

ANNUAL REPORT 2005 NSA TC, IEEE CAS SOCIETY

Past-Chair Ralph Etienne-Cummings
Chairman: Chin-Teng Lin
Chair-Elect: Derong Liu
Secretary: Giacomo Indiveri
Secretary-Elect: Wei Xing Zheng

(1) **TC Meeting:** The past TC meeting was held on May 25, 2004 during the 2005 IEEE International Symposium on Circuits and Systems, Kobe, Japan, May 23-26, 2005

(2) **Conferences or workshops where the NSA TC or members of the TC was/were actively involved in 2005-2006 include the followings:**

Panelist, "Competition and Sustainable Strength of High-Tech Companies in U.S. and Worldwide," Panel at VLSI Design & CAD Conference, Hua-Lien City, Taiwan, Aug. 2005 (Bing Sheu)

Track Chair of Multimedia Systems and Applications & Technical Program Committee Member, IEEE International Symposium on Circuits and Systems, Kobe, Japan, May 23-26, 2005 (Wai-Chi Fang)

Technical Program Co-Chair, 2005 International Workshop on Intelligent Information Hiding and Multimedia Signal Processing, Hilton Hotel, Melbourne, Australia, Nov. 10-11, 2005 (Wai-Chi Fang)

Member of Technical Program Committee for IEEE-SMC 2005 (Majid Ahmadi)

Track Chair and Technical Session Chair, 2005 IEEE International Symposium on Circuits and Systems (ISCAS 2005), Kobe International Convention Center, Kobe, Japan, May 23-26, 2005. (H. K. Kwan)

Best Paper Competition Chair and Technical Session Chair, International Conference on Communications, Circuits and Systems (ICCCS 2005), Hong Kong, May 27-30 2005. (H. K. Kwan)

Program Committee Member, International Symposium on Neural Networks (ISNN 2005), May 30 - June 1, 2005, Chongqing, China (H. K. Kwan)

Scientific Review Committee Member, The 9th European Conference on Speech Communication and Technology, (InterSpeech 2005), September 4-8, 2005, Lisbon, Portugal (H. K. Kwan)

Technical Program Committee Member, International Workshop on Intelligent Information Hiding and Multimedia Signal Processing (IIHMSP 2005), Hilton Hotel, Melbourne, Australia, September 14 – 16, 2005 (H. K. Kwan)

Technical Committee Member and Session Chair, 2005 International Symposium on Intelligent Signal Processing and Communications Systems (ISPACS 2005), Hong Kong, December 14-17, 2005 (H. K. Kwan)

Session Chairman: International Symposium on Circuits and Systems, 2005 (Ralph Etienne-Cumming)

Invited Speaker: SPIE Conference, Orlando, FL, 2005 (Ralph Etienne-Cumming)

Invited Speaker: Post IJCNN Neuromorphic Workshop, Montreal, Canada, 2005 (Ralph Etienne-Cumming)

Invited Speaker: NRO, Chantilly, VA, 2005. (Ralph Etienne-Cumming)

Invited Speaker: Agilent Corp., Palo Alto, CA, 2005. (Ralph Etienne-Cumming)

Invited Speaker: SPIE Conference, Orlando FL, 2005. (Ralph Etienne-Cumming)

Invited Speaker: NSF Grantees Meeting, Washington, DC, 2005. (Ralph Etienne-Cumming)

Invited Speaker: Columbia University, NY, 2005. (Ralph Etienne-Cumming)

Invited Speaker: NASA, Goddard, MD, 2005. (Ralph Etienne-Cumming)

Invited Speaker: Workshop on Neuromorphic Systems, IJCNN'05, Montreal, Canada, 2005. (Ralph Etienne-Cumming)

Invited Speaker: ETHZ-INI/INE Workshop, Zurich, Switzerland, 2005. (Ralph Etienne-Cumming)

Invited Speaker: National Society of Black Engineers, Greenbelt, MD, 2005. (Ralph Etienne-Cumming)

Review Panel: NIH SBIR Panel, Washington, DC, Nov 2005. (Ralph Etienne-Cumming)

Organizer: NSF Telluride Neuromorphic Engineering Workshop, Telluride, CO, 2003, 2004, 2005. (Ralph Etienne-Cumming)

Organizer: Topical Meeting on Time Domain Neural Signal Processing, Zurich, Switzerland, 2005. (Ralph Etienne-Cumming)

Organizer: ISCAS 2005, Special Sessions on Sensory Systems for Biological Applications, Kobe, Japan, May 2005. (Ralph Etienne-Cumming)

Organizer: ISCAS 2005, Demonstration Sessions on Sensory Systems, Kobe, Japan, May 2005. (Ralph Etienne-Cumming)

Program Chair: IEEE International Conference on Networking, Sensing and Control, 2006 (Ft. Lauderdale, FL) (Derong Liu)

21st IEEE International Symposium on Intelligent Control, 2006 (Munich, Germany) (Derong Liu)

Member on IEEE International Steering Committee, IEEE Asian Pacific Conference on Circuits and Systems (May 2005- May 2008) (Pau-Choo (Julia) Chung)

Technical Program Committee of 9th International Workshop on Cellular Neural Networks and Its Applications (CNNA), May 2005 (Pau-Choo (Julia) Chung)

Technical Program Committee, 2005 International Conference on Systems and Signals (Pau-Choo (Julia) Chung)

Delegate, International Federation for Medical and Biological Engineering (IFMBE) (Pau-Choo (Julia) Chung)

Organizer of special session "Medical Image Processing and Interpretation", European Biomedical Engineering Conference EMBEC'05 (Pau-Choo (Julia) Chung)

Associate Editor for ISIC 2006 Conference (Giacomo Indiveri)

General Chair, 2nd International Symposium on Neural Networks, Chongqing, China, May 2005 (Jun Wang)

Co-Chair for Special Sessions, IEEE/RSJ International Conference on Intelligent Robots and Systems, Edmonton, Alberta, Canada, August 2-6, 2005 (Jun Wang)

Co-Chair for Special Sessions, IEEE International Conference on Information Acquisition, Hong Kong, June 27-July 3, 2005 (Jun Wang)

Review Committee Member (Digital Signal Processing Track) of the 2005 IEEE International Symposium on Circuits and Systems (ISCAS'2005), Kobe, Japan, May 23-26, 2005 (Wei Xing Zheng)

Technical Session Chair of "Adaptive Signal Processing III" at the 2005 IEEE International Symposium on Circuits and Systems (ISCAS'2005), Kobe, Japan, May 23-26, 2005 (Wei Xing Zheng)

International Program Committee Member of the 2005 IEEE International Conference on Networking, Sensing and Control, Tucson, Arizona, USA, March 19-22, 2005 (Wei Xing Zheng)

International Program Committee Member of the 20th IEEE International Symposium on Intelligent Control, Limassol, Cyprus, June 27-29, 2005 (Wei Xing Zheng)

Program Committee Member of the 8th International Symposium on Signal Processing and Its Applications, Sydney, Australia, August 29-September 1, 2005 (Wei Xing Zheng)

Program Committee Member of the joint 44th IEEE Conference on Decision and Control and European Control Conference (CDC-ECC'2005), Seville, Spain, December 6-9, 2005 (Wei Xing Zheng)

Organizer and Chair of Special Session "Blind System Identification" at the 8th International Symposium on Signal Processing and Its Applications, Sydney, Australia, August 29-September 1, 2005 (Wei Xing Zheng)

Technical Program Committee Member, the 2005 International Conference on Communications, Circuits and Systems (ICCCAS'2005) in Hong Kong, 27-30 May 2005 (Wei Xing Zheng)

Session Chair of ISCAS 2005 (May 24-26, 2004, Kobe, Japan)

Review Committee Member of ISCAS 2006

Meeting Chair of CNNA 2005 (May 28-30, 2005, Hsinchu, Taiwan)

TPC Co-Chair VDVT (May 28-31, 2005, Suzhou, China) (Bin-Da Liu)

General Co-Chair of the 2nd International Meeting on Microsensors and Microsystems. (Jan. 16-18, Tainan, Taiwan) (Bin-Da Liu)

TPC Member of the 2006 IEEE International Conference on Networking, Sensing and Control (April 23-25, 2006, Ft. Lauderdale, Florida, U.S.A.) (Bin-Da Liu)

TPC Member of VLSI-TSA DAT (Apr. 26-28, 2006, Hsinchu, Taiwan) (Bin-Da Liu)

Technical Program Committee Member, IEEE International Workshop on Next Generation Wireless Networks 2005 (WonGen), Goa, India (Ramalingam Sridhar)

Conference Steering Committee member and technical committee member, 15th Annual IEEE International System on Chip (SOC) Conference, Washington, D.C., September 2005 (Ramalingam Sridhar)

Steering Committee member, Technical Committee member and IEEE Systems on Chip Conference, Austin, TX, Sep 2005⁶ Austin, TX, Sep 2005 (Ramalingam Sridhar)

Track Chair of Nano-Giga Technology & Technical Program Committee Member, IEEE International Symposium on Circuits and Systems, Kobe, Japan, May 23-26, 2005 (Chin-Teng Lin)

Program Chair, 2005 CNN Workshop, Hsinch, Taiwan, May, 2005 (Chin-Teng Lin)

General Chair, 2005 ICONIP, APPNA, Taipei, Taiwan, October, 2005 (Chin-Teng Lin)

(3) Ongoing Conferences or workshops where the NSA TC or members of the TC is/are actively involved in include the followings:

- Invited Talk, "21st Century Success Philosophy. Search and Research," MediaTek Workshop, Hsin-Chu City, Taiwan, Jan. 2006 (Bing Sheu)
- Plenary Speaker, "High-Tech Engineering Success in 21st Century," 6th International Caribbean Conference on Devices, Circuits and Systems, April 2006, Cozumel, Mexico (Bing Sheu)
- Track Chair of Nanoelectronics and Gigascale Systems & Technical Program Committee Member, IEEE International Symposium on Circuits and Systems, Island of Kos, Greece, May 21-24, 2006 (Wai-Chi Fang)
- Track Chair of Multimedia Hardware, Architecture, and Systems & Technical Program Committee Member, IEEE International Conference on Multimedia and Expo (ICME'06), Toronto, Canada, July 9-12, 2006 (Wai-Chi Fang)
- Technical Program Co-Chair, 2006 IEEE Workshop on Life Science Systems and Applications, Maryland, USA, July 6-7, 2006 (Wai-Chi Fang)
- General Co-Chair, 2006 International Conference on Innovative Computing, Control and Information Processing, Peking, China, Aug.. 10-11, 2006 (Wai-Chi Fang)
- General Chair, International Workshop on Intelligent Information Hiding and Multimedia Signal Processing, Pasadena Convention Center, Pasadena, CA, USA, Dec.. 10-11, 2006 (Wai-Chi Fang)
- Track Co-Chair of Neural Network for 2006 Midwest Symposium on Circuits and Systems (Majid Ahmadi)
- Member of Technical Program Committee for IEEE-NEWCAS 2006
- Reviewer for ISCAS 2006 (Majid Ahmadi)
- Reviewer for IEEE-SMC 2006 (Majid Ahmadi)
- DSP Track Chair, Review Committee Members, Technical Session Chairs, 2006 IEEE International Symposium on Circuits and Systems (ISCAS 2006), Kos, Greece, May 2006 (H. K. Kwan)
- Program Committee Member, 2006 International Symposium on Neural Networks (ISNN), Chengdu, China, May 29-31, 2006 (H. K. Kwan)
- Track Chair, Technical Program Committee Member, and Special Session Organizer and Chair, International Conference on Communications, Circuits and Systems (ICCCAS), Gui Lin, China, June 25-28 2006 (H. K. Kwan)
- Track Chair and Review Committee Member, IEEE Mid-West Symposium on Circuits and Systems (MWSCAS), San Juan, Puerto Rico, August 6-9 2006 (H. K. Kwan)
- International Program Committee Member, 2006 IASTED International Conference on Circuits, Signals, and Systems, California, USA, November 20-22 2006 (H. K. Kwan)
- Organizer: ISCAS 2006, Special Sessions on Sensory Systems for Biological Applications, Kos, Greece, May 2006. (Ralph Etienne-Cumming)
- Organizer: ISCAS 2006, Demonstration Sessions on Sensory Systems, Kos, Greece, May 2006. (Ralph Etienne-Cumming)
- General Chair, International Symposium on Neural Networks, 2007, Nanjing, China (Derong Liu)
- Program Chair, IEEE International Symposium on Approximate Dynamic Programming and Reinforcement Learning, 2007 (Derong Liu)

Co-organizing Telluride 2005, 2006, Secretary & Web Administrator of IEEE Circuits and Systems Society, Technical Committee on Neural Systems and Applications (Giacomo Indiveri)

General Chair, IEEE World Congress on Computational Intelligence, Hong Kong, June 1-6, 2008 (Jun Wang)

Member of the Advisory Committee, 6th International Conference on Intelligent Systems: Design and Applications, Jinan, Shandong, China, October 16-18, 2006 (Jun Wang)

Member of the International Program Committee, IMACS Multiconference on Computational Engineering in Systems Applications, Beijing, China, October 4-6, 2006 (Jun Wang)

General Chair, 13th International Conference on Neural Information Processing, Hong Kong, October 3-6, 2006 (Jun Wang)

Invited Speaker and Member of Program Committee, International Symposium on Artificial Brain with Emotion and Learning, Seoul, Korea, August 24-25, 2006 (Jun Wang)

Member of the Program Committee, 9th Pacific Rim International Conference on Artificial Intelligence, Guilin, Guangxi, China, August 7-11, 2006 (Jun Wang)

Member of the Program Committee, 3rd International Conference on Informatics in Control, Automation, and Robotics, Setubal, Portugal, August 1-5, 2006 (Jun Wang)

Chair for Special Sessions. International Joint Conference on Neural Networks, IEEE World Congress on Computational Intelligence, Vancouver, British Columbia, Canada, July 16-21, 2006 (Jun Wang)

Review Committee Member (Digital Signal Processing Track) of the 2006 IEEE International Symposium on Circuits and Systems (ISCAS'2006), Kos, Greece, May 2006 (Wei Xing Zheng)

Technical Session Chair of "Adaptive Signal Processing I" at the 2006 IEEE International Symposium on Circuits and Systems (ISCAS'2006), Kos, Greece, May 2006 (Wei Xing Zheng)

National Organizing Committee Member of the 14th IFAC Symposium on System Identification (SYSID'2006), Newcastle, Australia, 29-31 March 2006 (Wei Xing Zheng)

Registration Chair of the 14th IFAC Symposium on System Identification (SYSID'2006), Newcastle, Australia, 29-31 March 2006 (Wei Xing Zheng)

International Program Committee Member of the 2006 IEEE International Conference on Networking, Sensing and Control (ICNSC'2006), Miami, Florida, USA, 23-25 April 2006 (Wei Xing Zheng)

International Program Committee Member of the 6th World Congress on Intelligent Control and Automation (WCICA'2006), Dalian, China, 21-23 June 2006 (Wei Xing Zheng)

International Program Committee Member of the 2006 International Joint Conference on Neural Networks (IJCNN'2006), Vancouver, British Columbia, Canada, 16-21 July 2006 (Wei Xing Zheng)

International Program Committee Member of the 21st IEEE International Symposium on Intelligent Control (ISIC'2006), Munich, Germany, 4-6 October 2006 (Wei Xing Zheng)

Technical Program Committee Member of the 8th biennial Asia Pacific Conference on Circuits and Systems (APCCAS'2006), Singapore, 4-7 December 2006 (Wei Xing Zheng)

Program Committee Member of the 45th IEEE Conference on Decision and Control (CDC'2006), San Diego, California, USA, 13-15 December 2006 (Wei Xing Zheng)

Session Chair of ISCAS 2006 (May 22-24, 2006, Kos, Greece) (Bin-Da Liu)

RCM Member of MWSCAS (Aug. 6-9, 2006, San Juan, Puerto Rico) (Bin-Da Liu)

TPC Member of IEEE SMC (Oct. 8-11, 2006, Taipei, Taiwan) (Bin-Da Liu)

TPC Member of IEEE TENCON (Nov. 14-17, 2006, Hong Kong) (Bin-Da Liu)

Technical Program Committee Member, Broadnets Wireless 2006, San Jose, CA (Ramalingam Sridhar)

Technical Program Committee Member, Seventh ACM International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc) 2006, Florence, Italy (Ramalingam Sridhar)

Technical Program Committee Member, 2006 IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WowMoM) 2006, Buffalo, NY (Ramalingam Sridhar)

Special Session Co-Chair, IEEE International Symposium on Circuits and Systems, Island of Kos, Greece, May 21-24, 2006 (Chin-Teng Lin)

Program Chair, IEEE-SMC2006, Taipei, Taiwan, October, 2006 (Chin-Teng Lin)

(4) Short courses and Lectures:

Plenary Lecture "Embedded Information Processing and Wireless Communication Systems-on-Chip for Intelligent Sensor Networks," International Workshop on Intelligent Information Hiding and Multimedia Signal Processing, Hilton Hotel, Melbourne, Australia, Nov. 11, 2005 (Wai-Chi Fang)

Distinguished Lecturer, 2004-2005 IEEE Circuits and Systems Society (Orly Yadid-Pecht): "CMOS Imagers – following Biology" (Hungarian Institute of Science, Budapest, Hungary, October 2005), "CMOS Imagers – from Pixels to Systems" (National Microelectronics Center, CNM-CSIC, Spain, December 2005)

(5) Editorial Services:

One Editor on Editorial Board, Proceedings of the IEEE, 2005 -2007 (Bing Sheu)

Co-Editor, "Views on Modern Education in 21st Century," NCTU Press, Apr. 2006 (Bing Sheu)

Editor, Neurocomputing Letters (Robert Newcomb)

Regional Editor for the Journal of Circuits, Systems and Computers (Majid Ahmadi)

Associate Editor for Pattern Recognition Journal (Majid Ahmadi)

Associate Editor for International Journal of Computers in Electrical Engineering (Majid Ahmadi)

Associate Editor: IEEE Sensors Journal (Ralph Etienne-Cumming)

Editor, IEEE Computational Intelligence Society Electronic Letter, 2004-present (Derong Liu)

Letter Editor, IEEE Transactions on Neural Networks, 2006-present (Derong Liu)

Associate Editor, Automatica, 2006-present (Derong Liu)

Associate Editor, IEEE Computational Intelligence Magazine, 2006-present (Derong Liu)

Guest Editor, IEEE Transactions on Circuits and Systems Part I (2005) (Pau-Choo (Julia) Chung)
 Associate Editor, Journal of Information Science and Engineering (2003-2006) (Pau-Choo (Julia) Chung)
 Guest Editor, Journal of High Speed Networks (2005) (Pau-Choo (Julia) Chung)
 Associate Editor, Journal of High Speed Networks (2005-2007) (Pau-Choo (Julia) Chung)
 Editorial Board member of the Neuromorphic Engineering Newsletter (Giacomo Indiveri)
 Associate Editor, IEEE Transactions on Neural Networks, 1999 to present (Jun Wang)
 Associate Editor, IEEE Transactions on Systems, Man, and Cybernetics - Part B: Cybernetics, 2003 to present (Jun Wang)
 Associate Editor, IEEE Transactions on Systems, Man, and Cybernetics - Part C: Applications and Reviews, 2002-2005 (Jun Wang)
 Associate Editor, IEEE Transactions on Automatic Control (Wei Xing Zheng)
 CAS Associate Editor, IEEE Circuits & Devices Magazine (Bin-Da Liu)
 Associate Editor, IEEE Transactions on Circuits and Systems-I (Bin-Da Liu)
 Associate Editor, IEEE Transactions on Very Large Scale Integration (VLSI) Systems (Bin-Da Liu)
 Associate Editor, IEEE Transactions on Neural Networks (Bernabe Linares-Barranco)
 Deputy EIC, IEEE Transactions on Circuits and Systems Part I (2006-2007) (Chin-Teng Lin)

(6) Books and book chapters:

Wai-Chi Fang, "Intelligent Multimedia Hiding and Processing," Springer-Verlag, February, 2006 (Co-Editor)
 R. Etienne-Cummings, M. A. Lewis and P. Pouliquen, "Color Segmentation, Histogramming and Object Recognition System," Patent #6897426, May 2005. (Ralph Etienne-Cumming)
 H. Zhang and D. Liu, Fuzzy Modeling and Fuzzy Control, Boston, MA: Birkhauser, 2006 (Derong Liu)
 F. Y. Wang and D. Liu, Editors, Advances in Computational Intelligence: Theory and Applications, Singapore: World Scientific, 2006 (Derong Liu)

(7) IEEE and Other Academic Society Services:

Chair of Constitution & Bylaws Committee, CAS Society, till Aug. 2005 (Bing Sheu)
 Chair of Van Valkenburg Award Subcommittee, CAS Society, 2006 (Bing Sheu)
 Member of Board of Governor (2004-2006), IEEE Circuits and Systems Society (CASS) (Wai-Chi Fang)
 Chairman of IEEE CASS Nanoelectronics & Gigascale Systems Technical Committee (2005-2007) (Wai-Chi Fang)
 Chairman of IEEE CASS Multimedia Systems and Applications Technical Committee (2003-2005) (Wai-Chi Fang)
 IEEE CAS Society Representative to IEEE Systems Council (2005-2006)
 Member of IEEE Systems Council AdCom (Wai-Chi Fang)
 Chairman of Liaison and Transnational Committee, IEEE Systems Council (Wai-Chi Fang)
 International Steering Committee Member for International Symposium on Intelligent Signal Processing and Communication Systems (ISPACS), since 2005 (H. K. Kwan)
 International Advisory Committee Chair for IEEE Asia Pacific Conference on Circuits and Systems (APCCAS), Singapore, December 4-7, 2006 (H. K. Kwan)

Chair (2004-2006) of Digital Signal Processing Technical Committee (H. K. Kwan)
 Re-Elected to the Board of Governors, IEEE CAS Society, 2003-2005, 2006 – Present
 (Ralph Etienne-Cumming)

Chair, IEEE Computational Intelligence Society, Tainan Chapter (2005-2006) (Pau-Choo
 (Julia) Chung)

General Secretary, Biomedical Engineering Society of the Republic of China (2005-2007)
 (Pau-Choo (Julia) Chung)

BoG, Chinese Image Processing and Pattern Recognition Association (2003-2007, 2 terms)
 (Pau-Choo (Julia) Chung)

BoG, Medical Image Standard Association at Taiwan (2003-2005, 2005-2007) (Pau-Choo
 (Julia) Chung)

Secretary-Elect (2005-2006) of Technical Committee on Neural Systems and Applications,
 IEEE Circuits and Systems Society (Wei Xing Zheng)

VP-Region 10, IEEE CASS (Bin-Da Liu)

Member of the Editorial Board (Deputy Editor in Chief), IEEE Trans. on Circuits and Systems
 I, 2004-2006 (Orly Yadid-Pecht)

Member of the Editorial Board (Guest Editor), Analog Integrated Circuits and Signal
 Processing, 2003-2004 (Orly Yadid-Pecht)

Past Chair of the IEEE CAS Technical Sensors Committee (2004-2005) (Orly Yadid-Pecht)

IEEE Sensors Council – CAS representative (Orly Yadid-Pecht)

Member of the IEEE CAS Analog Signal Processing, Neural Networks, Biocas and Sensors
 Technical Committees (1996-present) (Orly Yadid-Pecht).

Member of the SPIE Solid State Sensor Arrays international conference program committee
 (1997-present) (Orly Yadid-Pecht)

Member of the Technical Committee for the IEEE workshop on CCDs and Advanced Image
 Sensors (1998-present) (Orly Yadid-Pecht)

Member of Board of Governor (2005-2008), IEEE Circuits and Systems Society (CASS)
 (Chin-Teng Lin)

Chairman of IEEE CASS Neural Systems and Applications Technical Committee (2005-
 2006) (Chin-Teng Lin)

(8) Honors:

IEEE Fellow (Bin-Da Liu)
 Recipient of the Visit African Fellowship Award, *University of Cape Town*, 2006/2007
 (Ralph Etienne-Cumming)

Selected for Fulbright Fellowship Award to South Africa, 2005/2006 (Ralph Etienne-
 Cumming)

(9) Next NSA TC Meeting will be held on May 22, 2006 during the 2006 IEEE International
 Symposium on Circuits and Systems, Island of Kos, Greece, May 21-24, 2006.