

# CURRICULUM VITAE

(update: May 2009)



## MUHAMMAD AGUNG BRAMANTYA

### LECTURER

Department of Mechanical and Industrial Engineering  
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### PERSONAL

Date / place of birth : March 22, 1981 / Yogyakarta – Indonesia  
Nationality : Indonesia  
Religion : Islam (Moslem)  
Wife : Dora Viala Fudholi, S.P.  
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### CURRENT STATUS

Doctoral Candidate in Keio University, Japan

Current Address : Campus : Department of Mechanical Engineering, Keio University  
3-14-1 Hiyoshi, Kohoku-ku, Yokohama 223-8522, Japan  
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### EDUCATIONS

Master's Degrees:

- **M.Eng.** (Master of Engineering):  
Engineering Design and Manufacturing, University of Malaya, MALAYSIA  
(2005 – 2007)  
*“Development of a software for designing and manufacturing an impeller”*
- **M.T.** (Master of Engineering):  
Mechanical Engineering (energy conversion), Gadjah Mada University, INDONESIA  
(2004 – 2005)  
*“The effect of geometry and amount of obstacles toward onset flooding counter-current two phase flow, air-water on vertical channel which porous inlet and sharp outlet”*

Bachelor's Degree:

- **S.T.** (Bachelor of Engineering)  
Mechanical Engineering, Gadjah Mada University, INDONESIA  
(1999 – 2003)  
*“Re-design conceptual aircraft Airbus A-330”*

## AREAS OF EXPERTISE

- Fluid Dynamics
- Turbomachineries
- Two Phase Flow
- Computation and Simulation
- Product Design and Development
- Magneto-hydro dynamics

## WORKING EXPERIENCES

### Gadjah Mada University (2006 – present)

- Lecturer, Department of Mechanical and Industrial Engineering (2006 – present)

#### Courses Taught:

- heat transfer and two phase flow (postgraduate, mechanical engineering)
- programming algorithm (postgraduate, mechanical engineering)
- pump and compressor (undergraduate, mechanical engineering)
- logistics and supply chain management (undergraduate, industrial engineering)
- project management (undergraduate, industrial engineering)
- engineering economic analysis (undergraduate, industrial engineering)

### University of Malaya (2005 – 2007)

- Tutor of Dynamics for Undergraduate degree, Department of Engineering Design and Manufacturing (2006/2007).
- Tutor of Ergonomics in Manufacturing for Master's degree, Department of Engineering Design and Manufacturing (2005/2006).
- Developed a software for designing and manufacturing an impeller (2006 – 2007)
- Developed a preliminary design for solar car racing (2006)

### KampongAkherat MULTIBUSINESS (2004)

- Manager of system development (2004/2005)

### UNOCAL Indonesia Company (2003)

- Maintenance and Production Crew (offshore) as Field Development Training (2003)
- On the-Job Training for Maintenance Crew (2002)
- Asisten Maintenance 3 rd Stage Boost Compressor C 1686 C1 Sepinggan (2002)

## RESEARCH EXPERIENCES

Research Area	Duration	Funding
Machine supports for Oil and Gas Processing at Lawe-lawe Terminal, Unocal Indonesia Company	2002; completed	Unocal Indonesia Company
Redesign Conceptual Aircraft: Airbus A 330	2003; completed	-
Power Distribution on Oil and Gas Factory	2003; completed	Unocal Indonesia Company
The Effect of Geometry and Amount Obstacles Toward Onset Flooding Counter-current Two Phase Flow Air-Water on Vertical Channel Which Porous Inlet and Sharp Outlet	2005; completed	-
Study on modification of lock-nut impeller of a centrifugal pump	2006; completed	-
Development of a Software for Designing and Manufacturing of an Impeller	2006 – 2007; completed	JICA project for AUN/SEEDNet
Study on fundamental research of ultrasonic propagation and inner structure in the magnetic and magneto-rheological (MR) fluids	2008 - present	JICA and KEIO University

## AWARDS

- **Fujiwara Award**, awarded by Keio University for evidence promise of significant progress and remarkable results in research, 2008.
- **The Best Poster Prize**, awarded in the 11<sup>th</sup> International Conference on Electrorheological Fluids and Magnetorheological Suspensions ERMR, Germany, 2008
- ASEAN University Network - Southeast Asia Engineering Education Development Network (**AUN/SEED-Net**) **scholarship for Doctoral Degree**, 2007
- ASEAN University Network - Southeast Asia Engineering Education Development Network (**AUN/SEED-Net**) **scholarship for Master's Degree**, 2005
- **The Fastest student** who has finished his bachelor's degree (as 2003), Department of Mechanical Engineering, Gajah Mada University (duration of study: 3 years 6 months).
- **The 1<sup>st</sup> Rank** (out of 141 students of 1999's batch), Department of Mechanical Engineering, Gadjah Mada University, 2003.

## SELECTED PUBLICATIONS

### 2009

- 1 M. A. Bramantya, M. Motozawa and T. Sawada, *Ultrasonic propagation velocity in magnetic and magnetorheological fluids due to an external magnetic field*, Journal of Physics: Condensed Matter, **2009 (reviewed)**.
- 2 M. A. Bramantya, H. Takuma and T. Sawada, *Ultrasonic study on the clustering structures of magnetorheological fluids under a uniform magnetic field*, Journal of the Japan Society of Applied Electromagnetic and Mechanics, Vol. 17, **2009 (to be published)**.
- 3 M. A. Bramantya, H. Takuma, M. Faiz and T. Sawada, *Ultrasonic propagation velocity in magneto rheological fluid under a uniform magnetic fields by ultrasound*, Journal of the Japan Society of Applied Electromagnetic and Mechanics, Vol. 17, 279, **2009**.
- 4 M. A. Bramantya, M. Motozawa, H. Takuma, M. Faiz and T. Sawada, *Experiment analysis of clustering structures in magnetic and MR fluids by ultrasound*, Journal of Physics: Conference Series, 149, 012040, **2009**.
- 5 M. A. Bramantya, H. Takuma and T. Sawada, *Hysteresis change of ultrasonic wave velocity in magnetorheological fluid*, Proceeding of the 21<sup>st</sup> Symposium on Electromagnetic and Dynamics, 4pp, Nagano, Japan, **2009**.
- 6 M. A. Bramantya, H. Takuma and T. Sawada, *Hysteresis change of ultrasonic wave velocity in MR fluid caused by the magnetic field*, Proceeding of The Annual Seminar of JSME Kanto Branch, pp. 391-392, Ibaraki, Japan, **2009**.

### 2008

- 7 M. A. Bramantya, H. Takuma, M. Faiz and T. Sawada, *Ultrasonic velocity anisotropy of MR fluids*, Proceeding of The Japan Symposium on Magnetic Fluids, Doshisha University, Japan, **2008**.
- 8 M. A. Bramantya, H. Takuma and T. Sawada, *Ultrasonic velocity anisotropy of magneto-rheological suspension*, Proceeding of First Regional Conference in Manufacturing Engineering, Manila, Philippine, **2008**.
- 9 M. A. Bramantya, H. Takuma and T. Sawada, *Ultrasonic study on the clustering structures of magnetorheological fluids under a uniform magnetic field*, Proceeding of MAGDA 17 Conference, pp.299-304, Hitachi, Japan, **2008**.
- 10 H. Takuma, M. A. Bramantya, M. Faiz and T. Sawada, *Time-Dependent Ultrasonic Propagation Properties of a MR Fluid under Magnetic Fields*, Proceeding of The Annual Seminar of The Japan Society of Fluid Mechanics (CD ROM), Kobe, Japan, **2008**.
- 11 M. A. Bramantya, M. Motozawa, H. Takuma, M. Faiz and T. Sawada, *Experiment analysis of clustering structures in magnetic and MR fluids by ultrasound*, Book of Abstract of The 11<sup>th</sup> International Conference on Electrorheological Fluids and Magnetorheological Suspensions, pp.51, Dresden, Germany, 25 – 29 August **2008**.
- 12 M. A. Bramantya, H. Takuma, M. Faiz and T. Sawada, *Ultrasonic Propagation Velocity in Magneto Rheological Fluid under a Uniform Magnetic Field*, Proceeding of Asia-Pasific Symposium on

Applied Electromagnetics and Mechanics (CD ROM), pp.360-363, Bangkok, Thailand, 24 – 25 July **2008**.

- 13 Bramantya, M. A., Sugiyono and Rama Doni, *Pengaruh Diffuser pada Flens Isap dan Lock Nut Impeller Berbentuk Tirus terhadap Kurva Karakteristik Pompa Sentrifugal*, Jurnal Mesin (Journal of Mechanical Engineering), Universitas Udayana, Indonesia, **2008** (in Indonesian language).

## 2007

- 14 Bramantya, M. A. and Sugiyono, *Improving Characteristic of Centrifugal Pumps due to Helical Inducer Shape of Lock Nut Impeller*, Proceeding of 11<sup>th</sup> AUN/SEED-Net Fieldwise Seminar for Manufacturing Engineering, pp. 107-111, Kuala Lumpur, Malaysia, 3 – 4 December **2007**.
- 15 Bramantya, M. A., Sugiyono and Rivani, P., *Karakteristik Pompa Sentrifugal dengan Modifikasi Diffuser dan Lock Nut Impeller Berbentuk Helical Inducer*, Proceeding of 6<sup>th</sup> Annual National Conference on Mechanical Engineering, ISME (Indonesian Society of Mechanical Engineering), pp. 299 – 307, Banda Aceh, Indonesia, 20 – 22 November **2007**. ISBN: 979-97726-8-0 (in Indonesian language).
- 16 Bramantya, M. A., Zahari Taha and Yasuo Suga, *A Java GUI for the Design of an Impeller*, Jurnal Mesin (Journal of Mechanical Engineering), Universitas Udayana, Indonesia, Vol. 2, No. 1, June **2007**.
- 17 Bramantya, M. A. and Sugiyono, *Pressure Characteristic on a Capture Pneumatic Chamber due to Nose Position for Oscillating Water Column*, Jurnal Mesin dan Industri (Journal of Mechanical and Industrial Engineering), Gadjah Mada University, Indonesia, Vol. 4, No. 2, pp. 155 – 160, May **2007**. ISSN: 1693 – 704X.
- 18 Bramantya, M. A. and Sugiyono, *Aerodynamics Performance for Body Development of a Solar Car*, Jurnal Mesin dan Industri (Journal of Mechanical and Industrial Engineering), Gadjah Mada University, Indonesia, Vol. 4, No. 2, pp. 161 – 165, May **2007**. ISSN: 1693 – 704X.
- 19 Bramantya, M. A., Zahari Taha and Yasuo Suga, *A Java GUI for Impeller Design and Manufacture*, 3rd International Conference on Humanoid, Nanotechnology, Information Technology, Communication and Control, Environment, and Management, Manila, Philippines, March **2007**. ISSN: 1656-7226.
- 20 Bramantya, M. A. and Sawada, T., *Properties and Applications of Ferro-fluid: Magnetically Controlled Suspension*, Indonesian International Journal of Social, Science, and Technology, University of Malaya, Vol. 2, No. 1, Malaysia, **2007**. ISSN: 1823-948X
- 21 Bramantya, M. A., Fauzun, and Ruhaizin, S., *Preliminary Development of Aerodynamics for a Solar Car*, Jurnal Mesin dan Industri (Journal of Mechanical and Industrial Engineering), Gadjah Mada University, Indonesia, Vol. 4, No. 1, pp. 83 – 88, January **2007**. ISSN: 1693 – 704X.
- 22 Bramantya, M. A., *Development of a Software for Impeller Design and Manufacture*, Master's Thesis, University of Malaya, **2007**.
- 23 Bramantya, M. A., Zahari Taha, and Yasuo Suga, *Software Development for Manufacturing of an Impeller*, Proceeding of 9th AUN/SEED-Net Fieldwise Seminar on Manufacturing Systems, pp. 107-111, Kuala Lumpur, **2007**.

## 2006

- 24 Minh, H. L., Zahari T., Herliansyah, M. K. and Bramantya, M. A., *PC-Based Milling Machine Toward 2.5 D Prototyping Purpose*, Proceeding of International Seminar on Product Design and Development, Yogyakarta, Indonesia, December 13-14, **2006** pp VII-1 – VII-7, ISBN: 979-15577-0-5.
- 25 Bramantya, M. A., Zahari Taha and Yasuo Suga, *Development of a 2D Software for Impeller Design and Manufacture*, Proceeding of International Seminar on Product Design and Development, Yogyakarta, Indonesia, December 13-14, **2006** pp VII-7 – VII-12, ISBN: 979-15577-0-5.
- 26 Bramantya, M. A., *Estimating Performance of Centrifugal Pumps Using JAVA Programming*, Journal of International Postgraduate Students – University of Malaya, Vol. 2, No. 2, July **2006**, pp. 18 – 29, ISSN: 1823-948X.
- 27 Bramantya, M. A., Zahari Taha, Yasuo Suga, and Norhafizan Ahmad, *Development of a Software for Designing and Manufacturing of an Impeller*, International Conference & AUN/SEED-Net Fieldwise Seminar on Manufacturing and Material Processing, Kuala Lumpur, **2006**, ISBN: 983-42876-0-7

## 2005

- 28 Bramantya, M. A. and Indarto, *The Effect of Amount Obstacles on Counter-current Two Phase Flow Air-Water in Vertical Channel*, Journal of International Postgraduate Students – University of Malaya, Vol. 1, No. 1, August **2005**, pp. 24 – 32, ISSN: 1823-948X (in Indonesian language).
- 29 Bramantya, M. A. and Indarto, *The Study of Amount Obstacles Toward Onset Flooding Counter-current Two Phase Flow Air-Water on Vertical Channel*, Master's Thesis publication, Gadjah Mada University, **2005** (in Indonesian language).
- 30 Bramantya, M. A., *The Effect of Geometry and Amount Obstacles Toward Onset Flooding Counter-current Two Phase Flow Air-Water on Vertical Channel Which Porous Inlet and Sharp Outlet*, Master's Thesis, Gadjah Mada University, **2005** (in Indonesian language).
- 31 Bramantya, M. A. and Indarto, *Study of Obstacle Geometry on the Onset Flooding Counter-current Vertical Water-gas Flows*, Proceeding of National Conference on Industrial Research and Technology Development, pp. MF 17 – MF 22, Yogyakarta, **2005**, ISBN: 979-99266-1-0 (in Indonesian language).

## 2003

- 32 Bramantya, M. A., *Power Distribution on Oil and Gas Factory*, Field Development Training Publication, Unocal Indonesia Company, **2003**.
- 33 Bramantya, M. A. and Sutrisno, *Redesign Conceptual Aircraft: Airbus A 330*, Bachelor's Thesis, Gadjah Mada University, **2003** (in Indonesian language).

## 2002

- 34 Bramantya, M. A., *Machine supports for Oil and Gas Processing at Lawe-lawe Terminal*, On the Job Training Publication, Unocal Indonesia Company, **2002** (in Indonesian language).

## TRAINING, WORKSHOP, AND EXHIBITIONS

1. *Ultrasonic study on the clustering structures in magnetic and magnetorheological fluids*, M. A. Bramantya and T. Sawada, **Poster Presented** in the 1<sup>st</sup> Year Ph.D. student evaluation, School of Integrated Design and Engineering, Keio University, Yokohama, Japan, 19 March **2009**.
2. *Ultrasonic study of clustering structures in magnetic and magnetorheological fluids*, M. A. Bramantya and T. Sawada, **Poster Presented** in the Open House of ASEAN University Network – Southeast Engineering Education Network, Gadjah Mada University, Yogyakarta, Indonesia, 10 March **2009**.
3. *Ultrasonic study on the clustering structures of magneto-rheological fluids under a uniform magnetic field*, M. A. Bramantya, H. Takuma, M. Faiz and T. Sawada, **Poster Presented** in The Magnetodynamics MAGDA 17 conference organized by The Japan Society of Applied Electromagnetics and Mechanics, Hitachi, Japan, 20-21 November **2008**.
4. *Ultrasonic study of clustering structures in magnetic and MR fluids*, M. A. Bramantya and T. Sawada, **Poster Presented** in The International Symposium: Strategic Partnership among Higher Education Institution in ASEAN and Japan, Tokyo, Japan, 23 October **2008**.
5. *Experiment analysis of clustering structures in magnetic and MR fluids by ultrasound*, M. A. Bramantya, M. Motozawa, H. Takuma, M. Faiz and T. Sawada, **Poster Presented** in The 11<sup>th</sup> International Conference on Electrorheological Fluids and Magnetorheological Suspensions, Dresden, Germany, 25 – 29 August **2008**.
6. *ESQ Leadership Training*, ESQ Leadership Center, Auditorium LPP Yogyakarta, Indonesia, 14 – 16 February **2008**.
7. *Intensive Course on Computational Fluid Dynamics for Multiphase Flow Simulation*, Department of Chemical Engineering, Gadjah Mada University, Indonesia, 10 – 14 December **2007**.
8. *International Workshop on Industrial Multiphase Flows and Reactors*, Department of Chemical Engineering, Gadjah Mada University, Indonesia, 6 – 7 December **2007**.

9. *Software for Impeller Design and Manufacture*, Bramantya, M. A., Zahari Taha, and Yasuo Suga, Poster Presented in The International Exposition of Research and Inventions of Institution of Higher Learning (PENCIPTA2007), Kuala Lumpur Convention Centre, Malaysia, 10 – 12 August **2007**.
10. *Development of a Software for Designing and Manufacturing of an Impeller*, Bramantya, M. A., Zahari Taha, and Yasuo Suga, Poster Presented in The Small and Medium Industries Development Corporation (SMIDEX2007), Kuala Lumpur Convention Centre, Malaysia, 5 – 8 June **2007**.
11. *PC-Based Milling Machine Toward Toward 2.5 Dimension Prototyping Purpose*, Poster Presented in The Malaysian Technology Expo (MTE2007), PWTC Kuala Lumpur, Malaysia, 29 – 31 March **2007**.
12. *Development of a Software for Designing and Manufacturing of an Impeller*, Bramantya, M. A., Zahari Taha, Yasuo Suga, and Norhafizan Ahmad, Poster Presented in The Manufacturing and Automation Technology exhibition (MAT2006), Penang, Malaysia, 21st – 23rd Sept **2006**.
13. *Computational Fluid Dynamic using Java Virtual Machine for Pump Design*, Bramantya, M. A., Zahari Taha, Yasuo Suga, and Norhafizan Ahmad, Poster Presented in The Langkawi International Maritime and Aerospace Exhibition (LIMA2005), Langkawi, Malaysia, 6th - 11th Dec **2005**
14. *Field development training*, Oil and Gas Training Centre, Institute of Training in Energy and Mineral Resources, Department of Energy and Mineral Resources of The Republic of Indonesia, June – September **2003**