

**Master Degree in Embedded System Design**

**The University of Lugano**  
in collaboration with

**ETH Zürich**



**Politecnico di Milano**



awards

**THE DEGREE**  
of  
**MASTER**  
**OF ENGINEERING**  
**IN EMBEDDED**  
**SYSTEM DESIGN**

to

**Andi Nurrachmat**

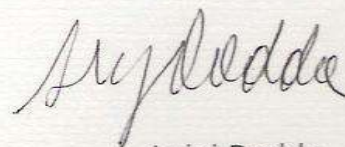
in recognition of the fulfillment  
of all requirements of that degree

The President  
of the  
University of Lugano

A handwritten signature in blue ink, appearing to read 'M. Baggiolini'.

Marco Baggiolini

The President  
of ALaRI

A handwritten signature in blue ink, appearing to read 'Luigi Dadda'.

Luigi Dadda

Lugano, Switzerland, 19<sup>th</sup> July 2001

**ALaRI Official Transcript**  
**Università della Svizzera italiana**  
 Advanced Learning and Research Institute

**Student: Andi Nurrachmat**

Course	Type (*)	ECTS	Score (**)
<b>1st Quarter</b>			
Digital Design Fundamentals	I	0	P
VHDL	I	0	P
Architectures	F	4	4 out of 5
Software Compilers	F	3	3 out of 5
Design Technologies	F	4	4 out of 5
Microelectronics	F	4	4 out of 5
Specification Languages	F	4	3 out of 5
Seminar on Presentation Skills	S	1	P
Seminar on Security	S	1	P
<b>2nd Quarter</b>			
Performance Evaluation	F	2	5 out of 5
Retargetable Compilers	F	2	3 out of 5
Power Analysis and Low-power Design	F	4	4 out of 5
RTOS and Scheduling	F	4	3 out of 5
DSP	F	3	4 out of 5
VLIW Architectures	F	2	3 out of 5
Dependable Systems	F	2	4 out of 5
Seminar on Cryptography	S	1	P
<b>3rd Quarter</b>			
HW/SW Co-design	F	2	4 out of 5
Control Theory	F	4	4 out of 5
Networking	F	2	4 out of 5
Seminar on Strategic Marketing	S	1	P
Seminar on Bluetooth	S	1	P
<b>4th Quarter</b>			
Re-programmable Systems	F	3	5 out of 5
Software Technologies	E	2	not present
Validation and Verification	E	2	not present
Real-time DB	E	2	4 out of 5
Seminar on Basic Financial Skills	S	1	P

**Beginning of studies: September 2000**  
**End of studies: July 2001**  
**ECTS total: 60 credits needed to graduate**  
 (\*) I=introductory, F=fundamental, E=elective,  
 S=seminar.  
 (\*\*) R=recognised from previous studies,  
 TBU=to be attended,  
 P/NP=introductory courses do not have  
 a score above Passed/Not Passed

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 URL: [www.alari.ch](http://www.alari.ch)



## Master Degree in Microelectronic:



**MINISTRY OF NATIONAL EDUCATION REPUBLIC OF INDONESIA  
INSTITUT TEKNOLOGI BANDUNG  
GRADUATE PROGRAM**

**ACADEMIC TRANSCRIPT  
MASTER'S PROGRAM  
( OFFICIAL TRANSLATION )**

Name	: Andi Nurachmat	Master's Program Enrollment
Date of birth	: March 8, 1969	Student Number : 23296025
Place of birth	: Ujung Pandang	Program of Study : Electrical Engineering
Previous Degree / Year	: Sarjana / 1995	First enrollment : 1996
Granting Univ.	: Universitas Hasanuddin	University : Institut Teknologi Bandung

Semester/Year	Courses	Credit Hours	Grade
I	EL 513 User Programmable Devices	2	B
	EL 611 Microelectronics	3	B
	EL 613 Physics of Semiconductor Devices	2	A
	EL 615 Advanced Electronic Circuit Analysis	3	B
	EL 617 VLSI System Design	2	A
II	EL 612 Integrated Circuit Technology	3	C
	EL 614 Integrated Circuit Design	3	C
	EL 617 Intelligent Instrumentation System	2	B
III	EL 713 Seminar	1	B
	EL 720 Artificial Neural Network & Fuzzy Logic	2	B
	EL 610 Signal Processor	2	B
	EL 616 Application of Microelectronic System	2	B
	EL 719 Image Processing and Pattern Recognition	2	B
IV	EL 801 Thesis I	2	A
	EL 802 Thesis II	6	A
Total Credits		37	

PROJECT / THESIS : Design and Implementation to Femto Java Processor on FPGA XILINX X C4010 XL-PC84

ADVISER : Dr.Ir. Suhono Harso Supangkat / Dr.Ir. Budi Rahardjo

GRADE : A


DATE OF FINAL EXAMINATION : December 20, 1999

DATE OF GRADUATION : February 19, 2000

JUDICIUM : —

AVERAGE GRADE : 3.16

BANDUNG, JUNE 12, 2000  
DIRECTOR OF GRADUATE PROGRAM

  
PROF.DR.IR. SULARSO, MSME.  
NIP. 130 188 318

Note : A: 4 ; B: 3 ; C: 2 = minimum passing grade



**Bachelor Degree in Telecommunication & Electronic:**

**HASANUDDIN UNIVERSITY**

**OFFICIAL TRANSCRIPT OF RECORD**

**N a m e** : ANDI NURRACHMAT  
**Student Number** : 89 09 386  
**Date Graduated** : DECEMBER 19<sup>th</sup>, 1995  
**Study Program** : TELECOMMUNICATION AND ELECTRONICS ENGINEERING



Number	Collegiate Record		
	Descriptive title of the course	Credits	Grades
1	Pancasila	2	A
2	Islamic Religion	2	A
3	Basic Cultural Science	2	C
4	Basic Social Science	2	A
5	Military Science	2	C
6	Indonesian Language	2	A
7	English	2	A
8	Engineering Drawing	2	A
9	Calculus I	3	A
10	Calculus II	3	C
11	Basic Physics I	3	A
12	Basic Physics II	3	C
13	Basic Physics III	3	A
14	Engineering Chemistry	3	B
15	Engineering Mathematics I	3	B
16	Engineering Mathematics II	3	C
17	Engineering Mathematics III	3	D
18	Engineering Mathematics IV	3	A
19	Computer Science	2	A
20	Basic of Computer Program	2	B
21	Electrical Material Science	2	B
22	Logic Circuits	2	B
23	Basic of Electronics	2	B
24	Basic of Communication System I	2	A
25	Basic of Communication System II	2	A
26	Electrical Circuits I	3	A
27	Electrical Circuits II	3	B
28	Electrical Circuits III	3	C
29	Electrical Power Engineering I	2	A
30	Electrical Power Engineering II	2	A
31	Practice I	2	B
32	Practice II	2	B
33	Practice III	2	B
34	Practice IV	2	B
35	Practice V	2	B
36	Electronics I	2	B
37	Electronics II	3	C
38	Theory of Electromagnetics I	3	B
39	Theory of Electromagnetics II	2	C
40	Digital Engineering	2	B
41	Transmission Line	2	B
42	Electrical Measurements	2	B
43	Swicthing Engineering	3	C

Number	Collegiate Record		
	Descriptive title of the course	Credits	Grades
44	Electronics Instrumental System	3	C
45	Radio Engineering	3	A
46	Basic Control System	3	C
47	Digital Computer	3	B
48	Antena's and Travelling Waves	2	B
49	Environmental Science	2	B
50	Introduction to Mechanical Technology	2	C
51	Introduction to Engineering Mechanics	2	C
52	Modern Physics	3	B
53	Engineering Economics	2	D
54	Practical Work I	1	A
55	Practical Work II	2	A
56	Student Study Service	4	A
57	Seminar I	1	A
58	Seminar II	1	A
59	Advanced Electronics	3	B
60	Control Engineering	3	B
61	Industrial Management	2	B
62	Signal and Information	3	B
63	Microprocessor	3	A
64	Thesis	7	A
Total of Credits		158	
Cumulative Grade Point Average			3.08

**Remarks :**

Title of thesis/dissertation : **Designing and Implementing Field instruments Emulator for Supervisory Control and Data Acquisition (SCADA) System Testing.**

**Grading System :**

- A : Excellent
- B : Very Good
- C : Good
- D : Satisfactory
- F : Failure

**Credits** : One university unit of credits is one hour lecture or recitation each week for the period of a complete semester.

In all courses, two and a half to three hours of laboratory work, and, in technical courses, three hours of drafting or shop work, are regarded as the equivalent of one hour of recitation of lecture.



*[Handwritten signature]*

A. Rivai Muslang, S.H.

OFF/REG: 130 520 644

**University Registrar**

Date issued : August 21<sup>st</sup>, 1998