2010 (supported by UNESCO)
- Multimedia Enhanced Instructions System for Technical Education and Training (MEIST), Multimedia University, Malaysia, May 12 – May 27, 2007 (under the Malaysian Technical Cooperation Program (MTCP))
- Recent Advances in Ultrawide Bandwidth Communications and Networks, Prof. Dr. Moe Win, Laboratory for Information and Decision Systems (LIDS), Massachusetts Institute of Technology, <http://wgroups.lids.mit.edu/>, held in Chulalongkorn University, March 9, 2007.
- Technical/Professional Writing Course, International School of Engineering, Faculty of Engineering, Chulalongkorn University, August 15-October 10, 2006
- Parameter Estimation in Chemical Plant using Genetic Algorithm, Associate Prof Dr.

Muhamed Azlan Hussain, University of Malaya, Email: mohd_azlan@um.edu.my, held in Chulalongkorn University, September 8, 2004

- Advanced Process Dynamics and Control, Lecture and Computer Lab Using MATLAB and Simulink by Professor Sirish L. Shah (Author of Control Loop Performance Assessment: Theory and Application, <http://www.ualberta.ca/~slshah>, University of Alberta, Canada, Held in Chulalongkorn University, January 16-26, 2004.
- Laser Technology in Peace and War, Prof. Nicolaas Bloembergen (a Nobel Laureate for Physics in 1981, <http://www.optics.arizona.edu/Faculty/Resumes/Bloembergen.htm>, the Optical Sciences Center at University of Arizona, Held in Chulalongkorn University, January 12, 2004
- Sciences and Global Communication based on Optical Science and Technology, Prof. Nicolaas Bloembergen (a Nobel Laureate for Physics in 1981, <http://www.optics.arizona.edu/Faculty/Resumes/Bloembergen.htm>), the Optical Sciences Center at University of Arizona, Held in Chulalongkorn University, January 12, 2004.

Keynote Speaker / Workshop Trainer:

- Keynote speaker, “The role of applied physics scientist to develop sustainable green building, The Third National Seminar of Physics, Pekanbaru, 29 September 2018.
- Trainer, AI using rapid miner, Universitas Kristen Satya Wacana, Salatiga, 2016
- Keynote Speaker, AI and its application, Universitas Kristen Satya Wacana, Salatiga, 2015
- Instructor, Simulation and modeling of Environmental problems using Simulink, Indonesian Atomic Energy Agency, Yogyakarta, 1998
- Instructor, Radioactive Source Replacement Laboratory, Training of Radiation Protection Operator, Gadjah Mada University, 1998

Research /Project Experiences:

- The implementation of machine learning on MRI images for the diagnosis of brain tumours, 2023
- Hand gesture recognition using machine learning, 2023
- A Study of Biometric Identification of Finger Vein using VGG16, 2021
- A Study of Biometric Identification of Finger Veins using Capsule Networks, 2020
- A Monitoring System of the Performance of Neutron Detector in Multipurpose Reactor GA Siwambessy using Artificial Neural Networks and SVM , 2019
- A Design of Detection System of Abnormality of Sensors in Multipurpose Reactor GA Siwabessy using Artificial Neural Networks, DTNTF UGM, 2018
- A design and implementation of the IoT system to Monitor the Wastewater from Pandan Arang Hospital, Boyolali, 2018
- The application of artificial neural networks and sequential probability ratio test to detect abnormality of sensors in multipurpose reactor GA Siwabessy, DTNTF UGM, 2017
- A design of measurement device and standard operating procedure (SOP) for the development of greenship of green building, 2016-2018
- Estimation of the output power of nuclear reactor based on the sensor parameters using

- artificial neural networks and extended Kalman filter, DTNTF UGM, 2016
- Optimisation of energy system in Gadjah Mada University Campuss Area to support Yogyakarta as a smart green city, 2015-2017
 - A Design of the Measurement and Recording of Physics Variable of Outdoor Building System, DTNTF UGM, 2015
 - A design of a smart patient bed system in a hospital inpatient room with a wireless health monitoring sub system to help a doctor and paramedics to conduct required therapy to improve the quality of the patient, 2013
 - Analysis of energy utility and a design of a wireless air conditioner controller system in a hospital inpatient room to achieve a balance between energy efficiency and the comfort and the healing of the patient, 2013
 - A design of a diagnosis aid device and a wireless monitoring system of a kidney patient based on artificial neural networks, 2012
 - A design of a Sun Tracking System using tube sensors and fuzzy logics to increase the efficiency of the generated electrical energy, 2012
 - A design of social network that is integrated with a virtual bank application as a database of disease patients based on SMS Gateway, 2012
 - *Measurements of the flow rate of particle in a pipe*, Staff Exchange Program, Instrumentation, Control and Embedded Systems (ICES) research group, School of Engineering and Digital Arts, Kent University, Erasmus Mundus Lotus Scholarship, Oct 22 – Nov 20, 2011
 - *Optimal identification of multidimensional polynomials describing systematic errors in CNC machines*, Post Doc, Department of Control and Computer Engineering, Politecnico di Torino, Italy, Erasmus Mundus Scholarship, July 3, 2010-May 3, 2011 (10 months)
 - *Automatic Recognition of Indonesian Declarative Questions and Statements Using Polynomial Coefficients of the Pitch Contours*, Short Term Research Program in Japan, the grant consists of round trip airfare, local transportation in Japan, accommodation in Japan, Shinoda Laboratory, Tokyo Institute of Technology, Japan, supported by AUN/SEED Net, August 11 – Sept 8 2009.
 - Recognition of Indonesian prosody using artificial intelligence, Chulalongkorn University and Tokyo Institute of Technology, 2004-2007, AUN-Seed Net Scholarship for sandwich PhD program
 - The application of fuzzy logic controller on the photovoltaic panel of the sun tracking system, 2007-2008
 - Identification System of Speech Intonations for the monitoring and controlling of electric equipment using neural networks, 2007-2008
 - Design of Monitoring System of Abnormality of Electrocardiograph Signals Based on Their Frequency Spectrum Recognition using Artificial Neural Networks, Faculty of Engineering, Gadjah Mada University, 1998-2000.
 - Implementation of Artificial Neural Networks to recognize the frequency spectrum Faculty of Engineering, Gadjah Mada University, 1996-1998
 - Grant of Student Creativity Program in Technology field, Directorate General of High Education, Department of National Education, Republic of Indonesia, 2008 (2 team: artificial leg robot and Control system of the soil humidity for ornamental plants), 1 team was chosen as the finalist in the National Student Scientific Week and awarded the silver medal (each team was awarded 5,000,000,- IDR, advisor).

Publications:

Books:

- Dian Irawati, Fajar Santoso Hutahaean, Muhammad Nur Fajri Alfata, Azis Fatihah Sangadji, Beny Yonter Forman Nahampun, Heidi Aisha, Bagus Ginanjar Dwi Putra, Muhammad Hafidz Anshori, Denny Pratama, Dinda Permata, Amani Azizah Anggraeny, Maria Vernanda Lubis, Muhammad Ery Wijaya, Matthieu Caille, Sandra Pranoto, Fararatri Widyadari, Yeni Indra, Jatmika Adi Suryabrata, Fery Sandria, Asri Triesnasari, Puri Mahestyanti, Amir Syarifudin, Alvin Gus Abdurrahman Wahid, Peter Graham, Craig Burton, Sentagi Sesotya Utami, Rachmawan Budiarto, Ari Bimo Prakoso, Faridah, Mohammad Kholid Ridwan, **Nazrul Effendy**, Ayodya Pradhipta Tenggara, Billy Imanuel Alpayed Panjaitan, Gigih Udi Atmo, FF Hendro Gunawan, Putri Anggraeni A.R, Arief Imam Santoso, Nurcahyanto, Qatro Romandhi , 2023, Peta Jalan Penyelenggaraan & Pembinaan Bangunan Gedung Hijau (BGH), Kementerian Pekerjaan Umum dan Perumahan Rakyat
- Sentagi Sesotya Utami, Faridah, Laksana Gema Perdamaian, Rachmawan Budiarto, Fiki Rahmatika Salis, Ressay Jaya Yanti, M. Kholid Ridwan, Dian Dianti Avoressi, Randy Frans Fela, Dwi Joko Suroso, **Nazrul Effendy**, Yakub Fahim Luckyarno, 2021, Menuju bangunan zero energy di Indonesia, UGM Press
- **Nazrul Effendy** and Vani Sugiyono, Engineering Mathematics I, in Indonesian, Caps Publishing, Yogyakarta, 2013
- Syifaun Nafisah and **Nazrul Effendy**, Computer Graphics using Borland C++ Builder Professional (Grafika Komputer dengan Borland C++ Builder Professional), in Indonesian, Graha Ilmu, Yogyakarta, 2010

International Journal:

- Syifaun Nafisah, Nazilatul Laili Sa'adah, **Nazrul Effendy**, (in press), Marketing strategy of library digital services, DESIDOC Journal of Library & Information Technology,
- **N. Effendy**, M. Z. A. Fadhilah, D. W. Kraton, and H. A. Abrar, "The prediction of thermal sensation in building using support vector machine and extreme gradient boosting," IAES International Journal of Artificial Intelligence (IJ-AI), vol. 13, no. 3, pp. 2963–2970, Sep. 2024, doi: 10.11591/ijai.v13.i3.pp2963-2970.
- R. M. Zein, **N. Effendy**, E. Basuki, and N. Nopriadi, "A design of a brain tumor classifier of magnetic resonance imaging images using ResNet101V2 with hyperparameter tuning," IAES International Journal of Artificial Intelligence (IJ-AI), vol. 13, no. 3, pp. 3141–3146, Sep. 2024, doi: 10.11591/ijai.v13.i3.pp3141-3146.
- Syifaun Nafisah, Siti Rohaya, **Nazrul Effendy**, Digital technology utilization and library's role in religious literacy, Jurnal Kajian Informasi & Perpustakaan, vol 12, No 1, pp. 103-120, Jun 2024, <https://doi.org/10.24198/jkip.v12i1.52136>
- S. Prihanto, **N. Effendy**, and N. Nopriadi, "Hand gesture-based automatic door security system using squeeze and excitation residual networks," IAES International Journal of Artificial Intelligence (IJ-AI), vol. 13, no. 2, Jun. 2024, pp. 1619–1624, doi: 10.11591/ijai.v13.i2.pp1619-1624
- Surya Prihanto, **Nazrul Effendy**, Nopriadi, (in press), Hardware Design of the Touchless Hand Code and Convolutional Neural Networks – Based Automatic Door Security System, Jurnal Teknik Informatika (JUTIF), Sinta 3, indexed by Copernicus

- Vandy Achmad Yulianto, **Nazrul Effendy**, Agus Arif, 2023, Finger Vein Identification Using Capsule Networks with Hyperparameter Tuning, IAES International Journal of Artificial Intelligence (IJ-AI), vol 12, No 4, pp 1636-1643, <http://doi.org/10.11591/ijai.v12.i4.pp1636-1643>, Scopus, Q2, SJR 2022: 0.4
- Eko David Kurniawan, **Nazrul Effendy**, Agus Arif, Kenny Dwiantoro, Nidlom Muddin, 2023, Soft Sensor for the Prediction of Oxygen Content in Boiler Flue Gas Using Neural Networks and Extreme Gradient Boosting, Neural Computing and Applications, 2023, vol 35, No 1, pp. 345-352, <https://doi.org/10.1007/s00521-022-07771-8>, Scopus, Q1, SJR 2021: 1,07, IF 2021: 5,102, Springer
- Dana Fatadilla Rabba, Awang N.I. Wardana, **Nazrul Effendy**, 2022, Intermittent Oscillation Diagnosis in a Control Loop Using Extreme Gradient Boosting, Jurnal Nasional Teknik Elektro, vol 11, No. 3. pp. 164-171, <https://doi.org/10.25077/jnte.v11n3.1040.2022>, Sinta 2, indexed by Copernicus, DOAJ,
- **Nazrul Effendy**, Eko David Kurniawan, Kenny Dwiantoro, Agus Arif, Nidlom Muddin, 2022, The Prediction of Oxygen Content of the Flue Gas in a Gas-Fired Boiler System Using Neural Networks and Random Forest, IAES International Journal of Artificial Intelligence (IJ-AI), vol 11, No 3, pp. 923-929, <http://doi.org/10.11591/ijai.v11.i3.pp923-929>, Scopus, SJR 2021: 0,35
- **Nazrul Effendy**, Didi Ruhyadi, Rizky Pratama, Dana Fatadilla Rabba, Ananda Fathunnisa Aulia, Anugrah Yuwan Atmadja, 2022, Forest quality assessment based on bird sound recognition using convolutional neural networks, International Journal of Electrical and Computer Engineering (IJECE), vol 12, No 4, pp. 4235-4242, <http://doi.org/10.11591/ijece.v12i4.pp4235-4242>, Scopus Q2 (SJR 2021 = 0.38)
- Shafanda Nabil Sembodo, **Nazrul Effendy**, Kenny Dwiantoro, Nidlom Muddin, 2022, Radial basis network estimator of oxygen content in the flue gas of debutanizer reboiler, International Journal of Electrical and Computer Engineering (IJECE), vol 12, No 3, pp. 3044–3050, <http://doi.org/10.11591/ijece.v12i3.pp3044-3050>, Scopus Q2 (SJR 2021 = 0.38)
- Syifaun Nafisah, **Nazrul Effendy**, *Voice Biometric System: The Identification of the Severity of Cerebral Palsy using Mel-Frequencies Stochastics Approach*, International Journal of Integrated Engineering, vol. 11, No. 3, 2019
- **Nazrul Effendy**, Koichi Shinoda, Sadaoki Furui, Somchai Jitapunkul, *Automatic Recognition of Indonesian Declarative Questions and Statements Using Polynomial Coefficients of the Pitch Contours*, Acoustical Science and Technology, July 2009

International Conference:

- Billy Panjaitan, Faridah, Sentagi S. Utami, Ayodya Tenggara, Ari Bimo Prakoso, Rachmawan Budiarto, Mohammad Kholid Ridwan, **Nazrul Effendy**, Sandhi Adhi Baskara, Laurentius Kevin Hendinata, Ahmad Ilham Rokhul Fikri, (in press), Energy Consumption Model in Commercial Buildings in Samarinda: Analysis and Recommendations for Energy Efficiency Improvement, Proceedings of Astechnova International Energy Conference 2023, Yogyakarta, Indonesia
- Rachmawan Budiarto, **Nazrul Effendy**, Fitrotun Aliyah, Dwi Novitasari, I A Mubarak, R K Arruzi, Z A Fikriyadi, T P Handayani and H H Adudu, 2021, Vocational high school as a part of Indonesian photovoltaics supply chain, IOP Conf. Ser.: Earth Environ. Sci.

926 012026, pdf1, pdf2, Scopus, SJR 2020 = 0,18

- Lebukan, D.E.P., Wardana, A.N.I., **Nazrul Effendy**, Implementation of Plant-Wide PI-Fuzzy Controller in Tennessee Eastman Process, Proceedings - 2019 International Seminar on Application for Technology of Information and Communication: Industry 4.0: Retrospect, Prospect, and Challenges, iSemantic 2019, 2019, pp. 450–454, 8884301
- Bobby Aulia Permana, Awang N.I. Wardana, **Nazrul Effendy**, Implementation of event-driven fast fourier transform based on IEC 61499, Proceedings - 2019 5th International Conference on Science and Technology, ICST 2019, 2019, 9166414
- Dita Anggraini, **Nazrul Effendy**, Muhammad Ihsan Al Hafiz, and Daniel Ojeda Luviano, *Research and Development of a Power Monitoring System for the Sustainable Energy Management System Implementation at Green School, Bali, Indonesia*, E3S Web Conf. Volume 43, 2018
- **Nazrul Effendy**, Nur Chalim Wachidah, Balza Achmad, Prasojo Jiwandono, Muhammad Subekti, *Power estimation of G.A. Siwabessy Multi-Purpose Reactor at start-up condition using artificial neural network with input variation*, Proceedings of 2016 2nd International Conference on Science and Technology-Computer (ICST), 2016
- Abdurrachman Mappuji, **Nazrul Effendy**, Muhamad Mustaghfirin, Fandy Sondok, Rara Priska Yuniar, Study of Raspberry Pi 2 quad-core Cortex-A7 CPU cluster as a mini supercomputer, Proceedings of 2016 8th International Conference on Information Technology and Electrical Engineering: Empowering Technology for Better Future, ICITEE, 2016
- Syifaun Nafisah, Oyas Wahyunggoro, Lukito Edi Nugroho, **Nazrul Effendy**, 2013, Automatic Recognition System for Speech Discrimination Cerebral Palsy using Mel-Cepstral Stochastic Model, Proceedings of regional conference on computer & information engineering, Bangkok, 22-23 Augustus 2013
- Gustavo Belforte, Erik L. J. Bohez, **Nazrul Effendy**, 2011, Optimal identification of multidimensional polynomials describing systematic errors in CNC machines, proceedings of the 21st International Conference on Production Research, July 31 – August 4, 2011, Stuttgart, Germany
- **Nazrul Effendy**, Faridah, I Nyoman Kusuma Wardana, Esti Puspitaningrum, A novel Indonesian intonation recognition system using binary matrix conversion of the pitch contour, proceedings of International Conference on Telecommunications (ICTel) 2008, Bandung, August 19-21, 2008, ISSN: 1858-2982 (best paper)
- **Nazrul Effendy** and Jitapunkul, S. Improvement of Intonation recognition for Indonesian speech based on Fujisaki model, proceeding of Field-wise seminar, Chulalongkorn University, 2006
- **Nazrul Effendy**, Maneenoi, E., Charnvivit, P., Jitapunkul, S., Intonation Recognition for Indonesian Speech Based on Fujisaki Model, proceeding of International Conference on Spoken Language Processing (Interspeech 2004), p. 2973-2976, Jeju Island, Korea, 2004, ISSN: 1225-441x

National Journal:

- M. I. A. Birru, W. M. K. Dewi, **N. Effendy**, and T. Y. Solekhah, “Edukasi Bahaya Kecanduan Smartphone dan Tips Menjaga Kesehatan Mata pada Siswa SD Negeri 1 Sikunang, Wonosobo,” *Wikrama Parahita : Jurnal Pengabdian Masyarakat*, vol. 8, no. 1, pp. 95–104, May 2024, doi: 10.30656/jpmwp.v8i1.7269.

- Syifaun Nafisah, **Nazrul Effendy**, 2023, Pengembangan Model Berbasis Ordinary Least Square untuk Prediksi Pengaruh Usabilitas Aplikasi iPusnas Terhadap Loyalitas Penggunanya, AITI-Jurnal Teknologi Informasi 20 (1): 16-31, accredited Sinta 3
- Nukman Tsaqib Tsanya, A.N.I. Wardana, **Nazrul Effendy**, 2022, Deteksi Osilasi Kontrol Proses Industri dengan Menggunakan Jaringan Saraf Tiruan - Review, Jurnal EECCIS 16 (3): 71-78, accredited Sinta 4
- Fajar Sidik Permana, **Nazrul Effendy**, Awang N.I. Wardana, 2021, Perancangan dan identifikasi kendali PID pada aliran hidrogen sumber ion siklotron DECY 13, Ganendra Majalah Iptek Nuklir 24 (2): 59-66 (accredited Sinta 2)
- TC Wardaya, ANI Wardana, **Nazrul Effendy**, 2021, Implementasi Metode Deteksi Friksi Statik pada Katup Kontrol menggunakan Pencocokan Elips pada Standar IEC 61499, Jurnal Otomasi, Kontrol, dan Instrumentasi, Vol 13, No 1, pp. 15-26, accredited Sinta 4
- RMAB Satria, ANI Wardana, **Nazrul Effendy**, 2020, Pengaruh Penggunaan Pemancar-penerima pada Controller Area Network, Jurnal Nasional Teknik Elektro, Vol 9, No 2, pp. 108–115, Sinta 2
- Dirga Eka Putra Lebukan, Awang Noor Indra Wardana, **Nazrul Effendy**, 2019, Pengembangan Blok Fungsi Kendali PI-Fuzi pada IEC 61499, Jurnal Teknik Elektro, Vol 11, No. 1, pp. 16-25, Sinta 2,
- Faridah, and **Nazrul Effendy**, the recognition of the lip motion patterns while uttering the Indonesian vowel phonemes, Jurnal Tekno Fisika, September 2012, vol. 1, No.2, pp 1-5, ISSN: 2089-7154
- **Nazrul Effendy**, Faridah, I Nyoman Kusuma Wardana, and Esti Puspitaningrum, A novel Indonesian intonation recognition system using binary matrix conversion of the pitch contour, Jurnal Penelitian dan Pengembangan TELEKOMUNIKASI, June 2008, vol. 13, No.1, pp 1-5, ISSN: 1410-7066
- **Nazrul Effendy**, Adnan Syarafi, Arditya Yulinggar, and I Nyoman Kusuma Wardana, the application of fuzzy logic controller on the photovoltaic panel of the sun tracking system, Media Teknik, Edisi Mei 2008
- **Nazrul Effendy**, Singgih Hawibowo, and Balza Achmad, Optimization on Artificial Neural Networks to Control "kartini" nuclear research reactor with linear reference model, Media Teknik, Edisi Februari 2001

National Conference:

- Rafly Vidhyanto Raisman, **Nazrul Effendy**, Rifqi Imanto, 2024, Studi Pengukuran pH Produk Mixed Hydroxide Precipitate pada Proses Netralisasi Pengolahan Nikel Laterit High Pressure Acid Leaching, Prosiding Seminar Nasional Keinsinyuran 2024: Praktik-Praktik Keinsinyuran di Indonesia, Yogyakarta, Indonesia
- Ervan Tri Wahyudi, **Nazrul Effendy**, Riza Subrata, 2023, Desain dengan konsep zero energy building pada Q-Big BSD, Prosiding Seminar Nasional Keinsinyuran 2023: Praktik-Praktik Keinsinyuran di Indonesia, Yogyakarta, Indonesia
- RY Galvani, **Nazrul Effendy**, A Kusumawanto, 2017, Sistem Pendukung Keputusan Tentang Konservasi Energi dan Air pada Bangunan Gedung Pemerintahan, Prosiding Simposium Nasional Rekayasa Aplikasi Dan Perancangan Industri (RAPI) XVI TAHUN 2017, ISSN: 1412-9612
- **Nazrul Effendy**, Sigit Wibowo Basuki, 2014, Analisis Penggunaan Energi Dan

Pengendalian AC Pada Ruang Inap Pasien Di Rumah Sakit Untuk Mencapai Keseimbangan Antara Kebutuhan Efisiensi Energi Dan Kenyamanan Pasien, prosiding Annual Engineering Seminar 2014, ISBN/ISSN: 978-602-98726-3-7

- Hanafi Ali, **Nazrul Effendy**, and Rachmawan Budiarto, Rancang bangun sistem pengukuran putaran sudu turbin dan perekam data berbasis mikrokontroler AVR ATmega16 pada turbin angin di Pantai Baru, Ngentak, Bantul, proceeding of the conference on Applied Science for TECHNOlogy inNOVAtion (Astechnova) 2012, Yogyakarta, November 22, 2012, ISSN : 2086-0005
- Amir Faisal, Faridah, **Nazrul Effendy**, Recognition of nominal value of a paper money based on its dominant color using neural net, proceeding of the conference on Applied Science for TECHNOlogy inNOVAtion (Astechnova) 2009, Yogyakarta, October 8, 2009
- **Nazrul Effendy**, Faridah, I Nyoman Kusuma Wardana, and Teguh Iryanto, Identification System of Speech Intonations for the monitoring and controlling of electric equipment using neural networks, proceedings of the conference on application and research in industrial technology, August 2008, ISBN: 978-979-18528-0-7
- **Nazrul Effendy**, Adnan Syaraf Ashfahani, Arditya Yulinggar, dan I Nyoman Kusuma Wardana, A fuzzy logic control application to the photovoltaic panels of sun tracking system, proceedings of the national conference on the application of information technology (SNATI 2008), 21 Juni 2008, Yogyakarta, ISSN 1907-5022
- **Nazrul Effendy**, M. Heikal Hasan dan Febry Wikatmono, the implementation of fuzzy logics to control the level and pH of water in a swimming pool, proceedings of the national conference on the application of information technology (SNATI 2008), 21 Juni 2008, Yogyakarta, ISSN 1907-5022
- **Nazrul Effendy**, Ridwan Herdiawan, Fikri Nur Muhammad dan I Nym Kusuma Wardana, A design of a control system of a microhydro power plant using a Fuzzy Logic Controller, Proceedings of National Seminar on Information Technology 2008, UPN veteran, Jogjakarta, 24 Mei 2008
- **Nazrul Effendy**, Singgih I Kurniawan, Intan Putri K, dan Nor Agny S. Utami, A vibration damping system with a Spring-Damper Model using Fuzzy Logic controller, Proceedings of National Seminar on Information Technology 2008, UPN veteran, Jogjakarta, 24 Mei 2008
- **Nazrul Effendy**, Rifqi Imanto, Aresdi Praha, dan I Nyoman Kusuma, The control of River water debit Based on Rainfall using Neuro-Fuzzy, proceedings of the Fourth Nasional Seminar on Technology, vol 8, UTY-Jogjakarta, 5 April 2008
- Nafisah, S., and **Effendy, N.**, The implementation of expert systems in the field of pharmacology and therapy as a web-based support decision making system, Proceedings of SNIKTI (National Conference on Kecerdasan Komputasional) II, 2001
- **Effendy, N.**, Setiawan, W., and Achmad, B., Implementation of Artificial Neural Networks on Frequency Spectrum Recognition, Proceedings of Seminar and Scientific Presentation of Basic Research in Nuclear Science and Technology, BATAN, 1998