Curriculum Vitae

A. Identitas Diri

1	Nama Lengkap (dengan gelar)	Irham Fadlika, S.T., M.T.
2	Jenis Kelamin	L
3	Jabatan Fungsional	Asisten Ahli
4	NIP/NIK/Identitas lainnya	199012162015041001
5	NIDN	0016129001
6	Alamat Kantor	Jalan Semarang 5 Malang
7	Nomor Telepon/Faks	0341 7044470/FAX 0341 573090
8	Lulusan yang telah dihasilkan	S1 = 17 orang D3 = 10 orang
9	Mata Kuliah yang Diampu	1. Elektronika Daya
		2. Elektronika Daya Lanjut
		3. Sistem Kendali
		4. Operasi dan Stabilitas Sistem Tenaga
		5. Sistem Proteksi dan Pentanahan
		6. Teknik Tegangan Tinggi dan Isolasi
		7. Stokastik dan Variabel Random

B. Riwayat Pendidikan

	S-1	S-2	S-3
Nama Perguruan Tinggi	Institut Teknologi Bandung	Institut Teknologi Bandung	
Bidang Ilmu	Teknik Tenaga Listrik	Teknik Tenaga Listrik	
Tahun Masuk-Lulus	2009 – 2013	2013 – 2014	
Judul Skripsi/Tesis/Disertasi	Analisis Riak Arus Keluaran Inverter pada Sistem Penggerak Daya Besar Topologi Baru	Periode Penyaklaran Variabel untuk Memperbaiki Kinerja Inverter PWM Tiga Fasa	
Nama Pembimbing/promotor	Prof. Pekik Argo Dahono	Prof. Pekik Argo Dahono	

C. Pengalaman Penelitian dalam 5 Tahun Terakhir

No.	Tahun	Judul Penelitian	Pendanaan	
			Sumber	Jml (juta Rp)
1	2020	SMART MPPT CONVERTER BERBASIS QHBM UNTUK OPTIMASI PENYALURAN DAYA MAKSIMUM PADA RUMAH MANDIRI ENERGI	PNBP UM	101

2	2019	PENGEMBANGAN DATA AKUISISI NIRKABEL UNTUK OPTIMALISASI PENGENDALIAN DAN MONITORING TRANSAKSI DAYA LISTRIK BERBASIS RENEWABLE ENERGY INTEGRATION	PNBP UM	90
3	2019	MODEL SMART MICRO GRID YANG OPTIMAL DAN EKONOMIS UNTUK KEMANDIRIAN ENERGI LISTRIK DALAM SKALA RUMAH TANGGA	PNBP UM	110
4	2018	Pengembangan Experimental Kit dengan Teknologi Rapid-Prototyping dalam Project-Based Learning Mata Kuliah Elektronika Daya	IsDB	21,5
5	2018	Pengembangan Topologi Baru Z-Source Inverter untuk Memperbaiki Efisiensi dan Keandalan Sistem Photovoltaic (PV) On-Grid	PNBP UM	50
6	2018	Rancang Bangun Intelligent Power Monitoring System Untuk Pengendalian Terpadu Konsumsi Energi Listrik di Universitas Negeri Malang	PNBP UM	60
7	2018	Pengembangan Smart Green Energy Building Sebagai Upaya Membangun Kampus Mandiri Energi Ramah Lingkungan	PNBP UM	75
8	2018	Sistem Hybrid Power Supply Tenaga Angin dan Surya pada Wireless Ballooned Network Untuk Daerah Pasca Bencana	DRPM RISTEKDIKTI	67,125
9	2017	Kapal Cepat Penebar Pakan Ikan (KCPPI)	CPPBT RISTEKDIKTI	142
10	2017	Materi Terbuka- Arsitektur Komputer	SPADA RISTEKDIKTI	7,5
11	2017	Blended Learning –Arsitektur Komputer	SPADA RISTEKDIKTI	15
12	2017	Sistem Monitoring Jenis Gangguan pada Sistem Kelistrikan di Gedung G4 Teknik Elektro Universitas Negeri Malang	PNBP FT UM	10
13	2016	Inverter 1 fasa SPWM dengan output tegangan dan frekuensi variabel berbasis SEPIC	PNBP FT UM	10

D. Pengalaman Pengabdian kepada Masyarakat dalam 5 Tahun Terakhir

No.	Tahun	Judul Kegiatan	Pendanaan	
			Sumber	Jml (juta Rp)
1	2020	STERILISASI MIKROORGANISME DENGAN PENYEMPROTAN DISINFEKTAN SEBAGAI UPAYA PENCEGAHAN PENYEBARAN COVID-19 DI DESA HARJOKUNCARAN KECAMATAN SUMBERMANJING WETAN KABUPATEN MALANG	PNBP UM	25
2	2020	PEMBUATAN SISTEM PEDULI, KEAMANAN DAN KETERTIBAN PEKERTI BERBASIS IOT SEBAGAI UPAYA MITIGASI MASYARAKAT DIMASSA PANDEMI VIRUS COVID-19 DI LINGKUNGAN WARGA RT. 09 RW. 06 PENANGGUNGAN KECAMATAN KLOJEN KOTA MALANG	PNBP UM	25
3	2020	PELATIHAN AVOGRADO SEBAGAI MEDIA PEMBELAJARAN BAGI GURU SMAN 10 KOTA MALANG	PNBP UM	26,5
4	2020	PENERAPAN TEKNOLOGI LAMPU BERTENAGA SURYA DI GADING KASRI SEBAGAI PILOT PROJECT KAMPUNG MANDIRI ENERGI	PNBP UM	23
5	2020	APLIKASI DAN WORKSHOP PENGELOLAAN LABORATURIUM DAN PERPUSTAKAAN PADA MTS AL - HUDA MALANG	PNBP UM	24
6	2018	PKM Otomatisasi Kontrol Air Ledeng Berdasarkan Debit dan Jadwal Pengaliran di Desa Gadungsari Kecamatan Tirtoyudo Malang	DRPM RISTEKDIKTI	40
7	2017	Strategi Penghematan Listrik Rumah Tangga di Desa Sengguruh Kabupaten Malang	Mandiri	5
8	2017	Pemeliharaan Alat-alat Penunjang Usaha Mikro Kecil dan Menengah (UMKM) Desa Tawangsari Kecamatan Pujon Kabupaten Malang	Mandiri	5
9	2016	Pengenalan Sumber Energi Sederhana bagi Siswa YPLM Al Islah Sumber Suko Kec. Wagir Kab. Malang	Mandiri	5

E. Pengalaman Penulisan Artikel Ilmiah dalam Jurnal dalam 5 Tahun Terakhir

No.	Judul Artikel Ilmiah	Nama Jurnal	Volume/Nomor/Tahun
1	PENERAPAN TEKNOLOGI LAMPU BERTENAGA SURYA DI GADING KASRI SEBAGAI PILOT PROJECT KAMPUNG MANDIRI ENERGI	TANJAK	1/1/2020
2	Distance Relay Protection System Planning on Malang 150 kV Transmission Network Reconfiguration	Frontier Energy System and Power Engineering (FESPE)	2/1/2020
3	Preliminary study of wireless balloon network using adaptive position tracking technology for post disaster event	Telkomnika	17/4/2019
4	Linear Trend Application on the Estimated Age of Distribution Transformer Based on the Load Growth and Environmental Temperature	Frontier Energy System and Power Engineering (FESPE)	1/2/2019
5	Partial model development of power grid structures considering sectionalizing scenarios for the controlling electric system expansion	International Journal of Innovative Computing Information and Control	15/2019
6	Operating assessment of local power grid development considered captive power plant and expanding structure	Przegląd Elektrotechniczny	95/2019
7	Penerapan Sistem Kontrol dan Filtrasi Air Ledeng Otomatis di Desa Gadungsari Kecamatan Tirtoyudo Kabupaten Malang	Jurnal KARINOV	1/2/2018
8	Rancang bangun inverter satu fasa SPWM dengan output tegangan dan frekuensi variabel	TEKNO Jurnal Teknologi, Elektro, dan Kejuruan	1/2018
9	Evaluation of the power transaction considering the transmission use of system charges and system constraints	ICIC Express Letters Part B: Applications	9/10/2018

10	Development of a Novel Evolutionary Algorithm Considered Thunderstorm Mechanisms for Optimizing an Economic Dispatch	International Journal of Hybrid Information Technology	9/6/2016
11	KEANDALAN DATA CENTER BERDASARKAN SISTEM TIER CLASSIFICATIONS	TEKNO Jurnal Teknologi, Elektro, dan Kejuruan	1/2015
12	Comparing Performances of Evolutionary Algorithms on the Emission Dispatch and Economic Dispatch Problem.	Telkomnika	13/4/2015
13	Current Ripple Analysis of New Double-Stator AC Drive Systems	Telkomnika	13/4/2015

F. Pengalaman Penyampaian Makalah Secara Oral Pada Pertemuan / Seminar Ilmiah Dalam 5 Tahun Terakhir

No.	Nama Pertemuan Ilmiah/	Judul Artikel Ilmiah	Waktu dan Tempat
1	IEEE International Conference on Sustainable Energy Engineering and Application (ICSEEA)	A New Transformerless High Voltage Gain DC-DC Converter for DC Microgrid	Virtual Conference, 18-20 November 2020
2	IEEE International Conference on Sustainable Energy Engineering and Application (ICSEEA)	Cascaded H-Bridge Dual Active Switched-Capacitor Quasi Z-Source Inverter	Virtual Conference, 18-20 November 2020
3	IEEE International Conference on Smart Technology and Applications (ICoSTA)	Analysis of Power Transactions on the Integrated Solar Home System	Surabaya, 20 Februari 2020
4	International Conference on Renewable Energy (ICORE) 2019	Analysis of power loss on the addition of new networks in Malang transmission system	Malang, 9-10 Agustus 2019
5	International Conference on Renewable Energy (ICORE) 2019	Impact of sugar factory pollutants on the insulators' impurity	Malang, 9-10 Agustus 2019
6	International Conference on Renewable Energy (ICORE) 2019	Voltage stability analysis: Case study in Madura 150 kV transmission system	Malang, 9-10 Agustus 2019

7	International Conference on Renewable Energy (ICORE) 2019	A testbed of intelligent sun tracking system and thermoelectric generator with Fresnel lens at solar cell system for maximizing generated energy	Malang, 9-10 Agustus 2019
8	International Conference on Renewable Energy (ICORE) 2019	A new switching control approach to reduce capacitor bank inrush current	Malang, 9-10 Agustus 2019
9	International Conference on Renewable Energy (ICORE) 2019	Analysis of maintenance scheduling transformer oil using Markov method	Malang, 9-10 Agustus 2019
10	International Conference on Renewable Energy (ICORE) 2019	Wind gradient impact on the potential wind energy profile based on the ground launch	Malang, 9-10 Agustus 2019
11	Prosiding-Seminar Nasional Teknik Elektro UIN Sunan Gunung Djati Bandung	Analisa Perbandingan Desain DC-DC Converter untuk Perbaikan Power Factor	Bandung, 23-24 November 2019
12	International Conference on Science & Technology (ICoST 2019)	Application of Fuzzy Logic to Electrical Protection Devices	Makassar, 2-3 Mei 2019
13	IEEE Conference on Energy Conversion (CENCON)	Dual Active-Switched-Capacitor Quasi-Z-Source Inverter	Yogyakarta, 16-17 Oktober 2019
14	IEEE International Conference on Electrical, Electronics and Information Engineering (ICEEIE)	A New Computational Intelligence for Face Emotional Detection in Ubiquitous	Bali, 3-4 Oktober 2019
15	IEEE International Conference on Electrical, Electronics and Information Engineering (ICEEIE)	Design and Experimental Validation of the Self-powered IoT for Indoor Temperature-Humidity Monitoring	Bali, 3-4 Oktober 2019
16	IEEE International Conference on Electrical, Electronics and Information Engineering (ICEEIE)	New Adaptive Intelligence Method for Personalized Adaptive Laboratories	Bali, 3-4 Oktober 2019
17	IEEE International Conference on Electrical, Electronics and Information Engineering (ICEEIE)	New Algorithm to Determine Prediction Accuracy on Wireless Sensor Networks	Bali, 3-4 Oktober 2019

18	IEEE International Seminar on Application for Technology of Information and Communication (iSemantic)	New Method of Artificial Intelligence for Disaster Information Floods use Distributed Wireless Sensors	Semarang, 21-22 September 2019
19	IEEE 5th International Conference on Science and Technology (ICST)	Analysis of Solar Power Plant Integration in Pakis District on 150 Kv Interconnection System	Yogyakarta, 30-31 Juli 2019
20	IEEE 5th International Conference on Science and Technology (ICST)	Impact of Electrostatic Precipitator Harmonics on the Performance of Overcurrent Relays	Yogyakarta, 30-31 Juli 2019
21	IEEE 5th International Conference on Science and Technology (ICST)	Reconfiguration of Protection System on 70kV Transmission Network	Yogyakarta, 30-31 Juli 2019
22	IEEE 5th International Conference on Science and Technology (ICST)	Sensitivity Analysis of 20 kV Distribution System Under Fault Condition	Yogyakarta, 30-31 Juli 2019
23	IEEE International Conference on Electrical Engineering and Informatics (ICEEI)	Multiple Tie-Line Configuration Scenarios for Voltage Quality Improvement in Malang Transmission System	Bandung, 9-10 Juli 2019
24	IEEE International Conference on Electrical Engineering and Informatics (ICEEI)	Enhanced Boost Active Switched Impedance Quasi Z-Source Inverter	Bandung, 9-10 Juli 2019
25	IEEE International Conference on Electrical Engineering and Informatics (ICEEI)	Transient Stability Analysis to Determine CCT Due to Increased Load and Addition of Transmission Lines in Malang Raya Interconnection System	Bandung, 9-10 Juli 2019
26	IEEE International Conference on Automatic Control and Intelligent Systems (I2CACIS)	A New MPPT based on Queen Honey Bee Migration (QHBM) in Stand-alone Photovoltaic	Selangor, Malaysia, 29 Juni 2019
27	IEEE International Conference on Automatic Control and Intelligent Systems (I2CACIS)	Efficiency Comparison between DC and AC Grid Toward Green Energy In Indonesia	Selangor, Malaysia, 29 Juni 2019
28	International Conference on Life Sciences and Technology	Natural Obstacles and Biological Salmon Behaviors Link to Modelling Approaches of Computational Intelligence Procedures for the Standard System	Malang, 12-13 September 2019

29	THE 4TH INTERNATIONAL CONFERENCE ON INDUSTRIAL, MECHANICAL, ELECTRICAL, AND CHEMICAL ENGINEERING	Local power grid assessment of the power system expansion considering captive power plants	Surakarta, 9–11 Oktober 2018
30	Seminar Nasional Inovasi dan Aplikasi Teknologi di Industri (SENIATI)	Estimasi Umur Transformator Distribusi Berdasarkan Pertumbuhan Beban dan Temperatur Lingkungan di Penyulang Bolo PLN Rayon Woha Kabupaten Bima	Malang, 2 Februari 2019
31	International Conference on Electrical Engineering, Computer Science and Informatics (EECSI)	Combined Computational Intelligence Approach for the Power System Optimization Problem	Malang, 16-18 Oktober 2018
32	International Conference on Electrical Engineering, Computer Science and Informatics (EECSI)	Quasi Z-source inverter as MPPT on renewable energy using grey wolf technique	Malang, 16-18 Oktober 2018
33	IEEE Conference on Power Engineering and Renewable Energy (ICPERE)	An Opportunity of Artificial Salmon Tracking Algorithm for the Optimal Power Wheeling Considering Open Tariffing Systems of the Transmission Charges	Solo, 29-31 Oktober 2018
34	IEEE Conference on Power Engineering and Renewable Energy (ICPERE)	Improved Two Switched-Inductor Quasi-Z-Source Inverter with High Voltage Gain and Reduced Inductor Current Ripple	Solo, 29-31 Oktober 2018
35	IEEE Electrical Power, Electronics, Communications, Controls and Informatics Seminar (EECCIS)	Cloud Charge Impacts on Thunderstorm Algorithm Performances Considering the Scheduled Power Output Optimization Problem	Batu, 9-11 Oktober 2018
36	IEEE Electrical Power, Electronics, Communications, Controls and Informatics Seminar (EECCIS)	Research in Ubiquitous Network: Communication Optimization using Publish-Subscribe	Batu, 9-11 Oktober 2018

37	IEEE International Seminar on Application for Technology of Information and Communication (iSEMANTIC)	Optimization Service Discovery in Wireless Balloon Network	Semarang, 21-22 September 2018
38	IEEE International Seminar on Application for Technology of Information and Communication (iSEMANTIC)	Performance Discovery in Ubiquitous Networks	Semarang, 21-22 September 2018
39	IEEE International Seminar on Application for Technology of Information and Communication (iSEMANTIC)	A Natural Phenomenon Emphasizing of the Thunderstorm Processes and Salmon Migration for the Optimal Power Production of the Power System Operation	Semarang, 21-22 September 2018
40	IEEE 4th International Conference on Science and Technology (ICST)	Power Flow Analysis of Power System Topology Development for Advancing Electricity System of Local Interconnection	Yogyakarta, 7-8 Agustus 2018
41	IEEE 10th International Conference on Information Technology and Electrical Engineering (ICITEE)	Comparison of ABC and genetic algorithms on economic power dispatch	Kuta, 24-26 July 2018
42	International Mechanical and Industrial Engineering Conference 2018 (IMIEC 2018)	Artificial salmon tracking algorithm: Preliminary designing approach for optimizing the integrated mixed energy composition	Malang, 30-31 Agustus 2018
43	IEEE International Conference on Sustainable Information Engineering and Technology (SIET)	IoT based electrical energy consumption monitoring system prototype: Case study in G4 building Universitas Negeri Malang	Malang, 24-25 November 2017
44	IEEE 4th International Conference on Information Technology, Computer, and Electrical Engineering (ICITACEE)	Online judging system for programming contest using UM framework	Semarang, 18-19 Oktober 2017
45	IEEE 3rd Conference on Power Engineering and Renewable Energy (ICPERE)	Solution of dynamic economic dispatch considered dynamic penalty factor	Yogyakarta, 29-30 November 2016

46	IEEE 3rd Conference on Power Engineering and Renewable Energy (ICPERE)	Variable switching period to achieve minimum output current ripple of discontinuous PWM three-phase voltage source inverters	Yogyakarta, 29-30 November 2016
47	IEEE 8th International Power Electronics and Motion Control Conference (IPEMC-ECCE Asia)	A new approach to reduce current ripple of PWM inverters by Variable Switching Period	Hefei, China, 22-26 Mei 2016

G. Karya Buku dalam 5 Tahun Terakhir

No.	Judul Buku	Tahun	Jumlah Halaman	Penerbit
-	-	-	-	-

H. Perolehan HKI dalam 10 Tahun Terakhir (sumber: DJKI | E-Status (dgip.go.id))

No.	Judul/Tema HKI	Tahun	Jenis	Nomor P/ID
1	PENCARIAN LAYANAN PEMANTAUAN PADA JARINGAN UBIQUITOUS	2020	Paten	IDS000002896, **Diberi**
2	Peraga mesin listrik memiliki perangkat keras pembangkit listrik terintegrasi Perangkat Lunak menghasilkan Virtual Laboratorium	2020	Paten	IDS000002895, **Diberi**
3	Perangkat Filtrasi dan Kontrol Air Otomatis untuk Daerah Pedesaan	2019	Paten	PID201901315, **(PA) Masa Pengumuman**
4	KONVERTER DC-AC RASIO TEGANGAN TINGGI MENGGUNAKAN SAKLAR IMPEDANSI AKTIF KAPASITOR GANDA	2019	Paten	PID201904861, **(PA) Masa Pengumuman**
5	KONVERTER DC-AC DENGAN RANGKAIAN IMPEDANSI SAKLAR AKTIF BERTINGKAT	2019	Paten	PID201904862, **(PA) Masa Pengumuman**
6	INVERTER DENGAN DUA JARINGAN IMPEDANSI PENINGKAT TEGANGAN	2019	Paten	PID201904941, **(PA) Masa Pengumuman**
7	PENGGABUNGAN BALON UDARA NIRKABEL BERTENAGA SURYA DAN BATERAI UNTUK DAERAH PASCA BENCANA SEBAGAI PENGGANTI PEMANCAR JARINGAN TELEKOMUNIKASI	2019	Paten	IDS000002723, **Diberi**

8	Edukit Internet of Things (IoT)	2019	Hak Cipta	000164779, **Diterima**
9	Samar Socket: IOT Energy Monitoring	2019	Hak Cipta	000126872, **Diterima**
10	Digilib v1.0	2019	Hak Cipta	000201527, **Diterima**
11	Smart Socket untuk Manajemen Energi Listrik Berbasis Mobile IoT dan Cloud	2018	Paten	PID201810149, **(PA) Masa Pengumuman**

I. Pengalaman Merumuskan Kebijakan Publik/Rekayasa Sosial Lainnya dalam 10 Tahun Terakhir

No.	Judul/Tema/Jenis Rekayasa Sosila Lainnya yang telah diterapkan	Tahun	Tempat Penerapan	Respon Masyarakat
-	-	-	-	-

J. Penghargaan dalam 10 Tahun Terkhir (dari pemerintah, asosiasi, atau institusi lainnya)

No.	Jenis Penghargaan	Institusi Pemberi Penghargaan	Tahun
1	10 Besar Best Paper Award di CENCON 2019 (artikel: Dual Active-Switched-Capacitor Quasi-Z-Source Inverter)	IEEE	2019
2	3rd Best Paper Award di ICPERE 2018 (artikel: Improved Two Switched-Inductor Quasi-Z-Source Inverter with High Voltage Gain and Reduced Inductor Current Ripple)	IEEE	2018

Semua data yang saya isikan dan tercantum dalam biodata ini adalah benar dan dapat dipertanggungjawabkan secara hukum. Apabila di kemudian hari ternyata dijumpai ketidaksesuaian dengan kenyataan, saya sanggup menerima sanksi. Demikian biodata ini saya buat dengan sebenarnya untuk memenuhi salah satu persyaratan dalam pengajuan Penelitian PNBP 2021.

Malang, 6 Januari 2020
Pengusul,

(Irham Fadlika, S.T., M.T.)