


Curriculum Vitae

	Personal Data
	<p><u>Firman Ridwan</u> First Name: Firman Family Name: Ridwan</p> <p><u>Permanent address:</u> Komplek. Cendana H 6 Tabing, Padang 25171 West Sumatera – INDONESIA</p> <p><u>Mailing address:</u> Jurusan Mesin Fakultas Teknik Unand Kampus Limau Manis, Padang, West Sumatera – INDONESIA 25163 Mobile Phone : (+62) 813 63 437282 Fax: (+62) 751 72566, 72586 E-mail: firmaridwan@ft.unand.ac.id firmaridwan@yahoo.com</p>

Academic Qualification

No.	Level	University	City & Nation	Graduation Year	Field
1.	Under-graduate	Andalas University	Padang, Indonesia	1994	Mech. Eng.
2.	Master of Applied Science	The University of Ottawa	Ottawa, Canada	2000	Mech. Eng.

Work Experiences

- 1994 - 2005 Teaching Mechatronics, Control and Manufacturing Process Courses, Mechanical Department, Engineering Faculty, Andalas University, Padang, Indonesia.
- 1996 - 2005 Member staff at Digital Control Laboratory, Electrical Department, Engineering Faculty, Andalas University, Padang, Indonesia.
- 1999 - 2000 Teaching and Research assistant at Mechanical Engineering, the University of Ottawa, Canada.
- 2001 - 2005 Head of Mechatronics and Robotics Laboratory, Mechanical Department, Engineering Faculty, Andalas University, Padang, Indonesia.
- 2002 - 2003 Researcher for electro-mechanical and control devices at PT. Semen Padang (Cement Portland Ltd.).
- 2005 Trainer of electro-mechanical and control devices at Hydro Power Plant, Singkarak, Padang.

Undergraduate Degree Qualification

- I have taken undergraduate courses as many as 159 credits with some advance manufacturing courses such as CNC programming (G code) for machining center STAMA 520, Machine Tool, Machining Process, Manufacturing Processes.
- Designed, implemented and tested cutting force load cell by data acquisition system to monitor forces constraint. It was used 16-strain gages sensor and C program language. Final Project of undergraduate.

Master Degree Qualification

- Understanding deeply, FFT, STFT, Wavelet, Electro-mechanical system, PLC and Data acquisition system.
- Courses have been taken: Industrial Control System, Robot Mechanics, Flexible Manufacturing System, CAD/CAM (IDEAS), Advanced topics in Mech. Eng.: Mechatronics, Knowledge Based System: AI using CommonLISP, Digital Signal Processing, Topics of signal processing: Multiresolution signal.
- Designed, implemented and tested Real-Time Online chatter detection and suppression of end milling process by data acquisition system using CVI (c for Virtual Instrument) Labwindows, National Instruments. Final project of Master Degree.

Technical and Professional Skills

Programming	Labwindows, Matlab, VB, Borland C, Borland /Turbo Pascal, G code (CNC programming)
Software packages	Microsoft Office, Excel, Word, Corel Draw, WordPerfect.
Operating Systems	DOS, WINDOWS 98/XP/NT.
Communication skills	Able to prepare and write clear and concise technical documents in English (Passed English Requirement equivalent TOEFL 550 score for master degree at the University of Ottawa, Canada)
Personal skills	Extremely fast learner, responsible, honest and very adaptable.

Award and Training

- Engineering Award and Entrance TID Scholarship, Gov. of Indonesia, Andalas University, Padang, 1993.
- Internship at PT. BUKAKA TEKNIK UTAMA, " Quality Control of Pumping Unit Product", Cileungsi Bogor, grade A, 1993.
- Short course of Data Communication between CNC type MC 520 and PC through RS232, HEDS-JICA, Directorate General of Higher Education Project, at Darma Agung University, Medan, 12-16 March 1994.
- Short course of CNC type MC 520 Maintenances and Errors Troubleshooting, PINDAD Trainers, HEDS-JICA, Directorate General of Higher Education Project, at Andalas University, Padang, 1995.
- Short course of Power System and Control Engineering, HEDS-JICA, Directorate General of Higher Education Project, Tanjung Pura University, Pontianak, 1995.
- Apprenticeship at ITB Bandung under Dr. Taufiq Rochim (Manufacturing Technology), Dr. Mulyo Widodo (Robotics and Control) and Dr. Yatna Yuana (Production System) Labors, six months, 1996.
- English Improvement workshop, higher study preparation, Directorate General of Higher Education Project, at International Academic Language Foundation (IALF) Bali, 1997.
- Entrance Scholarship, funded by Engineering Education Development Project, Gov. of Indonesia, Asian Development Bank to take master degree University of Ottawa, 1998.
- Teaching Improvement Workshop Batch 9, Achievement grade A+, Engineering, Education Development Project, Directorate General of Higher Education, 2000.
- Research Grant, Young Researcher, BBI, Gov. of Indonesia, 2001
- Research Grant, SDPF Heds-JICA Grant 2002.
- Training PLC Omron Sysmac-C, Pusdiklat PT. Semen Padang (cement Portland Ltd.), 2002.
- Training PLC, Mechatronics MH 711, Electro-mechanical system, FESTO, Jakarta, 2004.

Research Experiences

1. Load cell design for cutting force detection in drilling machine, undergraduate project, 1994.

2. Seminar of master thesis, On-line chatter detection and suppression for end milling processes, the University of Ottawa, Canada, April 2000.
3. On-line chatter detection and suppression for end milling processes, Master Thesis, 2000, Canada.
4. Position control of solar cell actuator, SPP/DPP Local Gov. Research Grant, 2000.
5. Study of 6R Elbow Robot Manipulator Part I: Inverse and forward kinematics methods, SPP/DPP Local Gov. Research Grant, *Teknika Jurnal* (National Journal), 2001.
6. Study of 6R Elbow Robot Manipulator Part II: Feedback Control System of Elbow actuator, SPP/DPP Local Gov. Research Grant, *Teknika Jurnal* (National Journal), 2001.
7. Noise detection and avoidance of end milling process using FFT, BBI Young Researcher Gov. Grant, 2001.
8. Tool wear detection of end milling process using STFT approach, *Poros Jurnal* (National Accredited Journal), Vol. 4 No. 4, Jakarta, 2001.
9. Tool wear detection of end milling process using wavelet approach, SDPF Heds-JICA Research Grant 2002.
10. Feedback Control of DC Motor Permanent on thread mechanism, *Jurnal Ilmiah Teknik Industri* (National Journal), Vol. 2, pp 71 – 75 , 2002
11. Recondition of Mechatronic module, Heds-JICA Grant, 2002.
12. Control of Equilibrium V pendulum, SPP/DPP Local Gov. Research Grant, 2003.
13. Automatic Control System, Classnote, 2003
14. Control system of 3 DOF Drilling machine for matrix- holed PCB which is interfaced to PC through PPI 8255A access, *Teknika Jurnal* (National Journal), Vol.1 No. 23, 2005.
15. Utilizing Driving licence Barcode to Control Portal Actuator of parking area using Programmable Logic Control (PLC), *Teknika Jurnal* (National Journal), Vol.2 No. 23, 2005.
16. Mechatronics Classnote, 2005
17. Chatter detection of end milling process using wavelet approach, *Poros Jurnal* (National Accredited Journal), Vol. 8 No.2 , Jakarta, 2005.
18. A Sorting Device of the Smallest Diameter of Rattan Using Data Acquisition System, DIPA Research Report, Oct 2006.