

Curriculum Vitae



Personal Information

Name	VITA LYSTIANINGRUM
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Date of Birth	August 29 th , 1982
Nationality	Indonesian
Gender	Female

Education

January 2013 – August 2016	Doctor of Philosophy, University of New South Wales, Australia. funded by scholarship from Indonesian Government. Thesis: <i>“Temperature Monitoring and Diagnostic System for a Forced-cooled Electrochemical Energy Storage String”</i>
September 2005 – September 2007	Master of Science and Magister Teknik (Master of Engineering), Darmstadt University of Applied Science-Germany, and ITS (Sepuluh Nopember Institute of Technology) Surabaya-Indonesia, funded by scholarship from Indonesian Government. Thesis: <i>“Current Source to Feed an Electrolyzer”</i> .
September 2000 – March 2005	Sarjana Teknik (Bachelor of Engineering), ITS Surabaya-Indonesia. Thesis (original title in Bahasa Indonesia): <i>“Comparative Study of Wye-Connected and Delta-Connected Passive Filter for Eliminating Harmonics on Neutral Wire”</i> .

Work Experience and Activities

March 2006 – present	Lecturer and Researcher in ITS, Dept. of Electrical Engineering <u>Research interest:</u> Applications and optimization of batteries, supercapacitors, and other types of energy storage. <u>Lecturing fields:</u> Electrical Energy Storage; Energy Conversion; Electric Machines; Electrical Measurement; Probability and Statistics; Engineering Electromagnetics; Optimization. Member of Laboratory of Instrumentation, Measurement, and Power System Identification Supervising students (undergraduate and postgraduate) and research.
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	Organizing laboratory work of electrical measurement for students. Power system software trainer.
2015 – present	Peer reviewer for academic journals and conferences IEEE Transactions on Energy Conversion, IEEE Transactions on Industry Application, Elsevier Journal of Energy Storage, etc. Various IEEE conferences (IGST, ISITIA, IES, etc.)
2008 – present	Judge for national-level competitions National Electrical Engineering Creation Contest (Lomba Cipta Elektroteknik Nasional (LCEN)), organized by Dept. of Electrical Engineering, ITS (May 2008) Electrical Competition Tour and Rally (Electra), organized by Dept. of Electrical Engineering, ITS (February 2019). PYC Paper Competition 2023, organized by Purnomo Yusgiantoro Center (September 2023).
2020 – present	Liaison Officer and Member of ITS International Undergraduate Program (IUP) Task Force for ITS Directorate of Global Engagement and Dept. of Electrical Engineering. Initiating, advising, organizing, and maintaining international programs mobility activities related to students, staffs, and the department.
April 2020 – January 2023	Editor in Chief for JAREE (Journal on Advanced Research in Electrical Engineering).
July 2016 – November 2016	Casual laboratory demonstrator at the School of Electrical Engineering and Telecommunications, the University of New South Wales, Australia.
January 2007 – present	Trainer <ul style="list-style-type: none"> ETAP (Electrical Power System Analysis and Operation Software): for PT Pertamina, ITS students, and public. Schneider Variable Speed Drive: for ITS students. LabVIEW software: for ITS students. Scientific writing: for universities staff and public. Etc.
April 2005 – present	Team member of several projects for industry and/or the government on behalf of ITS Dept. of Electrical Engineering in the field of power system analysis, energy audit, electricity masterplan analysis, building code, etc: <ul style="list-style-type: none"> Perusahaan Listrik Negara (PLN, <i>State Electricity Company</i>) PT Kaltim Daya Mandiri, Bontang PT Pupuk Sriwidjaya Palembang, Palembang China National Offshore Oil Corporation Pemerintah Propinsi DI Aceh
2000 – 2006	Music teacher in Yamaha Corp. Indonesia. Responsible for teaching group and private lessons, and concert organizing under Yamaha Education System.

Books

- Lystianingrum, V. (2021). Mengenal Lebih Dekat Baterai Dan Ultracapacitor. Deepublish. Printed and e-book (<https://books.google.co.id/books?id=A0xNEAAQBAJ>)

Selected Journal Publications

1. Lystianingrum, V, Priyadi, A, Negara, IMY, "Lessons learned from large-scale lithium-ion battery energy storage systems incidents: A mini review", in. *Process Saf. Prog.* 2023; 42(2): 348-355, doi:10.1002/prs.12448.
2. T. P. Sari, J. Kim, A. Priyadi, V. Lystianingrum, M. H. Purnomo and E. Muljadi, "Utilization of Supercapacitor to Extend the Critical Clearing Time in a Power System" in *IEEE Open Journal of Industry Applications*, vol. 1, pp. 248-257, 2020, doi: 10.1109/OJIA.2020.3041209.
3. V. Lystianingrum, B. Hredzak, and V. G. Agelidis, "Multiple-Model-Based Overheating Detection in a Supercapacitors String" *IEEE Transactions on Energy Conversion*, vol. PP, pp. 1-1, 2016.
4. V. Lystianingrum, B. Hredzak, V. G. Agelidis, and V. S. Djanali, "On Estimating Instantaneous Temperature of a Supercapacitor String Using an Observer Based on Experimentally Validated Lumped Thermal Model" *IEEE Trans. Energy Conv.*, vol. PP, pp. 1-11, 2015.
5. V. Lystianingrum, B. Hredzak, and V. G. Agelidis, "Multiple model estimator based detection of abnormal cell overheating in a Li-ion battery string with minimum number of temperature sensors" *J. Power Sources*, vol. 273, pp. 1171-1181, 1/1/ 2015

Selected Conference Publications

1. R. Tetuko, V. Lystianingrum, R. S. Wibowo, "Optimal Scheduling of Battery-Flywheel Hybrid Energy Storage System for Off-Grid Power System with Renewable Energy," 2022 International Conference on Technology and Policy in Energy and Electric Power (ICT-PEP), Jakarta, Indonesia, 2022, pp. 220-225, doi: 10.1109/ICT-PEP57242.2022.9988817.
2. N. Sugiantoro, R. S. Wibowo, V. Lystianingrum, E. Roviando and S. Triwijaya, "Optimal Power Flow With Dynamic Line Rating Using Quadratically Constrained Quadratic Program Method," 2021 1st International Conference on Electronic and Electrical Engineering and Intelligent System (ICE3IS), 2021, pp. 54-59, doi: 10.1109/ICE3IS54102.2021.9649715.
3. V. Lystianingrum, A. Irawan, I. Bagus Santoso, I. Made Yulistya Negara and A. Priyadi, "On Feasibility of Ultracapacitor Full Electric Transit Bus for Jakarta, Indonesia," 2021 International Conference on Technology and Policy in Energy and Electric Power (ICT-PEP), 2021, pp. 102-106, doi: 10.1109/ICT-PEP53949.2021.9600983.
4. A. Musafa, A. Priyadi, V. Lystianingrum, M. Pujiantara, S. Anam and M. H. Purnomo, "Combining Stand Alone PV Rooftop, Small Scale PHS, Rainfall Storage Systems for Increasing Electric Power Production based on Hybrid Pumping Technique," 2021 International Electronics Symposium (IES), 2021, pp. 47-54, doi: 10.1109/IES53407.2021.9594041.
5. L. O. M. F. Rachim, V. Lystianingrum, D. C. Riawan and I. Gunanda, "Design of EV Hardware-in-the-Loop Simulator of Battery and

	Supercapacitor Hybrid Storage System," 2021 International Seminar on Intelligent Technology and Its Applications (ISITIA), 2021, pp. 11-16, doi: 10.1109/ISITIA52817.2021.9502254.
6.	Y. Andika, V. Lystianingrum and F. A. Pamuji, "Energy Management System Using Cascade Fuzzy for Hybrid Battery and Supercapacitor in Electric Vehicles," 2021 International Conference on Green Energy, Computing and Sustainable Technology (GECOST), 2021, pp. 1-6, doi: 10.1109/GECOST52368.2021.9538648.
7.	Gunawan, C., Djanali, V. S., Paradigma, N., & Lystianingrum, V. (2018). Numerical study of flow characteristic and heat transfer on ultracapacitor stack with Reynolds number variations. AIP Conference Proceedings, 1983(1), 020038. doi:10.1063/1.5046234.
8.	V. Lystianingrum, B. Hredzak, and V. G. Agelidis, "Abnormal Overheating Detectability Analysis Based on Cross-Gramian for a Supercapacitors String," in Power & Energy Society General Meeting, 2016 IEEE, 2016.
9.	V. Lystianingrum, B. Hredzak, V. G. Agelidis, and V. S. Djanali, "Observability degree criteria evaluation for temperature observability in a battery string towards optimal thermal sensors placement," in Intelligent Sensors, Sensor Networks, and Information Processing (ISSNIP), 2014 IEEE Ninth International Conf., 2014, pp. 1-6.
10.	V. Lystianingrum, V. G. Agelidis, and B. Hredzak, "State of health and life estimation methods for supercapacitors," in Power Engineering Conference (AUPEC), 2013 Australasian Universities, 2013, pp. 1-7.

Selected research experiences and grants awarded

1.	Research project (original title in Bahasa Indonesia): "Development of Design and Prototyping of Battery Module and Battery Rack for Stationary Energy Storage System". Role: Research team member. Funded by: Matching Fund Kedaireka Grant, Indonesian Government Ministry of Education, Culture, Research, and Technology, 2023-2024
2.	Research project (original title in Bahasa Indonesia): "Computational Intelligence Design Optimization of Small-scale Hybrid Photovoltaic-Pumped Hydro Storage System in a Building". Role: Research team leader. Funded by: Indonesian Government Ministry of Education, Culture, Research, and Technology, 2023-2025.
3.	Research project (original title in Bahasa Indonesia): "Designing Hardware-in-the-Loop Simulator of Hybrid Battery and Supercapacitor Storage System for Electric Vehicle and Smart Grid". Role: Research team leader. Funded by: Indonesian Government Ministry of Education, Culture, Research, and Technology, 2021-2022.
4.	Research project (original title in Bahasa Indonesia): "Evaluation of Supercapacitor as an Energy Storage Alternative in Wind Energy Conversion System". Role: Research team member.

	Funded by: Indonesian Government Ministry of Research, Technology, and Higher Education, 2018-2019.
5.	Research project (original title in Bahasa Indonesia): "Prototyping a Wind Energy Conversion System with Constant Output Power for Farming Sustainability in Nganjuk" Role: Research team member. Funded by: Indonesian Government Ministry of Research, Technology, and Higher Education, 2017.
6.	Research project (original title in Bahasa Indonesia): "Prototype of Online Monitoring System for Power Transformer based on Thermal Imaging Distribution Analysis and Current Spectrum Feature". Role: Research team leader. Funded by ITS Laboratory Research Grant, 2012.
7.	Research project (original title in Bahasa Indonesia): "Multifunction Controller for Optimisation, Monitoring, and Operating of Hybrid Electricity System" Role: Research team member. Funded by ITS, 2011

Invited Talks

1.	"Battery Safety in Battery Pack Technology" (talks in Bahasa Indonesia), Workshop Development of EV Battery Technology and Recycling, organized by Pertamina, Jakarta, September 2023.
2.	"Batteries, supercapacitors, and their hybrids: Research and Applications", organized by Universiti Teknologi Petronas, Malaysia, June 2023.
3.	"Batteries for Industry 4.0" (talks in Bahasa Indonesia), organized by Universitas Budi Luhur, Jakarta, April 2019
4.	"Workshop on Writing for Scopus-Indexed Journals" (talks in Bahasa Indonesia), organized by UNP "Veteran" Jawa Timur, Surabaya, April 2017.
5.	"Workshop on Journal Articles Writing for Vocational School" (talks in Bahasa Indonesia), organized by Politeknik Perkapalan Negeri Surabaya, Surabaya, August 2017.

Selected Courses and Trainings

1.	"Automotive Battery Lithium Technology and Safety", TÜV SÜD China, December 2023.
2.	"Foundations of Microgrids", online course, organized by University of Alaska Fairbanks, October – November 2022.
3.	Workshop on Mobile Learning, Saga University, Japan, August 2009, funded by JICA.