

## Personal Information

**Name : Arjon Turnip**

Place & date of birth : Panangkohan, April 24<sup>th</sup> 1974

Sex : Male

Marital status : Married

Address : Pasir Impun No. 20 RT 001/ RW 005 (Hj. Umar), Pasir Impun, Mandalajati,  
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Religion : Catholic

Hobby : Reading, Teaching, & Motivate

Nationality : Indonesian



## Short biography

Arjon Turnip received the B.Eng. and M.Eng. degrees in Engineering Physics from the Institute of Technology Bandung (ITB), Indonesia, in 1998 and 2003, respectively, and the Ph.D. degree in Mechanical Engineering from Pusan National University, Busan, Korea, under the World Class University program in 2012. He is currently work in the Technical Implementation Unit for Instrumentation Development, Indonesian Institute of Sciences, Indonesia as a research coordinator. He received Student Travel Grand Award for the best paper from ICROS-SICE International Joint Conference 2009, Certificate of commendation: Superior performance in research and active participation for BK21 program from Korean government 2010, and JMST Contribution Award for most citations of JMST papers 2011. His research areas are integrated vehicle control, adaptive control, nonlinear systems theory, estimation theory, signal processing, brain engineering, and brain-computer interface.

Meanwhile, he accomplished three governmental projects as a project leader entitled the development of assistive intelligent system based bio-feedback signal, electric wheelchair controlled based EEG-P300 signal, and new advances wind turbine based planetary gear for water distribution. The last project is collaborate with the local government of the Kabupaten Samosir and supported by Indonesian Institute of sciences.

## Research Project

**February – Nopember 2013:** *Development of Intelligent Assistive System based Bio-feedback Signal* (Pengembangan Sistem Inteligen Asistif berbasis Sinyal Bio-feedback). Funded by: competitive (top research) LIPI (Indonesian Institute of Sciences).

**February – Nopember 2013:** *New advances wind turbine technology based planetary gear for water distribution* (Penerapan turbin angin dengan teknologi baru berbasis planetary gear untuk sistem distribusi air). Funded by: Tematic (regular research) LIPI (Indonesian Institute of Sciences).

**February – Nopember 2013:** *Electric controlled-wheelchair based EEG-P300 signals* (Pegendalian Kursi Roda Listrik Berbasis Sinyal EEG-P300). Funded by: Tematic (regular research) LIPI (Indonesian Institute of Sciences).

**June– December 2012:** Pengembangan Instrumentasi e-monitoring Data Kualitas dan Kapasitas Sumber Air untuk Sumur resapan (*Development of e-monitoring instrumentation data quality and water resources capacity of ground water*). Funded by: Peningkatan Kemampuan Peneliti dan Perekayasa (PKPP), Ristek.

**January 2010– December 2011:** *Real-time imaging of cognitive ability*. Funded by: The World Class University Program funded by the Ministry of Education, Science and Technology, Korea.

**October 2008 – December 2009:** *Development of an intelligent suspension system for ride comfort improvement: Road condition estimation*. Funded by: Pusan National University, S&T Daewoo, Daeheung R&T Co., Ltd., Inje University, Shinho Systems Co., Ltd.

**January – December 2008:** *Development of a control algorithm for active pneumatic engine mount systems*. Funded by: Pusan National University, Daeheung R&T Co., Ltd., INFAC Corporation, Shinhan Electronics Co., Ltd., KATECH.

## Education

### January 2008 – 2011

**Doctor (Dr.),** Brain Control Interface, Department of Cogno-Mechatronics Engineering, **Pusan National University (PNU), Republic of Korea.**

**Doctor (Dr.),** Modeling and Control for Suspension System, School of Mechanical Engineering, **Pusan National University (PNU), Republic of Korea.**

**Disertation:** *Feature Extraction and Classification of EEG-P300 Signals, and Its Application to Online Brain Computer Interface.*

**August 2000 – March 2003**

**Master of Technique (MT.)**, Instrumentation and Control Program, Department of Engineering Physics, **Institut Teknologi Bandung (ITB)**.

Thesis : “*Optimization Technique Application In Predictive Controller Design*”, PINK, ITB, 2002.  
**Grade: A.**

**August 1994 – October 1998**

**Bachelor (ST.)**, Department of Engineering Physics, Faculty of Industrial Engineering, **Institut Teknologi Bandung (ITB)**.

Final Project : “*Identification and Adaptive Control Design for Vehicle Suspension System*”, ITB, 1998. **Grade: A.**

## Research Areas of Interest

- **Signal Processing (Neural Networks, ICA, SEKF)**
- **Optimization**
- **Modeling and Parameter Estimation**
- **Adaptive Control**
- **Model Reference Predictive Filter**
- **Instrumentation and Measuring**
- **Neuro-Fuzzy and Soft Computing**
- **Data and Computer Communication**

## Achievements and Awards

- **JMST Contribution Award for most citations of JMST papers** from JMST Journal, Korea, 2011.
- **Certificate of commendation: Superior performance in research and active participation** for BK21 program, from Korean government, 2010.
- **Student Travel Grand Award for the best paper** entitled “*Detection of Critical Driving Situations Based on Wheel-ground Contact Normal Forces*” from ICROS-SICE International Joint Conference 2009.
- **Scholarship** from **BK21** and **WCU**, Pusan National University, Republic of Korea, January 2008 – December 2011.
- **Scholarship** from **DuPont Company**, Undergraduate, Department of Engineering Physics, ITB, January 1996 – September 1998
- **Scholarship** from **Department of Engineering Physics**, Master Degree, Instrumentation and Control Program, ITB, August 2000 – March 2003

# Publication

## A. Journal Publications (25 Papers)

### International Journal

1. **Turnip, A.**, Soetraprawata, D., and Kusumandari, D. E., Improvement of BCI performance through nonlinear principal component analysis extraction, *International Journal of Computer and Communication Engineering (IJCCE)*, 2013 (accepted).
2. **Turnip, A.**, Haryadi, Soetraprawata, D. and Kusumandari D. E., A Comparison of Extraction Techniques for the rapid EEG-P300 Signals, *Advanced Science Letters*, 2013 (accepted).
3. **Turnip, A.** and Hong, K.-S., "**P300 detection using multilayer neural networks based adaptive feature extraction method**", *International Journal of Innovative Computing, Information and Control (IJICIC)*, 2013 (Under review).
4. **Turnip, A.**, Sutraprawata, D. and Kusumandari, D. E., "**A Comparison of EEG Processing Methods to Improve the Performance of BCI**", *International Journal of Computer and Communication Engineering*, 2013 (Under review)
5. **Turnip, A.** and Sutraprawata, D., "**Feature Extraction of EEG-P300 Signals Using Nonlinear Independent Component Analysis**", *International Journal of Engineering and Sciences*, 2013 (Under review)
6. **Turnip, A.** and Hong, K.-S., "**Online P300 classification extracted by adaptive nonlinear principal component analysis**", *Cognitive Systems Research*, 2013 (Under review)
7. **Turnip, A.** and Hong, K.-S., "**Estimation of the tire-road friction coefficients based on state histories and tire forces**" *International Journal of Automotive Technology*, In Press, 2013 (accepted).
8. **Turnip, A.** and Hong, K.-S., "**Road-frequency based optimization of damping coefficients for semi-active suspension systems**" *International Journal of Vehicle Design*, In Press, 2013 (accepted).
9. **Turnip, A.** and Hong, K.-S., "**Classifying mental activities from EEG-P300 signals using adaptive neural network**", *International Journal of Innovative Computing, Information and Control (IJICIC)*, vol. 8, no. 7, 2012.
10. **Turnip, A.**, Hong, K.-S., and Jeong, M.-Y., "**Real-time feature extraction of P300 component using adaptive nonlinear principal component analysis**", *Journal of BioMedical Engineering OnLine*, 10:83, 2011.
11. **Turnip, A.**, Park, S. H., and Hong, K. S., "**Sensitivity Control of a MR-Damper Semi-Active Suspension**", *International Journal of Precision Engineering and Manufacturing*, Vol.11, No.2, pp.5-13, 2010.
12. **Turnip, A.**, Hong, K. S., and Park, S. H., "**Modeling of Hydraulic Engine Mount for Active Pneumatic Engine Vibration Control Using the Extended Kalman Filter**", *Journal of Mechanical Science and Technology*, Vol.23, No.1, pp.229-236, 2009.

### National Journal

1. **Turnip, A.** and Soetraprawata, D., "**Performance of EEG-P300 Classification Using Backpropagation Neural Networks**", *Journal of Mechatronics, Electrical Power and Vehicular Technology*, 2013 (Under review).

2. Soetraprawata, D. and **Turnip, A.**, "Autoregressive Integrated Adaptive Neural Networks Classifier for EEG-P300 Classification", *Journal of Mechatronics, Electrical Power and Vehicular Technology*, 2013 (Under review).
3. **Turnip, A.**, Soetraprawata, D., Hariyadi, and Kusumandari, D. E., "Design of an adaptive intelligent controller in a semi-active suspension systems", *Teknologi Indonesia*, 2012 (Under review).
4. **Turnip, A.**, Soetraprawata, D., Hariyadi, and Kusumandari, D. E., "Sequential extended Kalman filter on EEG extraction and classification", *Teknologi Indonesia*, 2013 (Under review).
5. **Turnip, A.** and Kusumandari, D. E., "Adaptive Autoregressive Integrated Nonlinear Principle Component Analysis Algorithm for EEG Extraction", *Mechatronics, Electrical Power and Vehicular Technology*, 2012 (Under review).
6. **Turnip, A.** and Kusumandari, D. E., "Adaptive Feed forward Controller applied for Active Pneumatic Engine Mount System", *Scientific Paper, Instrumentation*, 2012 (Under review).
7. Kusumandari, D. E. and **Turnip, A.**, "Modeling of an Engine Mount System based Parameter Identification Technique", *Journal INDUSTRI (FTI – ITS)* (Under review).
8. **Turnip, A.**, Soetraprawata, D., Munandar, A., and Alam, A. S., "Perancangan sistem monitoring untuk pengendalian pengambilan air bawah tanah berbasis wireless, Batan (Submitted).
9. **Turnip, A.**, Soetraprawata, D., Munandar, A., and Alam, A. S., "Perancangan sistem prototype untuk monitoring kualitas dan kuantitas air bawah tanah, Batan (Under review).
10. Sutraprawata, D. and **Turnip, A.**, "Neural network training using sequential extended kalman filter for reliable road friction coefficient estimation" *Journal of Indonesia Technology*, vol. 33, no.2, 2010.
11. Pardede, J., **Turnip, A.**, and Santoso, A., "Sistem Manajer pada Sistem Kolaborasi Berbasis Web", *Majalah Teknologi Indonesia*, vol. 30, no. 1, 2007.
12. **Turnip, A.** and Nazaruddin, Y. Y., "Optimization Technique Application In Predictive Controller Design", *Scientific Paper, Instrumentation*, Jakarta, 2007.
13. Sutraprawata, D., Santoso, A., and **Turnip, A.**, "Dynamic Parameter System Identification for Design of Furnish Metal Block", *Teknologi Indonesia*, vol. 29, no. 2, pp. 49-59, 2006.

### Conferences Publication (28 International & 2 National)

1. **Turnip, A.**, Soetraprawata, D., and Kusumandari, D. E., A comparison of EEG processing methods to improve the performance of BCI, *International conference on intelligent information processing (ICIIP 2013)*, Jakarta, Indonesia, 13-14 July 2013.
2. **Turnip, A.**, Haryadi, Soetraprawata, D. and Kusumandari D. E., A Comparison of Extraction Techniques for the rapid EEG-P300 Signals, The 2012 International Conference on Internet Services Technology and Information Engineering (ISTIE 2013), 10 - 11 May, 2013 in Aston Bogor Hotel Resort, Bogor, Indonesia.

3. **Turnip, A.** Widyotriatmo, A., and Suprianto, Classification of EEG-P300 Signals Using Fisher's Linear Discriminant Analysis, *International conference on instrumentation, control and automation*, Bali, August 28-30, 2013.
4. **Turnip, A.** and Haryadi, Impact of Inter-Stimulus Intervals on the Behaviour of EEG-P300 Signals, *International conference on instrumentation, control and automation*, Bali, August 28-30, 2013.
5. **Turnip, A.** and Soetraprawata, D., Classification of EEG Signals based Bayesian Linear Discriminant Analysis, *International conference on information, communication technology*, Bali, May 15 – 16, 2013.
6. **Turnip, A.**, Munandar, A., and Alam, H. S., Nonlinear Independent Component Analysis for P300 Component Detection, *The International Conference on Radar, Antenna, Microwave, Electronics and Telecommunications (ICRAMET)*, Surabaya March 27-28 2013.
7. **Turnip, A.**, Soetraprawata, D., and Fakhurroja, H., Extraction Methods for EEG-P300 Signals Performance Improvement and Its Application for BCI, *The International Conference on Radar, Antenna, Microwave, Electronics and Telecommunications (ICRAMET)*, Surabaya March 27-28 2013.
8. **Turnip, A.**, Haryadi, and Sutraprawata, D., Applied Adaptive Neural Network Control of a Semi-Active Suspension Systems, *The 6th National Radar Seminar and International Conference on Radar, Antenna, Microwave, Electronics and Telecommunications (ICRAMET)*, Bali, Indonesia, April 23-25, 2012.
9. **Turnip, A.**, Hong, K. S., Haryadi, and Sutraprawata, D., Nonlinear Principal Component Analysis Application for P300 Extraction and Classification, *The 6th National Radar Seminar and International Conference on Radar, Antenna, Microwave, Electronics and Telecommunications (ICRAMET)*, Bali, Indonesia, April 23-25, 2012.
10. **Turnip, A.**, Hong, K.-S., and Yoon, S., "Adaptive nonlinear principle component analysis based multilayer neural network for p300 detection," *2011 IEEE/SICE International Symposium on System Integration (SI International 2011)*, Clock Tower Centennial Hall, Kyoto University, Kyoto, Japan, December 20–22, 2011.
11. **Turnip, A.** and Hong, K.-S., "Adaptive neural network classifier for eeg signals of six mental tasks", *11th international conference on control, automation and systems*, KINTEX, Gyeonggi-do, Korea, Oct. 26-29, 2011.
12. **Turnip, A.**, and Hong, K.-S., "Real time feature extraction of EEG-based P300 using nonlinear principal component analysis", *17th Annual Meeting of the Organization for Human Brain Mapping*, Quebec City, Canada, June 26-30, 2011.
13. **Turnip, A.**, Hong, K.-S., and Ge, S. S., "EEE-P300 extraction using neural network based adaptive recursive filter and adaptive autoregressive models", *The Eighth IASTED International Conference on Biomedical Engineering (Biomed 2011)*, Innsbruck, Austria, February 14-18, 2011.
14. **Turnip, A.**, Hong, K. S., Ge, S. S., and Jeong M. Y., " Neural Networks Training Based on Sequential Extended Kalman Filtering for Single Trial EEG Classification", *The 2nd*

*International Conference on Knowledge and Systems Engineering (KSE 2010)*, Hanoi, Vietnam, October 7-9, 2010.

15. **Turnip, A.**, Hong, K. S., and Ge, S. S. " Classification Based on Backpropagation Training for EEG Signals", *Proceeding of The First PNU-HU Joint Workshop Hokkaido University*, Hokkaido, Japan, June 30, 2010.
16. **Turnip, A.**, Hong, K. S., and Ge, S. S. " Backpropagation Neural Networks Training for Single Trial EEG Classification", *Proceedings of the 29<sup>th</sup> Chinese Control Conference*, Beijing, China, July 29-31, 2010.
17. **Turnip, A.** and Hong, K. S., "Optimization of the Dynamic Behavior of Semi-Actively Suspended Road Vehicles," *Proceedings of the International Conference on Instrumentation, Control and Automation*, pp. 66-70, Bandung, Indonesia, Oct. 20-22, 2009.
18. **Turnip, A.**, Nguyen, L. H., Park, J. W., and Hong, K. S., "Optimization of the Dynamic Behavior of a Semi-active Suspension System Subjected to Road Frequency," *Proceedings of the Korea Automatic Control Conference 2009*, pp. 591-595, Bexco, Busan, Korea, Sep. 2-4, 2009.
19. Nguyen, L. H., Park, S., **Turnip, A.**, Park, J. W., and Hong, K. S., "Model Reference Adaptive Control for Quarter-car Active Suspension Systems," *Proceedings of the Korea Automatic Control Conference 2009*, pp. 596-599, Bexco, Busan, Korea, Sep. 2-4, 2009.
20. Haryanto, A., **Turnip, A.**, and Hong, K.-S., "Parameter Identification of a Superheater Boiler System Based on Wiener-Hammerstein Model using Maximum Likelihood Method", *Proceedings of the 7th Asian Control Conference*, Hong Kong, China, August 27-29, 2009.
21. **Turnip, A.**, Nguyen, L. H., and Hong, K. S., "Detection of Critical Driving Situations Based on Wheel-ground Contact Normal Forces," *Proceedings of ICROS-SICE International Joint Conference 2009*, pp. 2519-2524, Fukuoka, Japan, Aug. 18-21, 2009.
22. Nguyen, L. H., **Turnip, A.**, Park, S., and Hong, K. S., "Modified Skyhook Control of a Suspension System with Hydraulic Strut Mount," *Proceedings of ICROS-SICE International Joint Conference 2009*, pp. 1347-1352, Fukuoka, Japan, Aug. 18-21, 2009.
23. Nguyen, L. H., **Turnip, A.**, Park, S., and Hong, K. S., "Application of LQR Control Theory to the Design of Modified Skyhook Control Gains for Semi-active Suspension Systems," *Proceedings of ICROS-SICE International Joint Conference 2009*, pp. 4698-4703, Fukuoka, Japan, Aug. 18-21, 2009.
24. **Turnip, A.**, Hong, K.-S., and Park, S. H., "Control of a Semi-Active MR-Damper Suspension System: A New Polynomial Model," *Proceedings of the 17th World Congress, The International Federation of Automatic Control*, pp. 4683-4688, COEX, Seoul, Korea, July 6-11, 2008.
25. **Turnip, A.**, Nguyen, L. H., Park, S., Choi, J.-Y., Lee, W.-H., Kim, J.-H., and Hong, K.-S., "Development of Feed forward Control Algorithm for Active Pneumatic Engine Mount System", *KSME Dynamics and Control Division Spring Conference*, 2008.
26. **Turnip, A.**, Nazaruddin, Y. Y., and Hong, K. S., "Model Reference Adaptive Control of an Active Suspension System," *Proceedings of the First International Symposium on Advanced Vehicle Engineering*, pp. 71-76, Grand Hotel, Busan, Korea, Feb. 21-23, 2008.

27. Oh, D. M., **Turnip, A.**, and Hong, K. S., "Control Strategies of a Semi-Active Suspension System Using Four Relative Displacement Sensors," *Proceedings of the First International Symposium on Advanced Vehicle Engineering*, pp. 94-99, Grand Hotel, Busan, Korea, Feb. 21-23, 2008.
28. **Turnip, A.** and Nazaruddin, Y. Y., "*Application of Adaptive-Reference Model Controller for Controlling of Air Temperature in the a House Model*", *Scientific Paper*, KIM, Jakarta, 2000.
29. Nazaruddin, Y. Y. and **Turnip, A.**, "*Adaptive Active Suspension Design Using Model Reference Adaptive Control Technique*", *Scientific Paper*, ASCC'2000, Jun Wang and Xiaoning Du Institute of Automation, Shanghai Jiaotong Univ., Shanghai, China, 2000.
30. **Turnip, A.** and Nazaruddin, Y. Y., "Adaptive Control Design for Vehicle Suspension System", *Scientific Paper*, KIM – 99, Serpong, Tangerang, 1999.

## Working Experience

1. **Research Staff in Engineering Development for Instrumentation Department**, UPT BPI-LIPI, Bandung, December 2003 – Now.
2. **Member of Planning, Monitoring and Evaluation Team**, LIPI Project, December 2005 – 2008.
3. **Project Manager of Software Development of Hospital Management Information System** for Klinik Spesialis Kebidanan Kartini, Bandung, December 2006 – 2007.
4. **Project Manager of Software Upgrade of Hospital Information System** for Rumah Sakit Umum Graha Juanda, Bekasi, May – December 2006.
5. **Project Manager & Designer of Software Development of Hospital Management Information System** for Rumah Sakit Umum Fakultas Kedokteran Univ. Kristen Indonesia, Jakarta, May 2005 – May 2006.
6. **Project Manager of Networking-Based Diskless Technology Installation System** for Rumah Umum Fakultas Kedokteran Univ. Kristen Indonesia, Jakarta, April 2005.
7. **Project Manager & Designer of Software Development of Hospital Management Information and Networking Installation System** for Rumah Sakit Umum Bhakti Kartini, Bekasi, August 2004 – January 2005.
8. **Project Manager & Designer of Software Development of Hospital Management Information and Networking Installation System** for Rumah Sakit Umum Rawa Lumbu, Bekasi, June 2004 – November 2004.
9. **Project Manager & Designer of Software Development of Hospital Management Information System and Networking-Based Diskless Technology Installation System** for Rumah Sakit Umum Graha Juanda, Bekasi, March – December 2003.
10. **Programmer & Designer of Information System Softwares Design** for Rosdiana Accessories, Bandung, August – October 2003.



11. **Programmer & Designer of Calibration Information System Software Design** for UPT Balai LIN-LIPI, Bandung, June – September 2003.
12. **Programmer & Designer of Smart System for Backlog Management**, Department of Engineering Physics, ITB, March – December 2003.
13. **Web Designer for Calibration Laboratory Homepage**, Department of Engineering Physics, ITB, January - February 2003.
14. **IT Manager**, Institut Teknologi Harapan Bangsa (ITHB), Bandung, May 2002 - April 2003.
15. **Designer & Programmer of Library Information System** for Institut Teknologi Harapan Bangsa, Bandung, October 2002.
16. **Laboratory Coordinator and Course Guide Writer of Programming Algorithm**, Institut Teknologi Harapan Bangsa, Bandung, August – December 2002.
17. **Project Manager of Networking Installation System**, Institut Teknologi Harapan Bangsa, Bandung, July – September 2002.
18. **Web Designer for Master Degree Program**, PINK, Department of Engineering Physics, ITB, March – June 2001.
19. **Administrator Coordinator of Networking Systems and Web Master**, Department of Engineering Physics, ITB, 2000 – 2002.
20. **Designer of Academic Web Database** for Department of Engineering Physics, ITB, March -June 2001.
21. **Designer of Academic Information System** for Department of Engineering Physics, ITB February– April 2000.
22. **Designer of Application Information System Softwares** for Master Degree Program, Department of Engineering Physics, ITB, March – May 1999.
23. **Programmer for Undergraduate Education Quality Improvement Project**, Department of Engineering Physics, ITB, 1999.

## Teaching Experience

1. **Lecturer of OOAD, Information Management, Computer Architecture and Data Communication**, SAD, BPN International School, Braga City Walk, March 2012 – Now.
2. **Lecturer of Web-Based Information System**, ITENAS, Bandung, August 2006- 2007.
3. **Lecturer of Modeling and Simulation**, UNIKOM, Bandung, September 2005- February 2006.
4. **Lecturer of Engineering Electromagnetic**, Univ. Kristen Maranata (UKM) Bandung, January 2004 – July 2005.
5. **Lecturer of Measurement System**, UNIKOM, Bandung, January - July 2003.
6. **Lecture Assistant of Automatic Control for Master Degree Program**, Department of Engineering Physics, ITB, January – July 2003.

7. **Lecturer of Computer Application**, Institut Teknologi Harapan Bangsa, Bandung , August - December 2002.
8. **Lecturer of Computer Introduction**, Institut Teknologi Harapan Bangsa, Bandung, August - October 2002.
9. **Lecturer of Measurement System**, UNIKOM, Bandung, February - July 2002.
10. **Lecture Assistant of Automatic Control for Master Degree Program**, Department of Engineering Physics, ITB, January – June 2002.
11. **Instructor of TCP/IP Networking, Intranet Application, Web Server Operations and Database Link to Web Training**, PT. Sazindo Ergatama, Bandung, Januari 21-25, 2002.
12. **Instructor of TCP/IP and Principles of Networking Training**, PT. Sazindo Ergatama, Bandung, November 5-9, 2001.
13. **Instructor and Course Guide Writer of Database Link to Web Training**, PT. Sazindo Ergatama, Bandung, September 11-14, 2001.
14. **Instructor of Modern Office Management Training**, Pertamina, Bandung, August 2001.
15. **Instructor of TCP/IP Networking Training for Industry**, PT. Krakatau Steel, ITB, May 28 – June 1, 2001.
16. **Lecturer of Basic Physics**, ITENAS, Bandung, August 2001- February 2002.
17. **Lecture Assistant of Signal & System**, Department of Engineering Physics, ITB, August – December 2000.
18. **Instructor of Distributed Control System (DCS) for Computer Based Instrumentation and Control Course**, Engineering Physics Dept., ITB, 1997.
19. **Laboratory Assistant of Measurement System**, Department of Engineering Physics, ITB, 1996 – 1998.

## Subjects of Books

- ✚ Turnip, Arjon., " *Management Information System User Guide* ", RS Graha Juanda, Bekasi, 2006.
- ✚ Turnip, Arjon., " *Computer Introduction* ", Institut Teknologi Harapan Bangsa, Bandung, 2003.
- ✚ Turnip, Arjon., " *Algorithm Programming* ", Institut Teknologi Harapan Bangsa, Bandung, 2003.
- ✚ Turnip, Arjon., " *TCP/IP Networking Course Guide for Industry* ", Bandung Institute of Technology, Bandung, 2001.