

Dr. Eng. Khoirul Anwar, Assistant Professor

Short Biography	Dr. Anwar graduated (<i>cum laude</i>) from the department of Electrical Engineering (Telecommuni- cations), Institut Teknologi Bandung (ITB), Bandung, Indonesia in 2000. He received Master and Doctor Degrees from Graduate School of Information Science, Nara Institute of Science and Technol- ogy (NAIST) in 2005 and 2008, respectively. Since then, he was appointed as an assistant professor in NAIST. He received best student paper award from the IEEE Radio and Wireless Symposium 2006 (RWS'06), California-USA, Best Paper of Conference held by Indonesian Student Association (ISA 2007), Kyoto, Japan in 2007, Best Paper Presenter for the track of Advanced Technology in International conference on Sustainability for Human Security (SUSTAIN), Kyoto, October 2011, and Indonesian Diaspora "Award for Innovation", Congress of Indonesian Diaspora, Los Angeles, USA, July 2012, Achmad Bakrie Award 2014, Jakarta, December 2014.		
	Dr. Anwar's technique is adopted by the international telecommunication union (ITU), ITU-R standard No. ITU-R S.1878 "Multi-carrier Based Transmission Techniques for Satellite Systems" also in ITU-R S.2173 (07/2010) "Multi-carrier-based transmission techniques".		
	Dr. Anwar was in University of Melbourne, Australia, 2007 and University of Oulu, Finland, 2010 as a visiting researcher. Since September 2008, he is with the School of Information Science, Japar Advanced Institute of Science and Technology (JAIST) as an assistant professor. His research interests are network information theory, error correction coding, iterative decoding, coding for super-dense networks and signal processing for wireless communications. He serves as a reviewer for a number of main journals and conferences in the area of wireless communications, coding theory and signal processing. Dr. Anwar is a member of IEEE (Information Theory society, Communications society) and IEICE Japan.		
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Research Keywords	Network information theory, turbo processing, error correction coding, multiway relaying systems network coding, iterative decoding, coding for random access networks, signal processing for wireless communications, interference cancellation.		
Education	 PhD Degree (2005–2008): Nara Institute of Science and Technology (NAIST), Graduate School of Information Science, 8916-5 Takayama, Ikoma, Nara, Japan Ph.D., Wireless and Mobile Communications, March 2008 (Dr. Eng.) Topic: "Peak Power Reduction in Radio and Satellite Communications Systems" Supervisor: Prof. Minoru Okada and Asc. Prof. Takao Hara 		
	Graduate School of Information Science, 8916-5 Takayama, Ikoma, Nara, Japan		

	 M. Eng., Wireless and Mobile Communications, March 2005 Topic: "Peak-to-Average Power Ratio Reduction of OFDM Signals Using Carrier Interferometry Codes and Iterative Processing" Supervisors: Prof. Minoru Okada and Prof. Heiichi Yamamoto 	
	Bachelor Degree (1996–2000): Institut Teknologi Bandung (ITB), Electrical Engineering, Jl. Ganesha 10, Bandung, Indonesia	
	 Sarjana Teknik (B. Eng.), Electrical Engineering (Telecommunications), October 2000 Topic: "Interoperability of Digital Switching Systems for Signalling System No. 7 (SS7) using 5ESS" Supervisors: Dr. Ir. Hendrawan and Ian Yosef M., M.T. 	
Job Experience	PT. Astra Graphia Information Technology, Sunter, Jakarta, Indonesia	
	SAP Consultant October, 2000 - February, 2002 SAP software Design and Customization for Car Manufacturers.	
	Nara Institute of Science and Technology (NAIST), Nara, Japan	
	Assistant Professor April 2008 - August 2008 Communications Lab., Prof. Minoru Okada.	
	Japan Advanced Institute of Science and Technology (JAIST), Ishikawa, Japan	
	Assistant Professor Sept 2008 - Now Information and Coding Theory Lab., School of Information Science.	
Patents	 Inventors: K. Anwar, T. Hara and K. Ando "Transmitter and Receiver": for the reduction of power consumption in satellite and mobile communications system. In 2010 the technique in this patent is adopted by the ITU-R standard No. ITU-R S.1878 "Multi-carrier Based Transmission Techniques for Satellite Systems". Also noted in ITU-R S.2173 (07/2010) "Multi-carrier based transmission techniques". This patent is mainly based on our paper: Khoirul Anwar et al., "A New Design of Carrier Interferometry OFDM with FFT as Spreading Codes", RWS 2006, pp. 543-546, California, Jan 2006. 	
	• The detail of the patent can be found, for example, in: http://www.freepatentsonline.com/7804764.html.	
	 Inventors: T. Matsumoto and K. Anwar Chained Turbo Equalization for Block Transmission (CHATUE): for block transmission without guard interval (GI). This patent is mainly based on this paper K. Anwar, H. Zhou and T. Matsumoto, "Chained Turbo Equalization for Block Transmission without Guard Interval", IEEE VTC2010-Spring, Taiwan, pp. 1-5, June 2010. 	
	 Inventors: Z. Hui, K. Anwar and T. Matsumoto CHATUE for Uplink 4G SC-FDMA: this technique is dedicated for single carrier frequency division multiplexing (SC-FDMA) 4G system with insufficient or completely without guard interval. The detail of this paper is mainly from the idea and results of this paper: H. Zhou, K. Anwar and T. Matsumoto, "Chained Turbo Equalization for SC-FDMA Systems without Cyclic Prefix", IEEE Globecom 2010 Workshop on Broadband Single Carrier and Frequency Domain Communications, Dec. 2010. 	

Inventors: Y. Takano, K. Anwar and T. Matsumoto This CHATUE is referred as CHATUE-2 since it uses some different fundamental concepts. The basic concept of CHATUE-2 has been detailed explained in this paper:

• Y. Takano, K. Anwar and T. Matsumoto, "Spectrally Efficient Frame Format-Aided Turbo Equalization with Channel Estimation", (under review) IEEE Transactions on Vehicular Technology (submitted on May 23, 2012).

Invention Report: Chained Turbo Estimation (CHATES)

Inventors: Y. Takano, K. Anwar and T. Matsumoto

This technique is important for implementation of CHATUE algorithm since in practice the channel is unknown. The details of this invention have also been described in the above paper.

Patents: Geolocation Techniques Based on Factor Graph (2015)

Inventors: M. R. K. Aziz, K. Anwar and T. Matsumoto

This technique is important for future dense networks, where detection of unknown (illegal) transmitter is necessity.

BUDGET ACQUISITIONS

- 1. European Commision, 7th Framework Programme, Small or medium-scale focused research project INFSO (STREP), Nov. 2013– Oct. 2016 (FP7-ICT-2013-11) on "Links-on-the-fly Technology for Robust, Efficient and Smart Communication in Unpredictable Environments (RESCUE)" with total budget of 5,223,055,- Euros (the budget is not transferable to Japan).
- JSPS Grant-in-Aid for Scientific Research 2013–2016 (KAKENHI KIBAN KENKYU B) on "STAR-CODE: STAR struCtured relaying for glObal wireless Data Exchange" (as Principal Investigator) with budget of ¥17,290,000,-.
- 3. JSPS Grant-in-Aid for Scientific Research 2011–2014 (KAKENHI KIBAN KENKYU B) on "Connect All with Turbo Codes: COATNET-2." (as Co-Investigator) with budget about ¥19,890,000,- (including indirect budget).
- 4. JSPS Grant-in-Aid for Scientific Research 2010–2013 (KAKENHI KIBAN KENKYU C) on "COoperative DEcision making based on Slepian-Wolf/multiple Access wireless Networks: CODE-SWAN." (as a Principal Investigator) with budget about ¥3,660,000,- (direct budget).
- Research Grants 2011–2012 on "Turbo Equalization for Single Carrier Frequency Division Multiple Access (TURBO-FREMA)", (as a principal investigator) Chubu Electric Co, Ltd., with budget of ¥1,700,000,- (direct budget).
- Research Grants 2009–2012 on "Chained Turbo Equalization for Block Transmission (CHATUE)", (as a principal investigator) Kinki Mobile Radio Center (MRC), with budget of ¥4,000,000,-(direct budget).

Honors and Awards

- 1. Achmad Bakrie Award XII (2014) for the category of "Outstanding Young Scientist", 10 December 2014.
- 2. One of ten Indonesian inventors, Tempo Magazine, August 2012.
- Indonesian Diaspora "Award for Innovation", Congress of Indonesian Diaspora, Los Angeles, 6-8 July 2012.
- 4. Best Paper Presentation at International Conference on Sustainable future for Human Security and 186 Symposium on Humanosphere, Kyoto University, October 2011.
- 5. International Communications Foundation (ICF) Scholarship Award, 2006 2007.
- Best Academic Contributions in Japan, Consulate General of Indonesia in Osaka, on behalf of Foreign Affair Ministry of Indonesia, August 2007.
- 7. 2nd Best Paper, The 16th Indonesian Scientific Conference, Kyoto University, August 2007.
- Best Student in Japan Information Center Prosperous and Justice Party of Indonesia, August 2007.

- 9. Institute of Electrical and Electronic Engineering (IEEE) 3rd Best Student Paper in Radio and Wireless Symposium 2006 (RWS2006), California, USA, January 2006.
- 10. Travel Grant Award, Computer and Communications Conference Conference Award to Massachusets Institute of Technology (MIT), 2004.
- 11. Best-Three Graduated Student, Institut Teknologi Bandung (ITB), October 2000.
- Best Graduated Student in Faculty of Industrial Technology, Institut Teknologi Bandung (ITB), October 2000.
- 13. International Mathematics Olimpiad, representative of SMA Negeri 2 Kediri, 1995.
- K. Wu, K. Anwar and T. Matsumoto, "BICM-ID-Based IDMA: Convergence and Rate Region Analyses", *IEICE Trans. on Communications* Vol. E97-B, No.07, pp. 1483–1492, Jul. 2014.
 - Pen-Shun Lu, X. Zhou, K. Anwar, and T. Matsumoto, "Joint Adaptive Network-Channel Coding for Energy-Efficient Multiple Access Relaying", *IEEE Trans. on Vehicular Technology*, Vol. 63, No. 5, pp. 2298–2305, June 2014.
 - X. Zhou, Pen-Shun Lu, K. Anwar, and T. Matsumoto, "Correlated Sources Transmission in Orthogonal Multiple Access Relay Channel: Theoretical Analysis and Performance Evaluation", *IEEE Trans. on Wireless Communications*, Vol. 13, No. 3, pp. 1424–1435, March 2014.
 - Y. Takano, K. Anwar and T. Matsumoto, "Spectrally Efficient Frame Format-Aided Turbo Equalization with Channel Estimation", *IEEE Transactions on Vehicular Technology*, Vol. 62, No. 4, pp. 1635–1645, Dec. 2013 (DOI: 10.1109/TVT.2012.2230659).
 - X. He, X. Zhou, K. Anwar and T. Matsumoto, "Estimation of Observation Error Probability in Wireless Sensor Networks", *IEEE Communication Letters*, Vol. 17, No. 6, June 2013. (DOI: 10.1109 / LCOMM.2013.042313.130361).
 - A. Irawan, K. Anwar and T. Matsumoto, "Combining-after-Decoding Turbo Hybrid ARQ by Utilizing Doped-Accumulator", *IEEE Communication Letters*, Vol. 17, No. 6, June 2013, (DOI: 10.1109/LCOMM.2013.043013.130059).
 - A. Irawan, K. Anwar and T. Matsumoto, "Low-complexity Time-concatenated Turbo Equalization for Block Transmission without Guard Interval: Part 3 – Application to SIMO-OFDM", *Wireless Personal Communications*, Springer, (DOI: DOI 10.1007/s11277-012-0721-4), Vol. 70:769-783, May 2013.
 - M. Cheng, K. Anwar and T. Matsumoto, "Outage Probability of Relay Strategy Allowing Intra-link Errors Utilizing Slepian-Wolf Theorem", *EURASIP Journal on Advances in Signal Processing*, Feb. 2013 (DOI:10.1186/10.1186/1687-6180-2013-34).
 - M. A. M. Izhar, N. Fisal, X. Zhou, K. Anwar and T. Matsumoto "Exploitation of 2D binary source correlation using high rate codes", *EURASIP Journal on Wireless Communications* and Networking, Vol. 2013:89, (DOI:10.1186/1687-1499-2013-89), March 2013.
 - M. Cheng, X. Zhou, K. Anwar and T. Matsumoto, "Simple Relay Systems with BICM-ID Allowing Intra-link Errors", *IEICE Transaction on Communications*, Vol. E95-B, No.12, pp. 3671–3678, Dec. 2012 (DOI: 10.1587 /transcom.E95.B.3671).
 - X. Zhou, X. He, K. Anwar and T. Matsumoto, "GREAT-CEO: Large Scale Distributed Decision Making Technique for Wireless Chief Executive Officer Problems", *IEICE Transaction* on Communications (Invited Paper), Vol. E95-B, No. 12, pp. 3654–3662, Dec. 2012 (DOI: 10.1587/transcom.E95.B.3654).
 - X. Zhou, M. Cheng, K. Anwar and T. Matsumoto, "Distributed Joint Source-Channel Coding for Relay Systems Exploiting Source-Relay Correlation and Source Memory", *EURASIP Journal on Wireless Communications and Networking*, Vol. 2012:260, (DOI:10.1186/1687-1499-2012-260), Aug. 2012.

PUBLICATIONS IN JOURNALS

- K. Anwar and T. Matsumoto, "Spatially Concatenated Codes with Turbo Equalization for Correlated Sources", *IEEE Transaction on Signal Processing*, Vol. 60, No. 10, pp. 5572–5577, Oct. 2012 (DOI: 10.1109/TSP.2012.2204259).
- K. Anwar and T. Matsumoto, "Accumulator-assisted Distributed Turbo Codes for Relay Systems Exploiting Source-Relay Correlation", *IEEE Communication Letters*, Vol. 16, No. 7, pp. 1114–1117, July 2012 (DOI: 10.1109/LCOMM.2012.12.120629).
- K. Anwar and T. Matsumoto, "Low-complexity Time-concatenated Turbo Equalization for Block Transmission: Part 1 – The Concept", Wireless Personal Communications, Springer, DOI: 10.1007/s11277-012-0563-0, Online on 24 March 2012.
- K. Fukawa, S. Ormsub, A. Tolli, K. Anwar and T. Matsumoto, "EXIT-constrained BICM-ID Design using Extended Mapping", *EURASIP Journal on Wireless Comm. and Networking*, Vol. 2012, No. 1/40, (DOI: 10.1186/1687-1499-2012-40), Feb. 2012.
- H. Zhou, K. Anwar and T. Matsumoto, "Low-complexity Time-concatenated Turbo Equalization for Block Transmission: Part 2 – Application to SC-FDMA", Wireless Personal Communications, Springer, DOI:10.1007/s11277-011-0409-1, Online on 24 Sept 2011.
- K. Anwar and T. Matsumoto, "Very Simple BICM-ID using Repetition Code and Extended Mapping with Doped Accumulator", Wireless Personal Communications, Springer, Vol. 67, No. 3, pp. 573–584, 2012 (DOI: 10.1007/s11277-011-0397-1).
- K. Anwar, M. Saito, T. Hara and M. Okada, "Large Code Set for Double User Capacity and Low PAPR Level in Multicarrier Systems", *IEICE Transaction on Fundamentals of Electronics, Communications and Computer Sciences*, Vol. E91-A, No. 8, pp. 2183-2194, August 2008.
- K. Anwar, T. Hara, M. Okada dan H. Yamamoto, "Digital Terrestial Television Broadcasting over OFDM/FM via Satellite Communications System", *Journal of Wiley Interscience*, (ECJA 1365), Electronic and Communications in Japan, Part II. Vol. 90, No.11, pp. 74-84, Nov. 2007.
- K. Anwar, T. Hara, M. Okada and H. Yamamoto, "OFDM Chijouha Digital Terebi Housou Singou no FM Houshiki ni Yoru Eisei Tensou", *IEICE Transaction on Communications*, Vol. Vol. J89-B, No.11, pp. 2117–2126, Nov. 2006 (in Japanese).

Selected Publications in Conferences

- Khoirul Anwar, "High-Dense Multiway Relay Networks Exploiting Direct Links as Side Information", *IEEE International Conference on Communications (ICC 2016)*, Kuala Lumpur, Malaysia, May 2016 (Accepted).
- Khoirul Anwar, "Graph-based Decoding for High-Dense Vehicular Multiway Multirelay Networks", *IEEE VTC-Spring 2016*, Nanjing, China, 15-18 May 2016 (Accepted).
- Khoirul Anwar, "Exploiting the Dynamics of Rayleigh Fading Channels for Wireless High-Dense Networks with Multiple Relays", *IECE General Conference 2016*, Kyushu, Japan, March 2016.
- M. Nur Hasan and K. Anwar, "Estimating Source Correlation Online in Massive Multiway Multirelay Networks", *IECE General Conference 2016*, Kyushu, Japan, March 2016.
- Khoirul Anwar, "Coded Super-Dense Networks Exploiting Side Information for the Internetof-Things", *IEICE Technical Report HPB2016*, Tokyo, Feb. 2016.
- M. Nur Hasan and Khoirul Anwar, "Networked Everything Based on Massive Wireless Multiway Multirelay Networks", *IEICE Technical Report HPB 2016*, Tokyo, Feb. 2016.
- Ardimas A. Purwita and K. Anwar, "Vehicular Massive Multiway Relay Networks Applying Graph-Based Random Access", 2015 IEEE Vehicular Networking Conference (VNC), Kyoto, December 2015.

- Khoirul Anwar, "Decoding Techniques for Graph-based Random Access High Dense Multiway Multirelay Networks", *IEICE Symposium on Information Theory and Its Applications (SITA* 2015, Okayama, November 2015.
- M. N. Hasan and K. Anwar, "Exploiting CEO Problems in Massive Multiway Multirelay Networks", *IEICE Symposium on Information Theory and Its Applications (SITA 2015*, Okayama, November 2015.
- A. A. Purwita and K. Anwar, "Doubly Irregular Coded Slotted ALOHA for Massive Uncoordinated Multiway Relay Networks", *IEICE Symposium on Information Theory and Its Applications (SITA 2015*, Okayama, November 2015.
- A. Irawan, K. Anwar, and T. Matsumoto, "Network Coding-Based Turbo HARQ for Unicast Transmission", IEEE international Conference on Electronics Technology and Industrial Development (ICE-ID), Bali, Indonesia, October 2015.
- A. Irawan, K. Anwar and T. Matsumoto, "Lossy Forwarding Techniques for Parallel Multihop-Multirelay Systems," IEEE VTC2015-Fall, Boston, USA, Sept 2015.
- M. Nur Hasan and K. Anwar, "Massive Uncoordinated Multi-way Relay Networks with Simultaneous Detections," IEEE International Conference on Communications (ICC) Workshop on Advanced PHY and MAC Techniques for Super Dense Wireless Networks, London, June 2015.
- 14. A. Irawan, K. Anwar and T. Matsumoto, "Partial ARQ for Wireless Relaying Systems," IEICE General Conference, pp. 265, Ritsumeikan University, Japan, March 2015.
- M. Nur Hasan and K. Anwar, "Massive Uncoordinated Communications for Multi-way Relay Networks using Iterative Demapping Algorithm," IEICE General Conference, pp. 634, Ritsumeikan University, Japan, March 2015.
- M. Reza Kahar Aziz, K. Anwar, Y. Toshihiro, A. Shintaro and T. Matsumoto, "Monitoring Spot Configuration of RSS-based Factor Graph Geolocation Technique in Outdoor WSN Environments," IEICE General Conference, pp. 23, Ritsumeikan University, Japan, March 2015.
- K. Anwar and M. Nur Hasan, "Uncoordinated Transmission in Multiway Relaying Systems," International ITG Conference on System, Communications and Coding (SCC), Hamburg, Germany, Feb. 2015.
- A. Andi Purwita, K. Anwar and T. Adiono, "Experimental Evaluation for Relaying System Allowing Intralink Error", International ITG Conference on Systems, Communications and Coding (SCC), Hamburg, Feb. 2015.
- M. Nur Hasan and K. Anwar, "Capacity Bound Analysis of Uncoordinated Transmission in Multi-way Relaying Networks", *EU IC COST 1004*, Krakow, Poland, Sept. 2014.
- K. Wu, K. Anwar and T. Matsumoto, "Joint Turbo Equalization and BICM-ID-based IDMA over Frequency Selective Fading Channels", IEEE International Symposium on Information Theory and Its Application (ISITA), October 2014.
- 21. K. Anwar, R. Datta, A. Festag, G. Fettweis, G. Del Galdo, M. Grieger, S. Gurgul, M. Juntti, H. Khalife, P. Komulainen, Y. Ma, F. Mariani, M. Matthe, T. Matsumoto, G. Millar, M. Natkaniec, C. Schneider, S. Szott, R. Tafazolli, R. Thoma, J. Wszolek, P. Xiao, N. Yi, "RES-CUE: Links-on-the-fly Technology for Robust, Efficient and Smart Communication in Unpredictable Environments", *European Conference on Networks and Communications 2014*, Bologna, Italy, June 2014.
- X. Zhou, M. Cheng, X. He, K. Anwar, and T. Matsumoto, "Outage Analysis of Decode-and-Forward Relaying System Allowing Intra-link Errors", European Wireless 2014, Barcelona, Spain, 14-16 May 2014.
- K. Anwar and T. Matsumoto, "Iterative Spatial Demapping with Side Information for Threeway Relaying Systems", IEICE General Conference (B-8-21), pp.293, Niigata, Japan, 18 March 2014.

- M. Cheng, K. Anwar, and T. Matsumoto, "Outage Based Power Allocation: Slepian-Wolf Relaying Viewpoint", IEEE Globecom 2013 Workshop - First International Workshop on Cloud-Processing in Heterogeneous Mobile Communication Networks, pp. 807–811, Atlanta, GA, USA, December 9–13, 2013.
- 25. S. Qian, M. Cheng, K. Anwar, and T. Matsumoto, "Outage Probability Analysis for Correlated Sources Transmission over Rician Fading Channels", IEEE PIMRC 2013, UK.
- X. Zhou, L. A. Osman, K. Anwar and T. Matsumoto, "Distributed Joint Source-Channel-Network Coding Exploiting Source Correlation for Multiple Access Relay Channel", IEEE European Wireless 2013, Guildford, UK, 16-18 April 2013.
- K. Anwar and T. Matsumoto, "Field Measurement Data-based Performance Evaluation for Slepian-Wolf Relaying Systems", IEICE General Symposium, Gifu, March 2013.
- M. Cheng, K. Anwar and T. Matsumoto, "On the Duality of Source and Channel Correlations: Slepian-Wolf Relaying Viewpoint", 13th IEEE International Conference on Communication Systems 2012 (ICCS), Singapore, Nov. 2012.
- X. He, X. Zhou, K. Anwar and T. Matsumoto, "Wireless Mesh Networks Allowing Intra-Link Errors: CEO Problem Viewpoint", 2012 International Symposium on Information Theory and its Applications (ISITA2012), Hawaii, Oct. 2012.
- Rian Ferdian, Khoirul Anwar, and Trio Adiono, "Efficient Equalization Hardware Architecture for SC-FDMA Systems without Cyclic Prefix", IEEE Int. Symposium on Communications and Information Technologies (ISCIT), Australia, Oct. 2012.
- K. Anwar and T. Matsumoto, "Three-way Relaying Systems Using Iterative Spatial Demapping", The 7th International Symposium on Turbo Codes & Iterative Information Processing (ISTC), Sweden, August 2012.
- 32. M. A. M. Izhar, N. Fisal, X. Zhou, K. Anwar and T. Matsumoto, "Utilization of 2-D Markov Source Correlation using Block Turbo Code", The 7th International Symposium on Turbo Codes & Iterative Information Processing (ISTC), Sweden, August 2012.
- X. Zhou, K. Anwar and T. Matsumoto, "EXIT Chart Based Joint Source-Channel Coding forBinary Markov Sources", IEEE Vehicular Technology Conference (VTC)-Fall 2012, Canada, Sept. 2012.
- M. Cheng, K. Anwar and T. Matsumoto, "Outage Analysis of Correlated Source Transmissionin Block Rayleigh Fading Channels", IEEE Vehicular Technology Conference (VTC)-Fall 2012, Canada, Sept. 2012.
- 35. K. Anwar and T. Matsumoto, "Iterative Spatial Demapping for Two Correlated Sources over Fading Multiple Access Channel", IEEE Wireless Advanced 2012, London, UK, June 2012.
- X. Zhou, M. Cheng, K. Anwar and T. Matsumoto, "Distributed Joint Source-Channel Coding for Relay Systems Exploiting Spatial and Temporal Correlations", IEEE Wireless Advanced 2012, London, UK, June 2012.
- K. Anwar and T. Matsumoto, "Iterative Spatial Demapping for Two Correlated Sources with Power Control over Fading MAC", The 75th IEEE Vehicular Technology Conference (VTC)-Spring 2012, Yokohama, Japan, May 2012.
- A. Irawan, K. Anwar and T. Matsumoto, "Chained Turbo Equalization for Multiuser SIMO-OFDM Systems without Cyclic Prefix", ITG Workshop on Smart Antenna 2012, Dresden, Germany, March 2012.
- N. Ahmad, S. Kamilah S-Yusof, N. Fisal, K. Anwar and T. Matsumoto, "Soft-feedback MMSE Equalization for Non-orthogonal Frequency Division Multiplexing (n-OFDM) Signal Detection", ITG Workshop on Smart Antenna 2012, Dresden, Germany, March 2012.
- 40. Khoirul Anwar, "Turbo Equalization: Fundamental and Extension for Uplink SC-FDMA (4G) without Cyclic Prefix", The Third Annual Indonesian Scholars Conference in Taiwan, Hsinchu, Chung Hua University, March 2012.

- 41. M. Cheng, A. Irawan, K. Anwar, and T. Matsumoto, "BICM-ID for Relay System Allowing Intra-link Errors and a Similarity Constellation to ARQ Schemes", Progress In Electromagnetic Research Symposium (PIERS) 2012, Kuala Lumpur, March 2012.
- 42. Y. Takano, K. Anwar, and T. Matsumoto, "Performance of Turbo Equalization using Doped Accumulator with Channel Estimation", IEEE International Conference on Signal Processing and Communication Systems, Hawaii. Dec. 2011.
- X. Zhou, K. Anwar, and T. Matsumoto, "Serially Concatenated Joint Source-Channel Coding for Binary Markov Sources", IEEE Chinacom 2011, August 2011.
- 44. Khoirul Anwar, "Uplink SC-FDMA (4G) without Guard Interval in the Presence of Doppler Spread", The 2nd International Conference on Sustainable Future for Human Security (SustaiN) and the 186th Symposium on Sustainable Humanosphere, Kyoto University, 8-10 Oct. 2011.
- Quy X Nguyen, K. Anwar, and T. Matsumoto, "Simple Coded Amplify-and-Forward Two-Way Relay Systems with Imperfect Side Information", IEEE VTC-Spring 2011, Budapest, Hungary, May 2011.
- P. Lu, V. Tervo, K. Anwar, and T. Matsumoto, "Low-Complexity Strategies for Multiple Access Relaying", IEEE VTC-Spring 2011, Budapest, Hungary, May 2011.
- 47. A. Irawan, K. Anwar, and T Matsumoto, "Chained Turbo Equalization for OFDM System without Guard Interval", IEICE General Conference 2011 B-8-32, Tokyo, Mar 2011.
- H. Zhou, K. Anwar, and T. Matsumoto, "Iterative Channel Estimation for Block Transmission Systems without Cyclic Prefix", IEICE General Conference 2011, B-8-26, Tokyo, Mar 2011.
- K. Fukawa, K. Anwar, A. Tolli, and T. Matsumoto, "Design of Simple Shannon Limit Approaching BICM-ID", IEICE General Conference 2011, B-8-22, Tokyo Mar 2011.
- 50. K. Anwar, H. Zhou, T. Matsumoto, "Chained Turbo Equalization for Block Transmission without Guard Interval", IEEE VTC2010-Spring, Taiwan, June 2010.
- H. Zhou, K. Anwar and T. Matsumoto, "Chained Turbo Equalization for SC-FDMA Systems without Cyclic Prefix", IEEE Globecom 2010 Workshop on Broadband Single Carrier and Frequency Domain Communication, Dec 2010.
- K. Anwar,"Error Correction Coding: Theory, Application and Social Development", INOVASI Magazine XXII, July 2010 (in Bahasa Indonesia).
- 53. K. Anwar and T. Matsumoto, "MIMO Spatial Turbo Coding with Iterative Equalization", International ITG Wireless Smart Antenna, Bremen, Germany, Feb. 2010.
- D. Zhao, K. Anwar and T. Matsumoto, "Irregular Repetition Coded BICM-ID with Extended Mapping and Doping", IEEE Workshop on Advanced Signal Processing for Wireless Communication Systems, Feb 2009.
- T. Noguchi, K. Anwar, M. Saito, and M. Okada, "Efficient PAPR for OFDM and CI/OFDM Systems with Iterative Clipping", 5th International Conference on Innovations in Information Technology (IT-INNOVATION), Dec 2008.
- K. Anwar, T. Hara and M. Okada, "An Effective Iterative Clipping for Coded CI/OFDM Systems over the Nonlinearity of SSPA", IEEE Personal, Indoors and Mobile Radio Communications (PIMRC2008), France, August 2008.
- H. Takahashi, K. Anwar, M. Saito and M. Okada, "Low Complexity Fourier Transform using Double Square-waves", 7th International Symposium on Communications and Information Technologies, Australia October 2007.
- 58. K. Anwar, T. Hara, M. Okada, M. Shigaki, K. Yamanaka, R. Suzuki, "Performance Improvement of Ka-band Small Earth Stations for WINDS Utilizing Super-conductive Filter", 25th AIAA International Communications Satellite Systems Conference (organized by APSCC), Korea, April 2007.

- K. Anwar and M. Okada, "On the High Speed Satellite Communications System with Carrier Interferometry OFDM", 25th AIAA International Communications Satellite Systems Conference (organized by APSCC), April 2007.
- L. Sampebatu, K. Anwar, T. Hara and M. Okada, "Performances of Real and Complex Spreading Codes for OFDM in Fading Channel", 12th International OFDM Workshop, August 2007.
- Khoirul Anwar and Heiichi Yamamoto, "New Design of Carrier Interferometry OFDM with FFT as Spreading Codes", IEEE Radio and Wireless Symposium (RWS 2006), San Diego, California, January 2006. (Awared as one of BEST STUDENT PAPER), pp. 543-546, Jan 2006.
- 62. H. Okamoto, K. Anwar, T. Hara, M. Saito, M. Okada and H. Yamamoto, "A New Concept of Clipping without Spectrum Broadening for Carrier Interferometry OFDM system", IEEE Industrial, Electrical and Electronic GCC, Bahrain, Mar 2006.
- 63. K. Anwar, T. Hara, M. Saito, M. Okada and H. Yamamoto, "Large Code Set for PAPR Reduction of OFDM Signals and Capacity Increasing in MC-CDMA System", ACM International Wireless Communications and Mobile Computing (IWCMC2006), Vancouver, Canada, pp. 887-892, July 2006.
- K. Anwar, T. Hara, M. Saito, M. Okada and H. Yamamoto, "A Novel Fast Computation without Division for MMSE Equalizer and Combiner", IEEE Industrial, Electrical and Electronic GCC, Bahrain, May 2006.
- K. Anwar, T. Hara, M. Saito, M. Okada and H. Yamamoto, "A New Spreading Code for MC-CDMA and OFDM Systems", IEEE International Symposium on Computer and Communications (ISCC2006), Italy, pp. 283-288, June 2006.
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Under Review/Revisions	 Khoirul Anwar, "Graph-based Decoding for Super-Dense Multiway Multirelay Networks and Its Finite-Length Analysis", <i>IEICE Special Issue on Information Theory and Its Applications</i> (Submitted on Jan. 2016).
	2. Ardimas Andi Purwita and Khoirul Anwar, "Massive Multiway Relay Networks Applying Coded Random Access", <i>IEEE Transaction on Communications</i> (Submitted on Dec. 24, 2015).
	3. M. Reza Kahar Aziz, K. Anwar and T. Matsumoto, "A new DOA-based Factor Graph Geolo- cation Technique for Passive Radio Wave Emitter Using a First-Order Taylor Series Approxi- mation", <i>Eurasip Journal</i> (Submitted on April 2015, Conditionally accepted).
	 A. Irawan, K. Anwar and T. Matsumoto, "Lossy Forwarding HARQ for Parallel Relay Net- works", Springer Wireless Personal Communications (Submitted on August 2015).
Books and Chapter on Books	1. K. Anwar and M. Okada, "Fourier Transforms - Approach to Scientific Principles: Low Com- plexity Fourier Transforms using Multiple Square Waves", Intech, 2011.
	 K. Anwar, M. Saito, T. Hara, M. Okada and H. Yamamoto, Multi-Carrier Spread-Spectrum: "Simplified Realization of Pseudo-Orthogonal Carrier Interferometry OFDM by FFT Algo- rithm", Springer, 2006.
	3. K. Anwar, "Magnitudo 9.0 (Chapter of "Tetap Kreatif Meski Berduka"), Lesson Learnt from Earthquake, Tsunami in Japan 2011," Abatasa Publishing, 2011.
	4. K. Anwar and Sri Yayu I. Rochandi, "La Tahzan for Students (Inspiring Stories for Studying in Japan): Chapter of "Emak Kuraih Mimpi di Sini," and Chapter of "Puzzle Seorang Doktor", LPPH, 2011.
	5. K. Anwar, "Indonesia Bersyukur: Turbo Coding", 2013.
	6. K. Anwar, "Notes from Ishikawa: Diamond Theory for Science and Academic Cycle", 2015.
	7. K. Anwar, "Hikmah Project Nol Yen", Menghimpun yang Terserak, Ikatan Alumni, ITB, 2015.

- Keynote and Invited Speeches
- Khoirul Anwar, "Performing High Quality Research in Japan", PPI Shizuoka, Shizuoka, Japan, March 5, 2016.
- Khoirul Anwar, "5G Super Dense Networks of Internet-of-Things: Graph-based Decoding", IEEE ISPACS 2015, Bali, Indonesia, November 2015.
- Khoirul Anwar, "4G and Beyond: The Latest Results", University of Lampung, Lampung, Indonesia, 14 October 2015.
- Khoirul Anwar, "Information Technology: The Latest Innovation, Manufacturing and Potential Business", Institute of Technology Sumatera (ITERA), Lampung, Indonesia, 12–13 October 2015.
- Khoirul Anwar, "Computational Technology: Future Challenge in 5G Era", University of Andalas, Padang, Indonesia, 8 October 2015.
- Khoirul Anwar, "Coding Schemes and Signal Processings for Radar, Antenna and Microwave Toward 5G Super Dense Networks", IEEE International Conference on Radar, Antenna, Microwave, Electronics and Telecommunications (ICRAMET) 2015, Bandung, Indonesia, October 2015.
- Khoirul Anwar, "Challenges on Coding Schemes for 5G Super Dense Networks", IEEE Asia Pacific Conference on Wireless and Mobile (APWIMOB), Bandung, Indonesia, August 2015.
- Khoirul Anwar, "Humanity and Prosperity: Physical and Philosophical Contributions of Telecommunications Technologies", Hokkaido Indonesia Student Association Scientific Meeting (HISAS2015), Hokkaido, March 2015.
- Khoirul Anwar, "Challenges to Wireless Communications Beyond 4G,", International Electronics Symposium(IES) 2014, PENS ITS, Surabaya, December 3–4, 2014.
- Khoirul Anwar, "Advancing Indonesia with Mobile Broadband," XL Knowledge Sharing, Dec 1, 2014.
- 11. Khoirul Anwar, "Coding Techniques for Beyond 4G Communications,"University of Jenderal Soedirman, Purwokerto, 16 November 2014.
- Khoirul Anwar, "Telekomunikasi dan Kita di Masa Depan," International Symposium of Overseas Indonesian Students Association (OISSA), Tokyo Institute of Science and Technology, 21 Sept 2014.
- K. Anwar, "Learn The Signs: How to be A Great Scientits", International Student Workshop: Toward Success as Global Engineers, PPI Toyohashi, Toyohashi University of Technology, Japan, 18 April 2014.
- 14. K. Anwar, "How to Write a Scientific Paper and Project Proposal", University Sriwijaya (UNSRI), Palembang, Indonesia, March 5–6, 2014.
- 15. K. Anwar, "How to Write a Scientific Paper and Project Proposal", University Teknologi Malaysia (UTM), Kuala Lumpur, Malaysia, March 3, 2014.
- K. Anwar, "Challenges to 5G: Multiterminal Communication Systems", University Teknologi Malaysia (UTM), Kuala Lumpur, Malaysia, March 3, 2014.
- K. Anwar, "Thinking Big: Enhancing Innovations and Achievements", *General Lecture*, Hokuriku Scientific Forum 2014, Toyama University, Japan, 19 January 11, 2014.
- K. Anwar, "Thinking Big for Innovations Big", *General Lecture*, PPI Fukuoka, Ito Campus, Kyushu University, Japan, 11 January 2014.
- 19. K. Anwar, "The Challenge on Spectrum Efficiency: Guard Interval Removal with Iterative Decoding", *Keynote Speaker*, IEEE International Conference on Innovation Technology and Electrical Engineering (ICITEE), Yogyakarta, 7-8 October 2013.
- K. Anwar, "Study from Turbo Codes", *Elinsphoria#4 Symposium*, Gadjah Mada University, Yogyakarta, Indonesia, May 4, 2013.

- K. Anwar, "Future ICT: Understanding the Basic", *Invited Speech*, The 3rd Annual Indonesian Scholars Conference in Taiwan (AISCT) 2012, Hsinchu, Taiwan, March 2012.
- 22. K. Anwar, "Lecture on Information Theory and Telecommunication: Kuliah Anak Negeri 2011", *Invited Lecture*, The Radio of Republic of Indonesia, July-August 2011.
- K. Anwar, "Research and Development in Wireless Communications: Challenge to Indonesia", *Invited Speech*, Annual Meeting of Science and Technology Studies (AMSTECS 2011), Tokyo Institute of Technology, June 2011.
- 24. K. Anwar, "How to Increase the Quality and Quantity of Research", *Invited Speech*, Indonesian Scientific Meeting 2010, Nagoya University, August 2010.
- 25. K. Anwar, "Building National Competitiveness: Going Home or Staying Abroad", *Invited Speech* CISAK: Conference of Indonesia Students Association in Korea, Korea, Feb. 2010.
- 26. K. Anwar, "Research Gain for National Competitiveness: Learning from Coding Theory", *Invited Speech* Annual Indonesian Scholars Conference in Taiwan 2010, Taiwan, March 2010.
- 27. K. Anwar, "Research Gain for National Competitiveness: Learning from Coding Theory", Invited Speech Annual Indonesian Scholars Conference in Taiwan 2010, Taiwan, March 2010.
- K. Anwar, "Indonesian Network 2020: Sebuah Ide Membangun Sains dan Teknologi", *Invited Speech*, International Symposium PPI-Dunia, Den Haag, 4 July 2009.
- TUTORIALS AND LECTURES
- Khoirul Anwar, "Coding Theory and Signal Processing for Future Wireless Networks", Tutorial session, IEEE Asia Pacific Conference on Wireless and Mobile (APWIMOB), Bandung, Indonesia, August 2015.
- K. Anwar, "Spatially Coupled Codes for Wireless Networks: Short Introduction", JAIST-ITB Cooperation Program, ITB, Bandung, Indonesia, May 14, 2013.
- 3. K. Anwar, "Information Theory, Coding Theory and Challenges of Wireless Communications", *Teleconference Lecture*, Universitas Sriwijaya, Indonesia, October 31, 2012.
- 4. K. Anwar, "Information Theory, Coding Theory and Future Trend of Wireless Communications", *Half-day Lecture*, STKIP Surya, Tangerang, Banten, Indonesia, October 1, 2012.
- K. Anwar and T. Matsumoto, "PUNA Wireless Communication Systems from the Viewpoint of Slepian-Wolf Multiple Access Channel", *One-day Lecture*, IEEE Indonesia Section and BPPT, Serpong, Indonesia.
- T. Matsumoto, K. Anwar, and N. Ahmad, "Turbo Equalization: Fundamentals, Information Theoretic Considerations, and Extensions", *Tutorial*, IEEE Vehicular Technology Conference (VTC) Spring 2012, Yokohama, May 2012.
- K. Anwar and T. Matsumoto, "Iterative Spatial Demapping for Simultaneous Full Data Exchange in Three-way Relaying Channels", A temporary document TD(12)03073, the 3rd COST IC-1004 Meeting, Barcelona, February 8–10, 2012.
- X. Zhou, M. Cheng, K. Anwar and T. Matsumoto, "Distributed Joint Source-Channel Coding for Relay Systems Exploiting Spatial and Temporal Correlations", A temporary document TD(12)03072, the 3rd COST IC-1004 Meeting, Barcelona, February 8–10, 2012.
- K. Anwar and T. Matsumoto, "(1) Chained Turbo Equalizations for Block Transmission without Guard Interval and Its Application on 4G Uplink SC-FDMA, (2) Iterative Spatial Demapper for Future Relaying System", *Tutorial*, One-Day Seminar ITTelkom 2011, Bandung, Indonesia, 29 Nov. 2011.
- K. Anwar, "Genki Dama: An Inspiration for Block Transmission without Guard Interval", *Guest Lecture Seminar ITS 2010*, Institut Teknologi Sepuluh November (ITS), Surabaya, In-donesia, October 4, 2010

- 11. T. Matsumoto and K. Anwar, "Iterative Processing for Cooperative Communications Allowing Intra-Link Errors", Tutorial, 2nd COST IC-1004 MCM Meeting 2011, Istituto Superior Tecnico (IST), Lisbon, Portugal, 18 Oct. 2011.
- 12. K. Anwar and T. Matsumoto, "Turbo Principle for Multiterminal Networks: Theory and Applications", Tutorial, Institute Teknologi Bandung (ITB), Bandung, Indonesia, 11 November 2010.
- 13. K. Anwar and T. Matsumoto, "Turbo Equalization and Multiterminal Networks", Tutorial, One-day Seminar 2010 Universiti Teknologi Malaysia (UTM), 8 November 2010.
- 14. K. Anwar and T. Matsumoto, "Challenges in Wireless Communications Towards Eco-Driven Society", Tutorial, Inter-University Center, Institut Teknologi Bandung, Indonesia, 2 October 2009.
- 15. K. Anwar, "Trend of Wireless Communications: Complexity, Turbo Principle and Shannon Limit", Guest Lecture, PT LEN Industri (Persero) 2010, Bandung, Indonesia, Oct. 6, 2010.
- 16. K. Anwar and T. Matsumoto, "Spatial Turbo Coding and Its Extension into Slepian-Wolf Wireless Networks", Guest Lecture, Centre for Wireless Communications, University of Oulu, Finland, 11 September 2009.

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Teaching

September, 2010 - 2013

Co-taught graduate level course for the Master and PhD of Information Science. Shared responsibility for lectures, exams, homework assignments, and grades.

- Information Theory, Summer 2010-2013.
- Coding Theory, Summer 2012.

Nara Institute of Science and Technology, 8916-5 Takayama, Ikoma, Nara, Japan

Teaching Assistant

2006 - 2008

Duties at various times have included office hours and leading weekly computer lab exercises.

• Communication Systems, Summer.

Institut Teknologi Bandung, Jl. Ganesha 10, Bandung, Indonesia

Experimental Works Assistant

1998 - 2000

Supervise students for experiments in Physic Lab, Electronics Lab, Radio and Microwave Lab.

- Physic.
- Electronic Engineering
- Electronic Communications

SOCIETY/ Professional Membership

- IEEE, since 2004 (Information Theory Society and Communication Society)
- IEICE, since 2004
- ISTECS Japan, since 2003
- Ikatan Ilmuwan Internasional Indonesia (I-4), since 2009

SOCIETY

- CONTRIBUTIONS TO Technical Program Committee (TPC) member of the IEEE GLOBECOM'16 CSSMA (2016 IEEE Global Communications Conference: Communications Software, Services and Multimedia Apps), December 2016, Washington DC, USA.
 - Technical Program Committee (TPC) member of the IEEE International Conference on OFDM and Frequency Domain Techniques (ICOF 2016), August 2016, Essen, Germany.

- Technical Program Committee (TPC) member of the IEEE International Conference on Communications (ICC), Kuala Lumpur, Malaysia, June 2016.
- Technical Program Committee (TPC) member of the IEEE PIMRC 2016, September 2016, Valencia, Spain.
- Technical Program Committee (TPC) member of the IEEE International Conference on Telecommunications (ICT) 2016, May 2016, Thessaloniki, Greece.
- Technical Program Committee (TPC) member of the IEEE International Conference on Telecommunications (ICT) 2016, May 2016, Thessaloniki, Greece.
- Technical Program Committee (TPC) member of the IEEE International Conference on Control, Electronics, Renewable Energy, and Communications 2016 (ICCEREC 2016), September 2016, Bandung, Indonesia.
- Technical Program Committee (TPC) member of the IEEE International Conference on Communications (ICC), London, UK, June 2015.
- Technical Program Committee (TPC) member of the IEEE ICITEE, Thailand, 2015.
- Technical Program Committee (TPC) member of the IEEE ARIEET, Indonesia, November 2015.
- Technical Program Committee (TPC) member of the IEEE APWIMOB, Indonesia, 27-29 August 2015.
- Technical Program Committee (TPC) member of the IEEE ICCEREC, Indonesia, 27-29 August 2015.
- Technical Program Committee (TPC) member of the IEEE PIMRC 2015, Fundamentals and Physical Layer, August 2015, Hong Kong, China.
- Technical Program Committee (TPC) member of the IEEE International Conference on Communications (ICC), Sydney, Australia, 10–14 June 2014.
- Technical Program Committee (TPC) member of the IEEE Wireless Communications and Networking Conference (WCNC) Track 1: PHY, Istanbul, Turkey, 6–9 April 2014.
- Technical Program Committee (TPC) member of the 7th IEEE International Conference on Signal Processing and Communications Systems (ICSPCS'13), Gold Coast, Australia, 16–18 Dec 2013.
- Technical Program Committee (TPC) member of the The 5th IEEE International Conference on Information Technology and Electrical Engineering (ICITEE'13), Yogyakarta, Indonesia, 7–8 Oct 2013.
- Technical Program Committee (TPC) member of International Conference of Information and Communication Technology (ICOCT), 20-22 March 2013, at The Trans Luxury Hotel in Bandung, Indonesia.
- Technical Program Committee (TPC) member of The 8th International Wireless Communications and Mobile Computing Conference (IWCMC 2012), Wireless Sensor Networks Symposium, Cyprus, August 27-31, 2012.
- Technical Program Committee (TPC) member of the First IEEE International Conference on Communications in China, Signal Processing for Communications Symposium, Beijing, August 15–18, 2012.
- A Session Chair of IEEE International Conference on Communications (ICC), Kyoto, June 10–15, 2011.
- Technical Program Committee (TPC) member of IEEE International Conference on Communications (ICC), Kyoto, June 10–15, 2011.
- A technical document (TD) to the 3rd COST IC-1004 Meeting, Barcelona, February 8–10, 2012. The title of my TD is "IC1004 TD(12)03073 Iterative Spatial Demapping for Simultaneous Full Data Exchange in Three-way Relaying Channels".

COST (European Cooperation in Science and Technology) is one of the longest-running European instruments supporting cooperation among scientists and researchers across Europe. COST has a very specific mission and goal. It contributes to reducing the fragmentation in European research investments and opening the European Research Area to cooperation worldwide. It anticipates and complements the activities of the EU Framework Programmes, constituting a "bridge" towards the scientific communities of emerging countries. It also increases the mobility of researchers across Europe and fosters the establishment of scientific excellence. IC1004 is the Action on Cooperative Radio Communications for Green Smart Environments. This Action addresses research issues in the field of cooperative radio communications to make our society cleaner, safer, and more energy efficient.

- Reviewer of IEEE Communications Letter (CL) since 2009
- Reviewer of IEEE Trans. on Vehicular Technology (TVT) since 2006
- Reviewer of IEEE Trans. on Communications (TCOM) since 2009
- Reviewer of IEEE Trans. Signal Processing (TSP) since 2009
- Reviewer of IEEE Global Telecommunications Conference (GLOBECOM) since 2008
- Reviewer of IEEE Vehicular Technology Conference (VTC) since 2005
- Reviewer of IEEE International Conference on Communications (ICC) since 2009
- Reviewer of IEEE Military Communications (MILCOM) since 2007
- Reviewer of IEEE Asia-Pacific Conference on Communications (APCC) since 2006
- Reviewer of IEEE Personal, Indoor and Mobile Radio Communications (PIMRC) since 2005
- Reviewer of IEEE Wireless Personal Multimedia Communications (WPMC) since 2008
- Reviewer of IEEE International Symp. on Wireless Communication Systems (ISWCS) since 2005
- Reviewer of IEEE Wireless Communications and Networking Conference (WCNC) since 2005
- Reviewer of Springer Journal, Wireless Personal Communications since 2009
- Reviewer of IEICE Transaction on Fundamentals (A), and Communications (B) since 2008
- Reviewer of ISTECS Journal and conferences since 2006
- Reviewer of conference on sustainable energy since 2010
- Advisory Board of Institute for Science and Technology Studies (ISTECS), Tokyo
- Advisory Board of the Indonesian International Scholars Association, *Ikatan Ilmuwan Indonesia* International (I-4), Jakarta
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Last Updated on March 14, 2016, Khoirul Anwar