

FACULTY OF MATHEMATICS AND NATURAL SCIENCES



INSTITUT TEKNOLOGI BANDUNG
2015

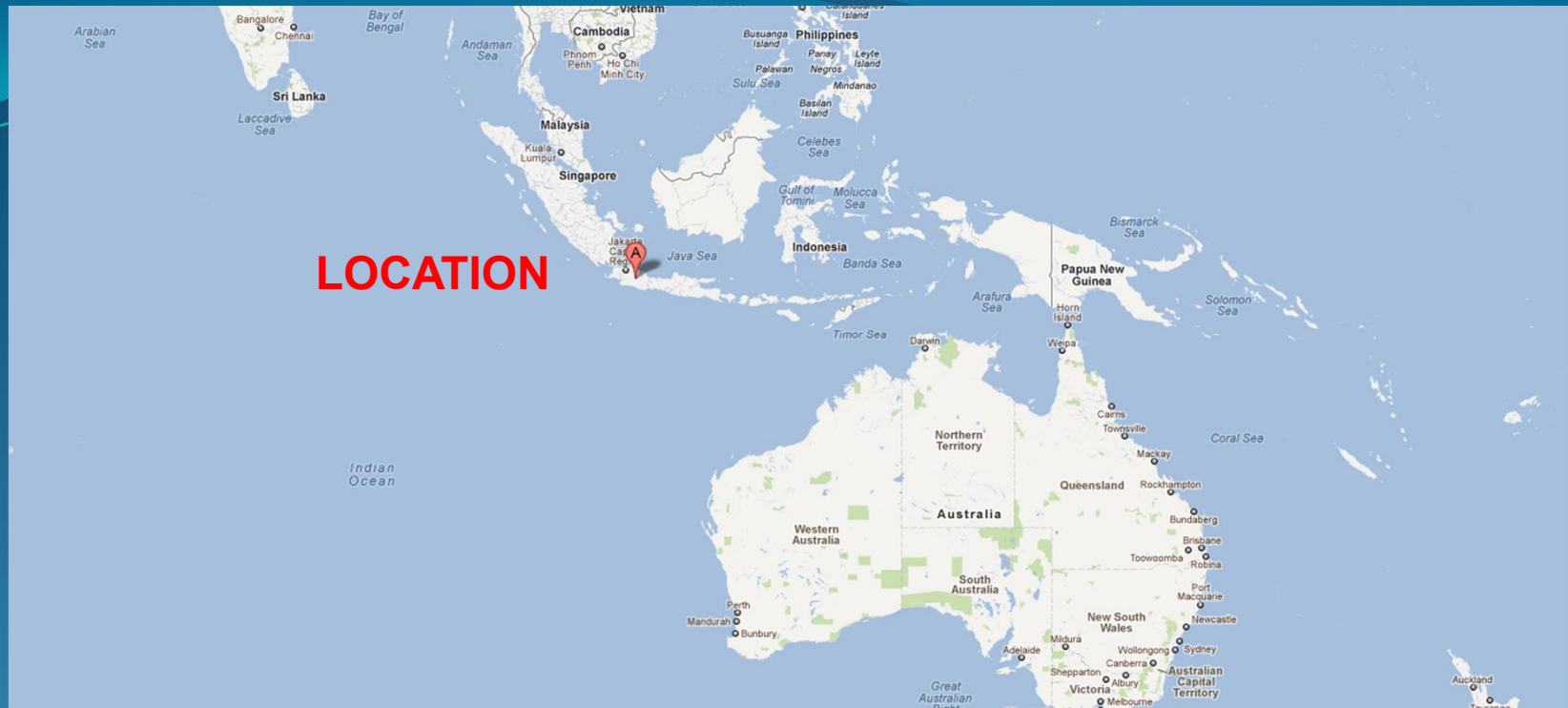


6 October 1947: *Exacte Faculteit van Wetenschap*

Faculteit van Wiskunde en Natuur Wetenschap

1952 : *FIPIA*

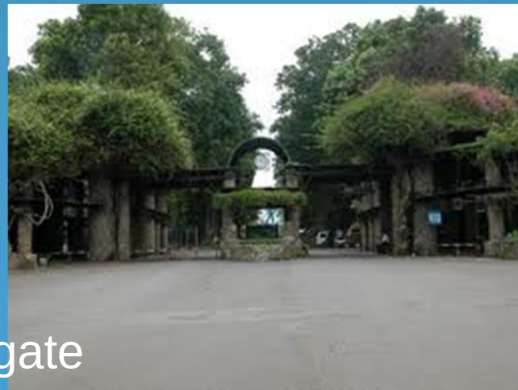
1972 - now : *Faculty of Mathematics and Natural Sciences*



<http://www.itb.ac.id/petakampus/#>



Main gate



VISI – MISI FMIPA ITB

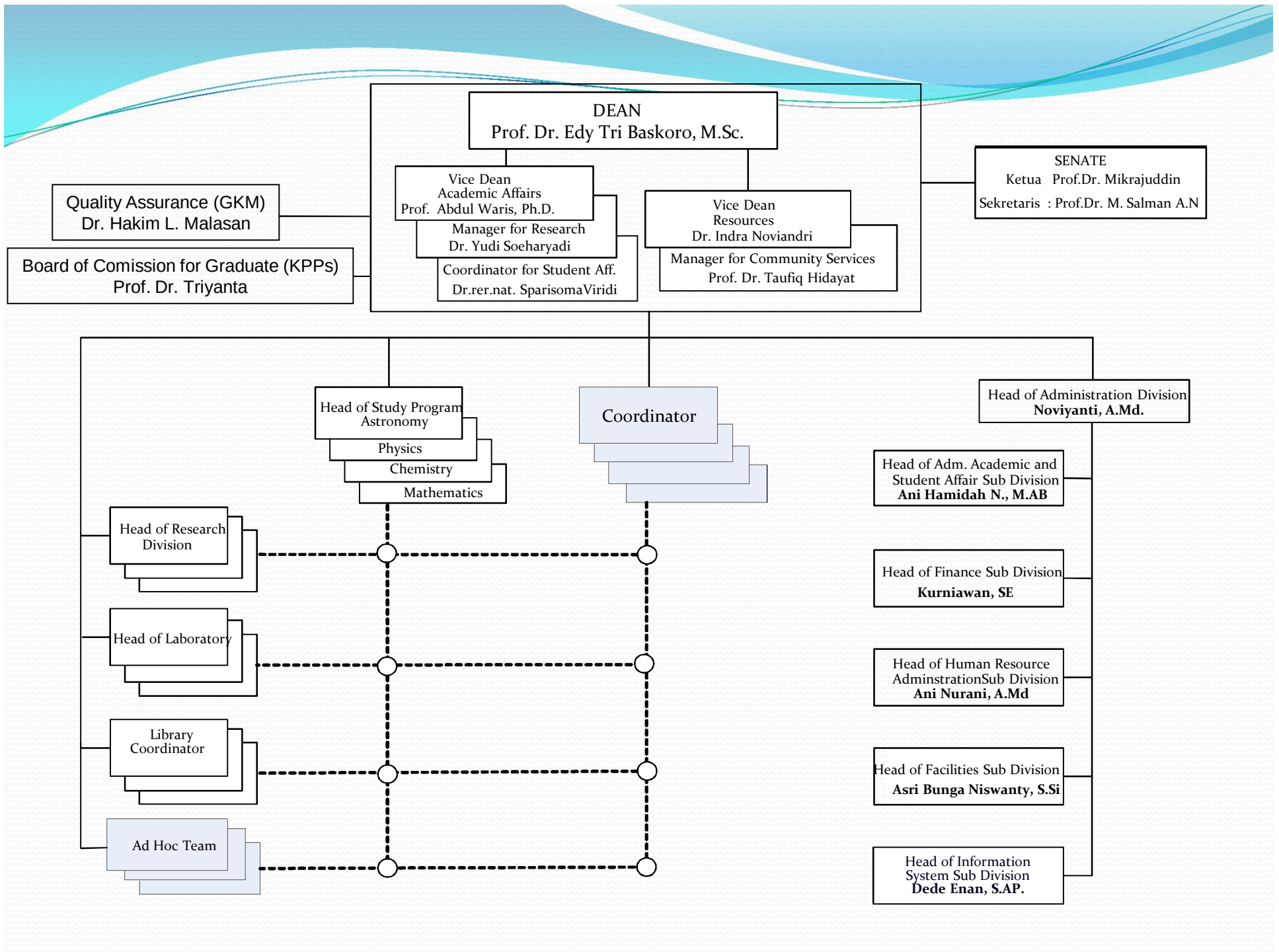
VISION

Fakultas terkemuka, pelopor pengembangan matematika dan sains serta memberikan kontribusi bagi kesejahteraan bangsa

A leading faculty, pioneering the advancement of mathematics and sciences, and contributing to the national prosperity

MISION:

- menyelenggarakan pendidikan terbaik dalam matematika dan sains untuk menghasilkan lulusan berkarakter dan berdaya saing global,
conducting high quality education in mathematics and sciences to produce graduate with strong characters and global competetiveness
- melaksanakan penelitian berkualitas dan terdepan dalam matematika dan sains,
conducting high quality and cutting edge research in mathematics and sciences
- melaksanakan pelayanan publik dan pemberdayaan masyarakat melalui pemanfaatan kepakaran fakultas bagi kesejahteraan masyarakat.
Conducting public services and community empowerment through faculty expertise for nation welfare





ACADEMIC PROGRAMS



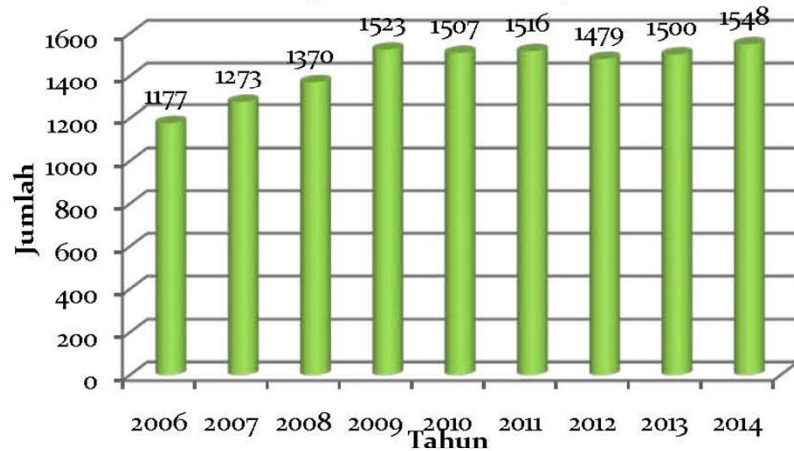
© Bosscha Observatory

Study Programs at FMIPA ITB

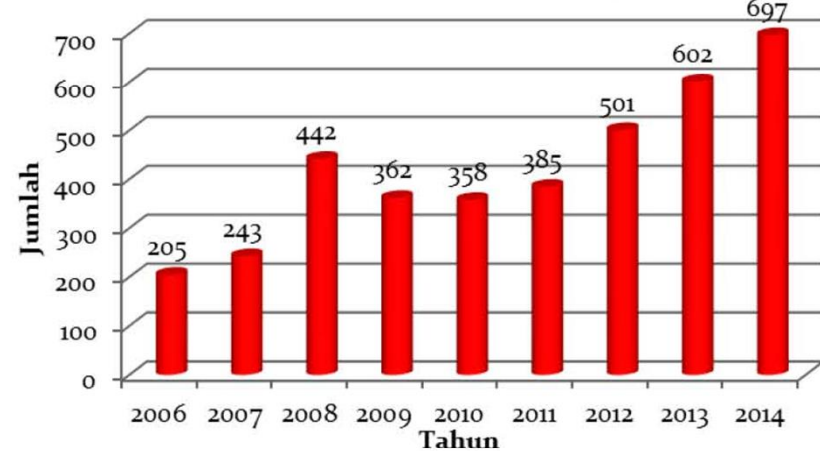
Undergrad	Master	Doctor
Astronomy	Astronomy	Astronomy
Physics	Physics	Physics
Chemistry	Chemistry	Chemistry
Mathematics	Mathematics	Mathematics
	Actuarial	
	Teaching in Physics	
	Teaching in Chemistry	
	Teaching in Mathematics	
	Computational Sciences	
4 years	2 years	3 years
4 years	1 year	3 years
4 th	4 years	

STUDENT BODY OF FMIPA

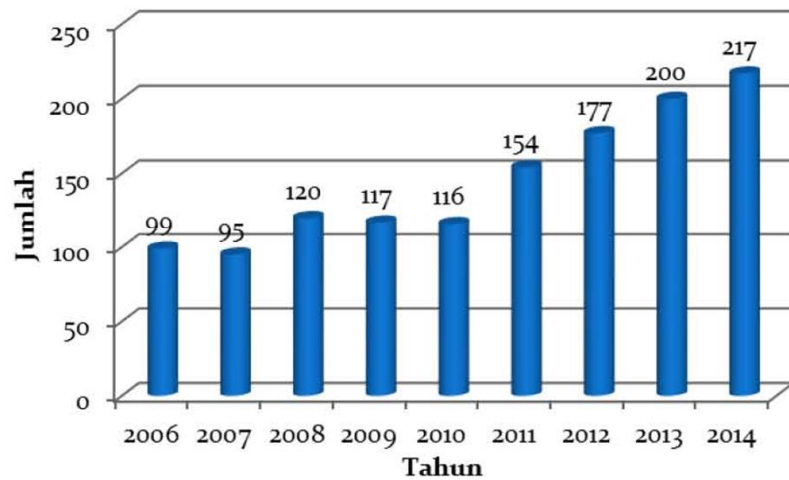
S1 (Undergrad) 2006-2014



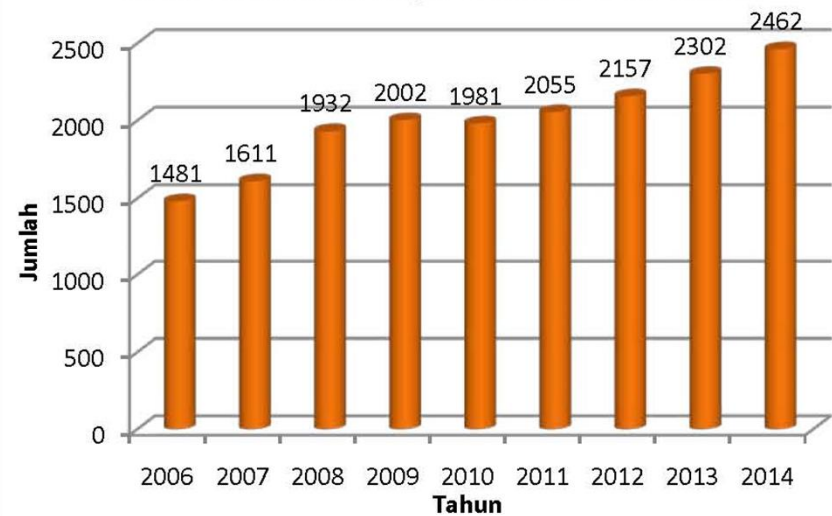
S2 (Master) 2006-2014



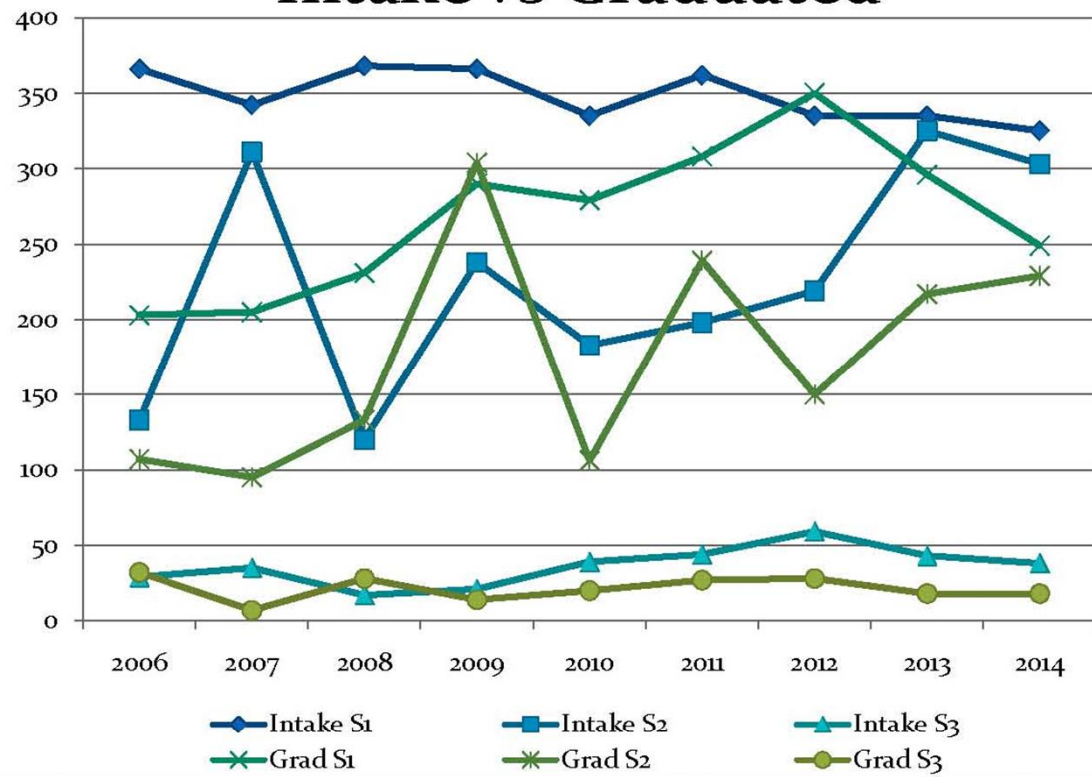
S3 (Doctor) 2006-2014

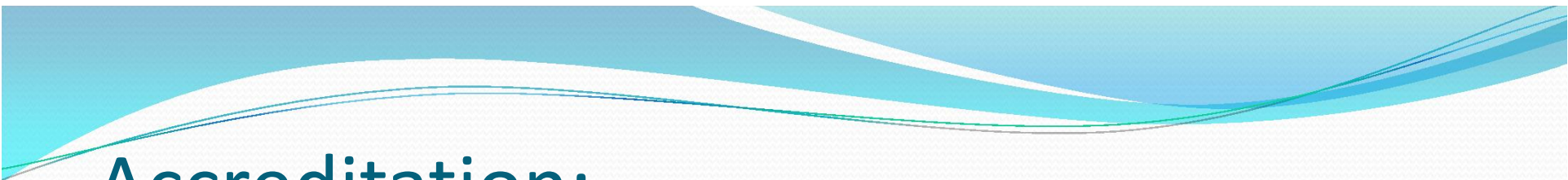


Total Student Body of FMIPA 2006-2014



Intake vs Graduated





Accreditation:

Å National accreditation board :

Å S1 and S3 : A (highest rank)

Å In preparation S2 (2015 : reaccreditation process)

Å International Accreditation (undergraduate programs)

Å AUN-QA: Physics (2009) - Assessment

Å RSC (Royal Society of Chemistry, London): Chemistry (2012) - accredited

Å ASIIN – Germany : Astronomy, Physics, Mathematics (2015) - accredited

COOPERATIONS (MoA):

➤ Japan:

- Osaka University
- JUNED (Japanese University Network for Global Nuclear Human Resources Development):
e.g.: Kyoto Univ, TIT, Kyushu Univ, Nagoya Univ., etc (16 Univ.)
- RIKEN
- Hiroshima University
- Kanazawa University
- Gunma University

➤ Germany:

- RWTH Aachen
- The University of Koblenz-Landau
- Julius-Maximilians-Universitaet Wuerzburg
- Hochschule: Ulm; Ruesselsheim Geisenheim
- University of Cologne (in progress for renewed)

➤ The Netherland:

- The University of Groningen
- University of Twente

➤ South Korea:

- KAIST (Korean Advanced Institute of Science and Technology)
- Kyungpook National University

➤ Australia;

- University of Newcastle

➤ Spain:

- University of Lleida

➤ Thailand:

- Nakhon Pathom Rajabhat University

Double degree programs

- Double degree programs (graduate programs):
 - University of Kanazawa, Japan (Number of alumni/students: 45)
 - University of Twente, Netherlands (Number of alumni/students: 15)
 - French Universities (starting 2012) (Number of alumni/students: 29)
 - Osaka University, Japan (starting 2014)
 - University of Newcastle, Australia
 - University of Lleida, Spain
- Double degree with French Universities:
 - Université d'Aix-Marseille,
 - Institut de Physique du Globe de Paris,
 - Université Pierre et Marie Curie,
 - Université Paris Sud/Paris XI,
 - Université Paris-est,
 - Université Nice Sophia Antipolis
 - Université d'Angers
 - Univ. Joseph Fourier-Grenoble
 - University of Littoral Côte d'Opale
 - Université de Rennes 1
 - Université Montpellier 2
 - Université de Lyon 1
 - Université de Poitiers
 - Université Paris Diderot-Paris 7
 - Université Paris 1 Panthéon Sorbonne

ACADEMIC AND RESEARCH COLLABORATIONS



- Staff/student Exchange, sandwich program, joint research programs through Professor-to-Professor collaboration:

- Australia: Univ. of Curtin, CSIRO, Univ. of Newcastle.
- French: Universite de Picardie, Institut Mines-Telecom,
- Germany: TU-Dortmund, Univ. of Hamburg, Univ. of Cologne, Univ. of Goettingen, Univ. of Stuttgart, Univ. of Kaiserslautern, TU-Munchen, Univ. of Koblenz, Univ. of Wuerzburg, etc.
- Japan: Univ. of Tokyo, Univ. of Kyoto, Univ. of Hiroshima, Univ. of Kanazawa, Univ. of Osaka, TIT, Univ. of Tohoku, Naruto University, etc.
- Korea: KAIST
- Lithuania: VMU
- New Zealand: Auckland Univ.
- Norway : NTNU Trondheim, Hogskole Gjovik
- Oman: Sultan Qaboos Univ
- Pakistan: GC University, Lahore
- Romania: University of RomaniaUK:
- Slovakia: STU Kosice, Comenius Univ.,
- Thailand: Mahidol University,
- The Netherland: Univ. of Twente, Univ. of Groningen
- USA: Southern Illinois,
- Erasmus-Mundus: <http://www.strongties.eu/index.asp?p=1711&a=1393>
- Etc.

Collaboration with industries and governmental institutions

- PT Indaco Coating Industry
- PT Great Eastern Life Indonesia
- PT. AXA Indonesia
- PT. AVIVA Insurance
- Indonesia Life Insurance Association
- PT. Bank Mandiri Tbk.
- Persatuan Aktuaris Indonesia
- Total Indonesia
- FMIPA - Universities in Indonesia
- District Kuantan Sengingi, Riau Province
- Gorontalo Province
- Central Sulawesi Province
- Nangro Aceh Darussalam Province
- West Java Province

International exposure of students:

- Short research visit: KAIST (since 2010)
- Campus Asia Program: Kanazawa (since 2010)
- Student associations short visit: NUS, UKM, UPM

- Mathematical Contest in Modeling (MCM) 2014 (www.comap.com)
- Joined The 55th London International Science Youth Forum (LIYSF) 2014.
- Second winner of The Green Brain of the Year – 2014 METU Northern Cyprus Campus.
- Joined Asia Pacific Youth Training on Media and Civic Participation and Global Media Forum
- Hong Kong Model United Nation Conference 2011
- International Students Meeting (ISM) at NIT, ROURKELA, INDIA 9 – 15 March 2011

Foreign Students:

Student Exchange:

- Japan (DD, Asia Campus)
- Germany (SE)
- USA (SE)
- Thailand (SE)
- Fiji (regular)
- The Netherland
- Turkey
- Spain
- Lithuania

Full time students:

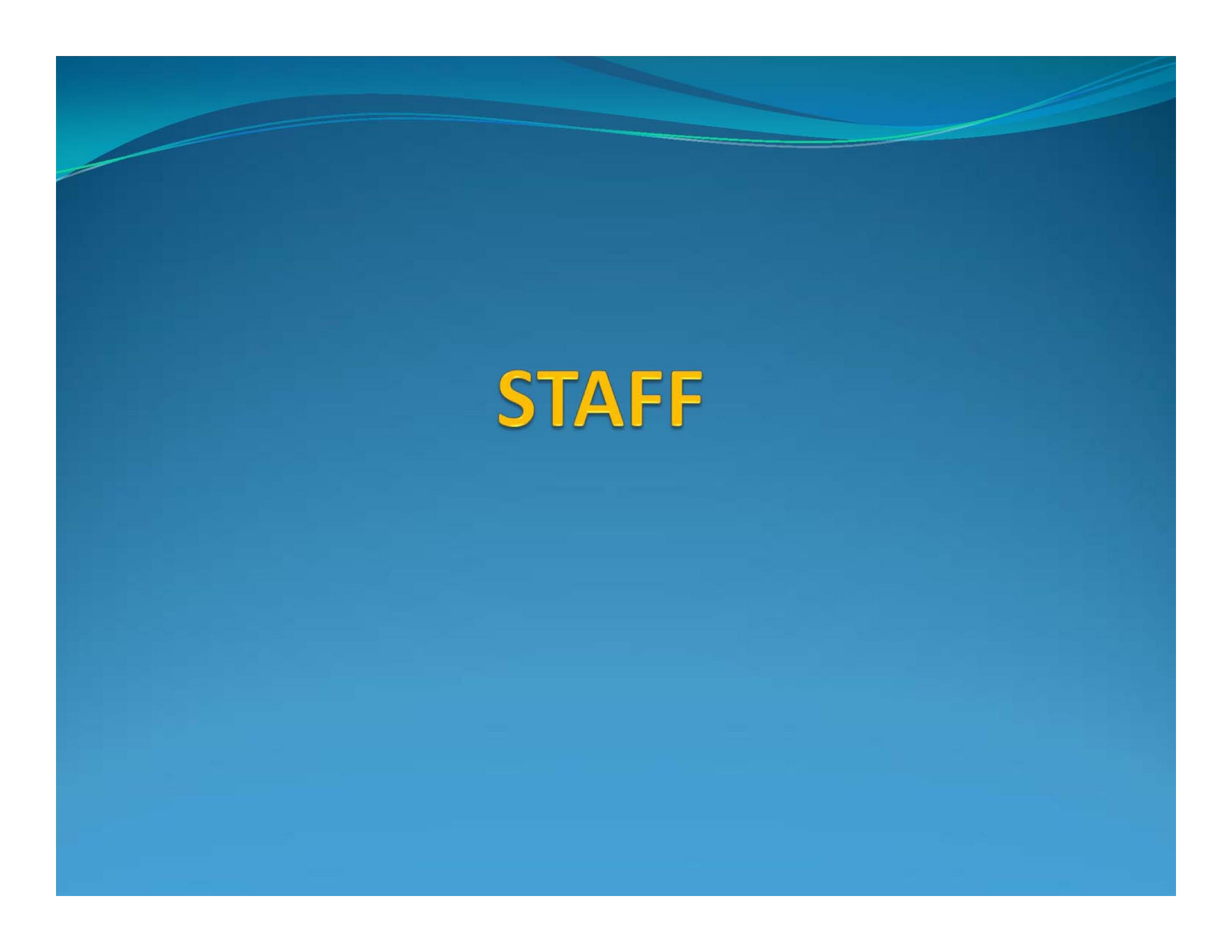
- Fiji (S2)
- Papua New Guinea (PNG) (S2)
- Malaysia (S1)

STUDENTS EXCHANGE PROGRAMS



Short Visit to KAIST (Oct-Nov, 2010)



The background is a solid blue color with a gradient. At the top, there are several thin, wavy lines in shades of blue and green that curve across the width of the image.

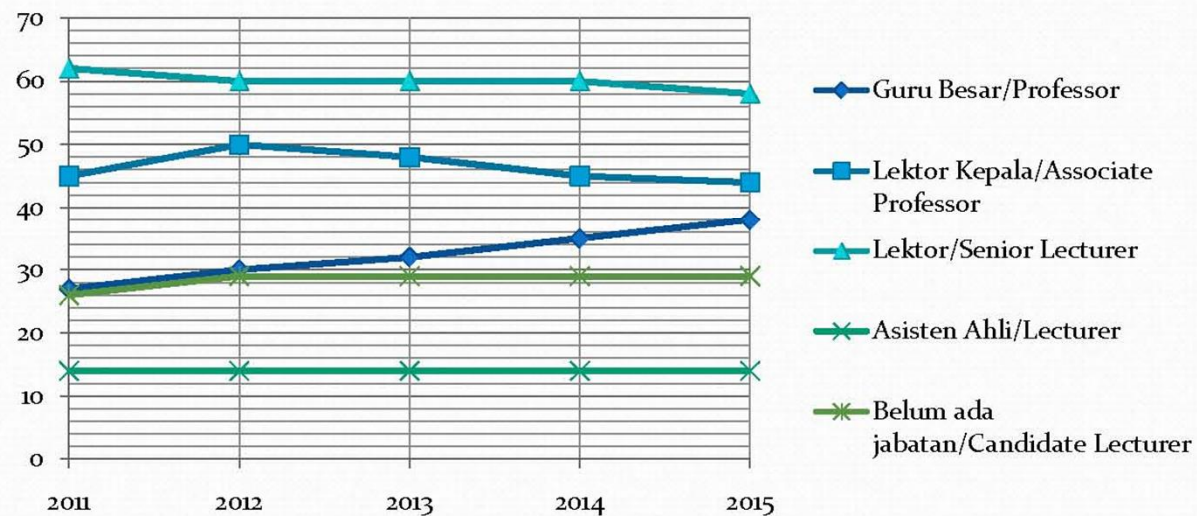
STAFF

Country of PhD-graduation (of faculty members)

	Country	Number	(%)
1	Japan	43	27.56
2	Australia	31	19.87
3	Indonesia	24	15.38
4	French	13	8.33
5	Germany	13	8.33
6	USA	11	7.05
7	The Netherland	9	5.77
8	UK	8	5.13
9	Canada	2	1.28
10	Malaysia	1	0.64
11	Singapore	1	0.64

Position	2011	2012	2013	2014	2015
Guru Besar/Professor	27	30	32	35	38
Lektor Kepala/Associate Professor	45	50	48	45	44
Lektor/Assistant Professor	62	60	60	60	58
Asisten Ahli/Instructur	14	14	14	14	14
Belum ada jabatan/Teaching Assistant	26	29	29	29	29
Total	174	183	183	183	183

Faculty Member of FMIPA



AWARDS & ACHIEVEMENT OF FACULTY MEMBERS OF FMIPA

- Habibie Awards:
 - Prof. M. Barmawi
 - Prof. Bambang Hidayat
 - Prof. Sjamsul A. Achmad
 - Prof. Djoko T. Iskandar*
 - Dr. Wilson W. Wenas*
 - Prof. Dr. Freddy P. Zen
 - Prof. Edy Tri Baskoro
 - Dr. Ferry Iskandar
- Australian Alumni Award for Excellence in Education:
 - Prof. Dr. Edy Tri Baskoro
 - Prof. Dr. Hendra Gunawan
- Bakrie Awards:
 - Prof. P. Silaban
 - Dr. Jorga Ibrahim
- Endeavour awards:
 - Prof. Yana M. Syah
 - Prof. Ismunandar
- National best academic staffs:
 - Prof. Dr. Edy Tri Baskoro (2008) - 1
 - Prof. Dr. Mikrajuddin (2010) - 1
 - Prof. Khairurrijal (2011) - 2
 - Prof. Yana M. Syah (2012) - 2

Rector of ITB (from FMIPA):

- Prof. Doddy A. Tisna A.* (1969-1976 & 1979-1980)
- Prof. Hariadi P. Supangkat (1980-1988)
- Prof. Lilik Hendrajaya (1997-2001)
- Prof. Akhmaloka (2010 – 2015)

Dr. Ferry Iskandar received Habibie Award and Anugerah Kekayaan Intelektual Luar Biasa (AKIL) 2014 from Ministry for Research Technology and Higher Education.



RESEARCH GROUPS AT FMIPA

FACILITIES, AND EQUIPMENTS

Teaching Laboratories

- Physics Laboratories: 5
- Chemistry Laboratories: 6
- Observatorium Bosscha for Astronomy
- Computer Labs: 4
- Workshops: glass, mechanics, electronics

Laboratory at Research Division

- Research Labs

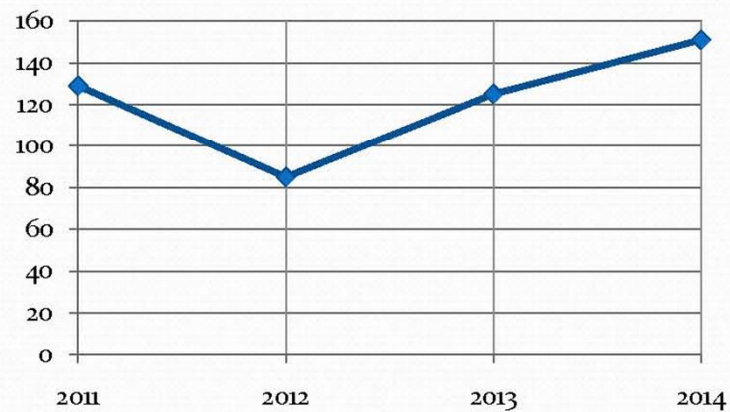
Common Facilities & Equipments

- Scanning Electron Microscope
- Nuclear Magnetic Resonance
- Micro-CT-Scan
- Workshop for glasses, mechanical
- Etc.

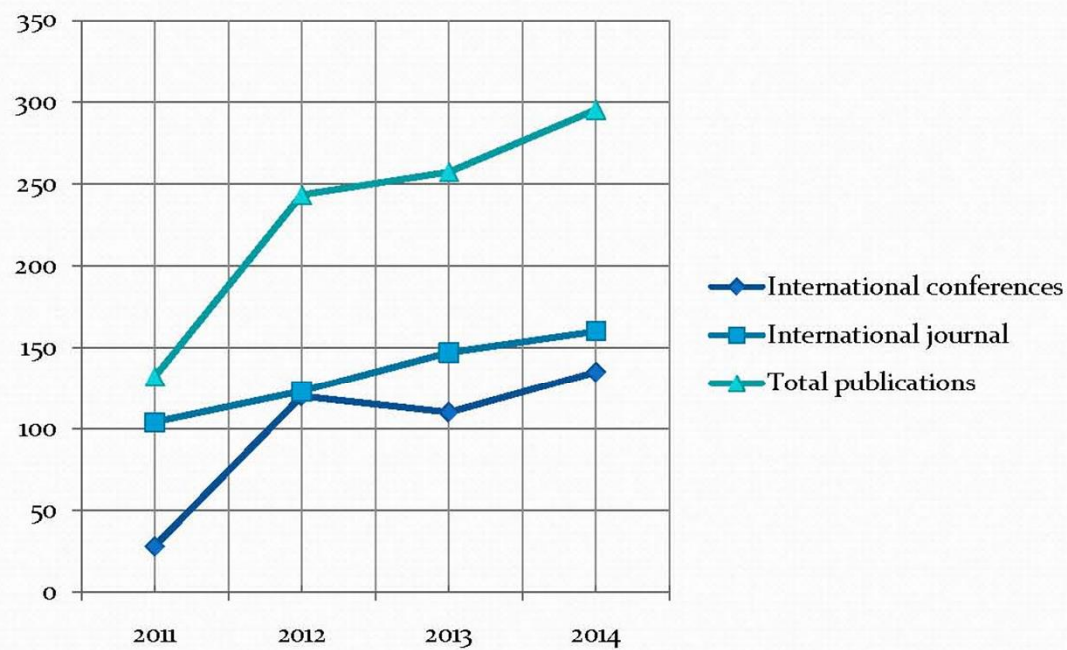
RESEARCH GROUP

RESEARCH GROUP	Professors	Total Members (Incl. Assoc., Assist.)
<u>Astronomy</u>	2	18
<u>Physics of Electronic Materials</u>	3	11
<u>Physics of Magnetism and Photonics</u>		10
<u>Physics of Earth and Complex Systems</u>	3	13
<u>Nuclear Physics and Biophysics</u>	3	14
<u>Theoretical High Energy Physics and Instrumentation</u>	4	13
<u>Analytical Chemistry</u>	2	10
<u>Inorganic and Physical Chemistry</u>	4	19
<u>Organic Chemistry</u>	2	10
<u>Biochemistry</u>	3	11
<u>Algebra</u>	2	8
<u>Analysis and Geometry</u>	2	9
<u>Industrial and Financial Mathematics</u>	6	16
<u>Combinatorial Mathematics</u>	2	11
<u>Statistics</u>		9
	38	183

No of research grants



RESEARCH GRANTS AND PUBLICATIONS



Workshop/seminar FMIPA 2013

- Seminar Nasional Material 2013
- 80 years and Inauguration of Prof. M. Barmawi as Honorary Member of Akademi Ilmu Pengetahuan Indonesia (AIPI) 2013
- ITB-DAAD Workshop 2013
- The 5th Advanced International Colloquium on Building the Scientific Mind 2013 (BtSM 2013)
- The 9th EASIAM Conference and The 2nd CIAM 2013
- Simposium Nasional Inovasi dan Pembelajaran Sains 2013 (SNIPS 2013)
- Simposium Nasional Inovasi dan Pembelajaran Sains – 2013
- Workshop on Discrete Solitons 2013
- The 4th International Conference on Advances in Nuclear Science and Engineering - ICANSE 2013
- The 2013 International Conference on Advanced Materials Science and Technology (ICAMST 2013)
- 2013 HAI Seminar - 90th Bosscha Observatory
- 2nd Indonesian Student Conference on Science and Mathematics (ISCSM)
- The 5th Nanoscience & Nanotechnology Symposium (NNS) 2013
- Symposium on Biomathematics 2013
- SEAMS School “Numbers, Graphs and Matrices” 2013
- Graph Masters 2013
- Seminar Kontribusi Fisika (SKF 2013)
- Joint UK-Indonesia Symposium on Anorganic Chemistry 2013

Workshop/seminar FMIPA 2014

1. International Symposium on Computational Science
2. Mathematical and Statistical Methods for Imaging (CIMPA 2014)
3. Seminar Internasional Joint Program of Institut Teknologi Bandung (ITB) and Japanese University Network for Global Nuclear Human Resource Development (JUNET-GNHRD)
4. Seminar Kontribusi Fisika (SKF2014)
5. Seminar Nasional Material 2014
6. International Symposium on Computational Science 2014 (ISCS-2014)
7. Seminar Nasional Material 2014 (SNM 2014)
8. International Conference on Sensor, Sensor System and Actuator 2014 (ICSSA 2014)
9. Symposium Nasional Inovasi dan Pembelajaran Sains (SNIPS 2014)
10. MRS-Id Meeting 2014
11. Seminar Claude Cibils
12. Bruker Open Lab Indonesia
13. International Conference on Advances in Education Technology (ICAET)
14. The 5th International Conference on Mathematics and Natural Sciences
15. SEAMS School Module Theory and Its Applications
16. Seminar Kontribusi Fisika 2014 (SKF 2014)

GUESTS AT FMIPA



2011: Prof. R. Huber
(Nobel Laureate)



2011: Prof. C. Villani
(Field Medalist)



2014: Prof. Brian Schmidt
(Nobel Laureate)

Guest Scientists:

- More than 72 scientists visit FMIPA in 2014
- Prominent scientists:
 - Prof. Robert Huber (Nobel Laureate) - 2011
 - Prof. Cedric Villani (Field Medalist) - 2011
 - Prof. Brian Schmidt (Nobel Laureate) - 2014

GUESTS (by country) 2013:

1. China
2. French
3. Germany
4. Holland
5. Hongkong
6. India
7. Irlandia
8. Japan
9. Malaysia
10. Nepal
11. Nigeria
12. Rusia
13. South Korea
14. South Africa
15. Sweden
16. Thailand
17. Turkey
18. USA
19. UK
20. Venezuela

By country 2014

1. France
2. Poland
3. USA
4. Japan
5. Thailand
6. Germany
7. Saudi Arabia
8. South Korea
9. South Africa
10. The Netherlands
11. Malaysia
12. Canada
13. Australia
14. Taiwan
15. New Zealand



THANK YOU

PLEASE VISIT

<http://www.fmipa.itb.ac.id/?lang=en>

