

Curriculum Vitae

Prof. Dr. Congo Tak Shing CHING

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Nationality: British National (Overseas), Hong Kong, and Taiwan

DOB/Gender: 17 March 1976 / Male

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Education

08/2005 – 05/2006	Certificate in Entrepreneurial Studies <i>University of Colorado at Denver and Health Sciences Center, United States</i>
10/2001 – 07/2005	PhD in Bioengineering (Biomedical Electronics and Instrumentation) <i>University of Strathclyde, United Kingdom</i>
09/1999 – 11/2002	MPhil in Biomedical Engineering (Spinal Biomechanics and Intervertebral Disc Biology) <i>The Hong Kong Polytechnic University, Hong Kong</i>
09/1996 – 12/1999	BSc in Prosthetics and Orthotics (First Class Honours & Graduation with the 1st Position) <i>The Hong Kong Polytechnic University, Hong Kong</i>

Work Experience and Posts Held

08/2023 – Present	Section Chief of Academia-Industry Promotion Section Academia-Industry Collaboration Center <i>National Chung Hsing University, Taiwan</i>
08/2016 – Present	Professor Graduate Institute of Biomedical Engineering <i>National Chung Hsing University, Taiwan</i>
08/2021 – Present	Jointly Appointed Professor Department of Electrical Engineering <i>National Chi Nan University, Taiwan</i>
11/2016 – Present	Consultant <i>University Entrance Committee for Overseas Chinese Students, Taiwan</i>
08/2019 – 07/2023	Head Graduate Institute of Biomedical Engineering <i>National Chung Hsing University, Taiwan</i>
06/2019 – 07/2019	Visiting Professor Department of Physics and Electronic Engineering <i>University of Science (Vietnam National University of Hochiminh City), Vietnam</i>
11/2016 – 10/2019	Honorary Professor Department of Health and Physical Education <i>The Education University of Hong Kong, Hong Kong</i>

01/2016 – 12/2016	Consultant Innovation Incubation Center <i>Nan Kai University of Technology, Taiwan</i>
03/2015 – 02/2018	Consultant <i>AllBio Science Incorporated, Taiwan</i>
02/2015 – 07/2016	Professor Department of Electrical Engineering <i>National Chi Nan University, Taiwan</i>
09/2011 – 07/2016	Section Chief of Nature & Science Section Center for General Education <i>National Chi Nan University, Taiwan</i>
05/2013 – 07/2016	Section Chief of Publicity Section <i>University Entrance Committee for Overseas Chinese Students, Taiwan</i>
08/2013 – 07/2015	Director Graduate Program of Optoelectronic Technology <i>National Chi Nan University, Taiwan</i>
02/2012 – 07/2015	Jointly Appointed Associate Professor Department of Applied Materials and Optoelectronic Engineering <i>National Chi Nan University, Taiwan</i>
08/2011 – 01/2015	Associate Professor Department of Electrical Engineering <i>National Chi Nan University, Taiwan</i>
08/2008 – 07/2011	Assistant Professor Graduate Institute of Biomedicine and Biomedical Technology <i>National Chi Nan University, Taiwan</i>
02/2007 – 07/2008	Assistant Professor Department of Photonics and Communication Engineering <i>Asia University, Taiwan</i>
02/2006 – 02/2007	Post-Doctoral Research Fellow (by Royal Society of Edinburgh Enterprise Fellowship) Department of Bioengineering <i>University of Strathclyde, United Kingdom</i>
08/2005 – 12/2005	Post-Doctoral Research Fellow (by First Medical Devices Faraday Colorado Fellowship) <i>Department of Trade and Industry, United Kingdom</i> <i>University of Colorado at Denver and Health Sciences Center, United States</i>
10/1999 – 04/2001	Associate Prosthetist-Orthotist <i>Cosmo Rehabilitation Centre and Associates, Hong Kong</i>

Research Interests

Biomedical instrumentation design; biomedical electronics; biosensors; tissue bioimpedance; AIoT healthcare; assistive healthcare technologies; biomedical optoelectronic; non-invasive and transdermal metabolites/biomarkers extraction and drugs delivery

Funded Projects

(USD 1,720,612 in total, 2009-2023)

- [1] Artificial Intelligence Driven Closed-loop Transcutaneous Vagus Nerve Stimulator Paired with Soft Robotic Hand System in Post Stroke Motor Recovery. (Principle Investigator, National Science and Technology Council Grant, 112-2221-E-005-042-, USD 34,723), 2023

- [2] Development of a reusable, low-cost and reliable interdigitated microelectrode for noninvasive quantification of glucose in saliva. (Principle Investigator, Hospital Collaboration, Show Chwan Memorial Hospital and National Chung Hsing University Collaboration Grant, SRD-112024, USD 3,726), 2023
- [3] Establishment and verification of an impedance-based non-invasive in ovo sexing method. (Co-Investigator, National Chung Hsing University, USD 32,928), 2023
- [4] A simple, rapid and low-cost method for the detection of pesticides in aqueous solutions. (Co-Investigator, Hospital Collaboration, Show Chwan Memorial Hospital and National Chung Hsing University Collaboration Grant, SRD-111050, USD 8,105), 2023
- [5] Development of a mitochondrial extraction and viability analyzer based on MEMS, microfluidics and electrochemical impedance spectroscopy technology. (Principle Investigator, National Science and Technology Council Grant, 111-2221-E-005 -018 -, USD 28,253), 2022
- [6] The application of the perceptive soft machinery glove in stroke rehabilitation. (Co-Investigator, Hospital Collaboration, Taichung Veterans General Hospital and National Chung Hsing University Collaboration Grant, TCVGH-NCHU1110108, USD 11,525), 2022
- [7] A ID μ E sensor for the characterization of E. Coli. (Co-Investigator, Hospital Collaboration, Show Chwan Memorial Hospital and National Chung Hsing University Collaboration Grant, SRD-111050, USD 9,726), 2022
- [8] Development of an reusable interdigitated microelectrode for the rapid identification of date rape drug in alcoholic drinks based on impedance and capacitance measurements. (Co-Investigator, Hospital Collaboration, Show Chwan Memorial Hospital and National Chung Hsing University Collaboration Grant, SRD-109030, USD 9,726), 2021
- [9] Development of a Noninvasive System Incorporated with Photo-Impedimetric Techniques and Artificial Neural Network for the Sex Identification of Fertilized Eggs. (Principle Investigator, Ministry of Science and Technology Grant, 109-2313-B-005 -007 -, USD 24,116), 2020
- [10] Development of a Perceptual Soft Robotic Glove System for Hand Rehabilitation and Assisted Exercise in Stroke Patients. (Principle Investigator, Ministry of Science and Technology Grant, 108-2221-E-005 -025 -, USD 28,731), 2019
- [11] Product design and development for remote home rehabilitation integrated platform system. (Principle Investigator, Industry-University Collaboration, International Nano Technology Consultant Corp. Grant, 109D501, USD 6,920), 2020
- [12] Flexible Bioimpedance Sensor for Detection of Cell Viability and Application of High Throughput Analysis. (Principle Investigator, National Chung Hsing University, 108ST001B, USD 52,050), 2019
- [13] A New Spinal Orthosis with an Integrated System of Electric Surface Stimulation and Heat Sensing for Adolescent Idiopathic Scoliosis (2/2). (Co-Investigator, Ministry of Science and Technology Grant, 107-2218-E-371-001-, USD 66,415), 2018
- [14] Development and clinical applications of a smart physical examination system for the health management in elderly. (Co-Investigator, Ministry of Science and Technology Grant, 106-2218-E-182 -007 -MY3, USD 167,948), 2017~2020
- [15] A New Spinal Orthosis with an Integrated System of Electric Surface Stimulation and Heat Sensing for Adolescent Idiopathic Scoliosis (1/2). (Co-Investigator, Ministry of Science and Technology Grant, 106-2218-E-371-001-, USD 65,564), 2017
- [16] Development of a System Incorporated with a Highly-Sensitive Nanomaterial Immunobiosensor Array and Readout Circuit for Simultaneous Monitoring of Multi-Biomarkers for Pancreatic Cancer Screening in its Early Stage. (Principle Investigator, Ministry of Science and Technology Grant, 105-2221-E-005-089-, USD 27,225), 2016
- [17] Portable/wearable bio-sensors powered by dye-sensitized solar cells (3/5). (Co-Investigator, Ministry of Science and Technology Grant, 104-2119-M-260 -001-, USD 127,137), 2016
- [18] Alliance for Nano Imprint and Biosensing Technology Applications (3/3). (Co-Investigator, Ministry of Science and Technology Grant, 105-2622-8-260-001-TE1, USD 50,710), 2016
- [19] Portable/wearable bio-sensors powered by dye-sensitized solar cells (2/5). (Co-Investigator, Ministry of Science and Technology Grant, 104-2119-M-260 -001-, USD 129,824), 2015
- [20] A Study of a Bioimpedance-based 2-Dimensional Imaging System for Detection and Localization of Pathological Epithelial Tissues. (Principle Investigator, Ministry of Science and Technology Grant, 104-2221-E-260-010-, USD 27,148), 2015
- [21] Development of a Noninvasive blood glucose Monitoring System and Its Clinical Application. (Principle Investigator, Hospital Collaboration, Puli Christian Hospital Grant, USD 19,474), 2015
- [22] Alliance for Nano Imprint and Biosensing Technology Applications (2/3). (Co-Investigator, Ministry of Science and Technology Grant, 104-2622-E-260-001-, USD 73,675), 2015
- [23] Noninvasive Detection of Medullary Thyroid Carcinomas Based on Reverse Iontophoresis, Electroporation and Biosensor Techniques. (Principle Investigator, Hospital Collaboration, Taichung Veterans General Hospital and National Chi Nan University Collaboration Grant, TCVGH-NCNU1047903, USD 8,763), 2015
- [24] Development of a Des-Gamma-Carboxy Prothrombin (DCP) Nano-Immunobiosensor and Readout Circuit System for the Screening of Early-Stage Liver Cancers. (Principle Investigator, Ministry of Science and Technology Grant, 103-2221-E-260-003-, USD 26,452), 2014
- [25] Development of an Immunobiosensor Based on Nano-Materials for Liver Cancer Screening in its Early Stages. (Principle Investigator, Hospital Collaboration, Taichung Veterans General Hospital and National Chi Nan University Collaboration Grant, TCVGH-NCNU1037904, USD 8,114), 2014
- [26] Portable/wearable bio-sensors powered by dye-sensitized solar cells (1/5). (Co-Investigator, Ministry of Science and Technology Grant, 103-2119-M-260-001-, USD 129,824), 2014

- [27] Alliance for Nano Imprint and Biosensing Technology Applications (1/3). (Co-Investigator, Ministry of Science and Technology Grant, 103-2622-E-260-001-, USD 74,421), 2014
- [28] Development of a tele-monitoring system integrated with constant-power physical forces and highly-sensitive biosensors for noninvasive and transdermal monitoring of metabolites. (Principle Investigator, Ministry of Science and Technology Grant, 102-2221-E-260-004-, USD 25,642), 2013
- [29] Integration of Electroporation, Reverse Iontophoresis and Uric Acid Biosensor Array for the Development of a Non-invasive Uric Acid Monitoring System. (Principle Investigator, Hospital Collaboration, Puli Christian Hospital Grant, USD 19,750), 2013
- [30] Development of a highly-sensitive biosensor system with the combination of amperometric and impedimetric types. (Principle Investigator, Hospital Collaboration, Taichung Veterans General Hospital and National Chi Nan University Collaboration Grant, TCVGH-NCNU1027901, USD 11,358), 2013
- [31] Research on Dual-functional Array Nano-biomedical sensor device and Readout Integrated Circuit Design (I). (Co-Investigator, Ministry of Science and Technology Grant, 102-2221-E-260-031-, USD 25,226), 2013
- [32] Bayesian Identification of the Van der Pol Systems with Jump Phenomenon for Application in Heartbeat Modeling. (Co-Investigator, Ministry of Science and Technology Grant, 102-2221-E-260-021-, USD 16,137), 2013
- [33] Development of a System Incorporated with Impedimetric CEACAM-6 Nano-Immunobiosensor Array and Physical Forces for Non-Invasive Screening of Colorectal Cancer. (Principle Investigator, Ministry of Science and Technology Grant, 101-2221-E-260-001-, USD 26,432), 2012
- [34] Development of an Immunobiosensor Array for Colorectal Cancer Screening in its Early Stages. (Principle Investigator, Hospital Collaboration, Taichung Veterans General Hospital and National Chi Nan University Grant, TCVGH-NCNU-1017902, USD 9,635), 2012
- [35] Research on Multifunctional High Resolution Nano-Biomedical Sensor Device and System Design. (Co-Investigator, Ministry of Science and Technology Grant, 101-2221-E-260-034-, USD 25,985), 2012
- [36] Development of a System Incorporated with Immunobiosensor for Simultaneous Monitoring of Urinary Multi-Biomarkers for Bladder Cancer Screening. (Principle Investigator, Ministry of Science and Technology Grant, 100-2221-E-260-007-, USD 19,506), 2011
- [37] Development of a System Incorporated with Uric Acid Biosensor Array and Readout Circuit. (Principle Investigator, Hospital Collaboration, Puli Christian Hospital Grant, USD 22,897), 2011
- [38] Detection of the Pathological Changes of Superficial Tissues and Development of a 2-Dimensional Image Measurement System Based on Bioimpedance Technique. (Principle Investigator, Hospital Collaboration, Taichung Veterans General Hospital and National Chi Nan University Grant, TCVGH-NCNU-1007906, USD 6,359), 2011
- [39] Development of a System for Noninvasive Prostate Cancer Detection. (Principle Investigator, Ministry of Science and Technology Grant, 99-2221-E-260-004-, USD 21,422), 2010
- [40] Noninvasive Monitoring of Ovarian Cancer by Reverse Iontophoresis and Biosensor Techniques. (Principle Investigator, Hospital Collaboration, Taichung Veterans General Hospital and National Chi Nan University Grant, TCVGH-NCNU-997901, USD 16,058), 2010
- [41] Detection and Prevention of Pressure Sore in its Early Stage by Bioimpedance. (Principle Investigator, Hospital Collaboration, Puli Veterans Hospital Grant, 99A019-1, USD 16,058), 2010
- [42] Development of a Real-Time Bioimpedance Measurement System for Cell Culture Monitoring. (Principle Investigator, Grant from Ministry of Education, 99F033-3, USD 5,139), 2010
- [43] Noninvasive and Tele-Monitoring System for Multi-Metabolites. (Principle Investigator of an Integrated Sub-Project, National Chi Nan University Grant, TWD 1,600,000 ~ USD 55,067), 2010~2012
- [44] Development of a System for Noninvasive and Simultaneous Transdermal Monitoring of Multi-Metabolites. (Principle Investigator, Ministry of Science and Technology Grant, 98-2221-E-260-002-, USD 23,991), 2009
- [45] Non-invasive detection of oral cancer by bioimpedance. (Principle Investigator, Hospital Collaboration, Taichung Veterans General Hospital and National Chi Nan University Grant, TCVGH-NCNU-987908, USD 9,635), 2009
- [46] Research on Differential Solid-State Multifunctional Biomedical Sensing System Design. (Co-Investigator, Ministry of Science and Technology Grant, 98-2221-E-260-024-MY3, USD 91,822), 2009~2012
- [47] Development of a Noninvasive Uric Acid Monitoring System and Its Clinical Application. (Co-Investigator, Hospital Collaboration, Puli Christian Hospital Grant, 98A032, USD 19,270), 2009

Honors and Awards

- [1] Best Academic Service Award awarded by National Chung Hsing University, Taiwan, 2023
- [2] Outstanding Service Teacher Award awarded by the College of Engineering, National Chung Hsing University, Taiwan, 2023
- [3] First Place Award in Intelligence Medical Device Innovative Competition 2022 (IMeDIC 2022), 2 Dec 2022, Taichung, Taiwan
- [4] The Best Commercialization Award in Intelligence Medical Device Innovative Competition 2022 (IMeDIC 2022), 2 Dec 2022, Taichung, Taiwan
- [5] Outstanding Engineering Professor Award awarded by the Chinese Institute of Engineers (Taichung Chapter), Taiwan, 2021
- [6] Outstanding Service Teacher Award awarded by the College of Engineering, National Chung Hsing University, Taiwan, 2020
- [7] Mentor Model Award awarded by the College of Engineering, National Chung Hsing University, Taiwan, 2018

- [8] Outstanding Young Teacher Award awarded by the College of Engineering, National Chung Hsing University, Taiwan, 2017
- [9] Outstanding oral presentation award in the 2017 ISSMD & 22nd SACST, 20 May 2017, Tainan, Taiwan
- [10] Top prize in Biomedical Thematic Competition (Implementation group), 19 Jan 2017, Taiwan
- [11] The best paper award in the 2016 Symposium on Joint Research Projects Exhibition of Taichung Veterans General Hospital and Central-Region Universities, 25 Jun 2016, Taiwan
- [12] The best industry application award at the industry competition of the 2016 21th Symposium of Association for Chemical Sensors in Taiwan, 21 May 2016, Taiwan
- [13] Pride of the Nation Academic Award for Outstanding International Achievement awarded by the Taiwan International Invention Award Winners Association, Taiwan, 2015
- [14] University Outstanding Talent Award awarded by the Ministry of Science and Technology, Taiwan, 2015
- [15] Outstanding Teaching Award awarded by the National Chi Nan University, Taiwan, 2015
- [16] Second prize in The 2015 National Wisdom Electronic Creative Designs and Thematic Applications Competition, 14 Dec 2015, Taiwan
- [17] The best paper award in The 2014 International Conference of Systems Biology and Bioengineering, 2-4 Jul 2014, London, United Kingdom
- [18] Third prize in The 10th National Electronic Creative Designs Competition, 29 Mar 2014, Taiwan
- [19] Top prize in The 9th National Electronic Creative Designs Competition, 11 May 2013, Taiwan
- [20] Third prize and the best commercialization award in The 2013 Taiwan Innovative Products Design & Development Competition, 22 Nov 2013, Taiwan
- [21] The 2012 Distinctive and Outstanding Talent Merit Pay Award awarded by the Ministry of Education, Taiwan, 2012
- [22] Top prize and the best creative supervision award in The 2012 Creative Designs and Implementation Competition on Biomedical Engineering, 26 Oct 2012, Taiwan
- [23] Distinguished Contributions to Teaching Award awarded by the National Chi Nan University, Taiwan, 2011
- [24] Scientific Award of Excellence 2011 awarded by American Biographical Institute, 2011
- [25] Who's Who in Science and Engineering, 2011
- [26] University Outstanding Talent Award awarded by the Ministry of Science and Technology, Taiwan, 2010
- [27] Excellent Performance of Journal Article Publication Award awarded by Asia University, Taiwan, 2009
- [28] Excellent Conceptual Proposal Award awarded by Asia University, Taiwan, 2008
- [29] Royal Society of Edinburgh Enterprise Fellowship awarded by the Royal Society of Edinburgh, United Kingdom, 2005
- [30] First Medical Devices Faraday Colorado Fellowship awarded by Department of Trade & Industry, United Kingdom, 2005
- [31] Academic travel support awarded by John Swire & Sons (H.K.) Ltd., 2005 and 2004
- [32] Third Prize in paper competition in the 2nd IEEE-EMBS International Summer School and Symposium on Medical Devices and Biosensors (ISSS-MDBS), 26 Jun to 2 Jul 2004, Hong Kong
- [33] Studentship awarded by the 2nd IEEE-EMBS International Summer School and Symposium on Medical Devices and Biosensors (ISSS-MDBS), 26 Jun to 2 Jul 2004, Hong Kong
- [34] University Postgraduate Studentship 2003/2004 awarded by University of Strathclyde, United Kingdom, 2003
- [35] James Henry Scott Scholarship for PhD studies at University of Strathclyde from John Swire & Sons (H.K.) Ltd., 2001
- [36] The Hong Kong Polytechnic University Tuition Scholarship for Research Postgraduate Studies, 2001 and 2000
- [37] 10-year Foundation Scholarship awarded by The Hong Kong Polytechnic University, 2000
- [38] Sonca Products Gold Medal Awards 1999, Hong Kong, 1999

Service to Professional & Scientific Bodies, Membership of Professional & Learned Societies

- [1] Professional training program
 - Lecturer for the Central Commissioned Training Program for Prosthetist & Orthotist 2021/22 organized by the Hong Kong Hospital Authority Institute of Health Care, 13-14 Jan 2022, Hong Kong [Lecture topic: A Journey of Amputation ~ Rehabilitation and Advance; Lecture time: 11 hours]
 - Lecturer for 2021 Symposium on Upper Limb Prostheses for medical professionals (medical physicians, physiotherapists, occupational therapists, prosthetists) organized by Lien I-Nan Foundation for Promotion of Education and Research in Rehabilitation Medicine, and Prosthetics and Orthotics Society of Taiwan, 24 Oct 2021 [Lecture topic: (1) Terminal device and control system of upper limb prostheses; (2) Cutting-edge upper limb prosthetics and future development]
- [2] Editorial service
 - Guest Editor of a SCI journal "Applied Science (ISSN 2076-3417)", 2022
 - Guest Editor of a SCI journal "Applied Science (ISSN 2076-3417)", 2021
 - Guest Editor of a SCI journal "Applied Science (ISSN 2076-3417)", 2020
- [3] Plenary/Keynote/Invited speech
 - Keynote speaker of The International Symposium on Applied Science (ISAS 2023), 13-15 Oct 2023, Ho Chi Minh City, Vietnam
 - Keynote speaker of Rencontres du Vietnam: The first International Symposium of Nano Life Science: Nano Biotechnology, Biosensor, Computation (NanoBioCoM2023), 17-19 Sep 2023, ICISE, Quy Nhon, Vietnam

- Keynote speaker of International Symposium on Medical Devices and Technology 2023, 27-28 Aug 2023, Johor, Malaysia
 - Plenary speaker of The 3rd International Workshop on Engineering Physics, IC-MEMS-Sensors and Their Applications (3rdIWEMA2022), 25-26 Nov 2022, Ho Chi Minh City, Vietnam
 - Keynote speaker of IEEE The 2nd International Conference on Intelligent Cybernetics Technology & Applications 2022 (IEEE ICICyTA 2022), 15-16 Dec 2022, Bandung, Indonesia
 - Invited speaker of International Joint Symposium on Applied Mathematics, Science and Technology, 01 Dec 2022, Taichung, Taiwan
 - Invited speaker of The 38th SENSOR SYMPOSIUM, 9-11 Nov 2021, Japan
 - Keynote speaker of The International Symposium on Applied Science 2021, 15-17 Oct 2021, Ho Chi Minh City, Vietnam
 - Keynote speaker of The Fifth International Conference on Biological Information and Biomedical Engineering (BIBE2021), 20-22 Jul 2021, Hangzhou, China
 - Keynote speaker of the 3rd International Conference on Bioscience and Medical Engineering (ICBME2021), 29-30 Jun 2021, Johor Bahru, Malaysia
 - Invited speaker of Distinguished Lecture Series, Universiti Teknologi Malaysia, 12 Nov 2020, Malaysia
 - Plenary speaker of International Convention on Rehabilitation Engineering and Technology (i-CREATe 2020), 5-7 Nov 2020, Taipei, Taiwan
 - Keynote speaker of International Conference on Biological Information and Biomedical Engineering (BIBE 2018), 6-8 Jul 2018, Shanghai, China
 - Keynote speaker of The 2nd International Conference on Biomedical and Biological Engineering (BBE2017), 26-28 May 2017, Guilin, China
 - Keynote speaker of The International Conference on Biological Engineering and Pharmacy (BEP2016), 9-11 Dec 2016, Shanghai, China
 - Keynote speaker of The International Conference on Biomedical and Biological Engineering (BBE2016), 15-17 Jul 2016, Shanghai, China
 - Invited speaker of The 11th Annual IEEE International Conference on Nano/Micro Engineered and Molecular Systems, 17-20 April 2016, Matsushima Bay and Sendai MEMS City, Japan
- [4] Board member of professional & scientific bodies
- Council member of the Taiwan Engineering Medicine Biology Association, 2023~2025
 - Committee member of Board of Education, Biomedical Engineering Society of the R.O.C., 2021
 - Supervising council of the Taiwan Rehabilitation Engineering and Assistive Technology Society, 2021~2023
 - Council member of Prosthetics and Orthotics Society of Taiwan, 2019~2021
 - Advisory Board Member of Hong Kong Chemical, Biological & Environmental Engineering Society (HKCBEES), since 2019
 - Council member of the Taiwan Rehabilitation Engineering and Assistive Technology Society, 2018~2020
 - Supervising council of the Taiwan Rehabilitation Engineering and Assistive Technology Society, 2014~2017
- [5] Investment project proposal examiner/reviewer
- Reviewer of investment case at Hsinchu Science Park, 2022
 - Reviewer of investment case at Hsinchu Science Park, Oct 2021
 - Proposal Reviewer of Emerging Technology Application Project of Southern Science Park, Mar 2021
 - Proposal Reviewer of Project for Industry-Academia Collaboration on Innovative R&D at Southern Taiwan Science Park, Mar 2017
 - Reviewer of investment case at Central Taiwan Science Park Bureau, Nov 2016
 - Reviewer of investment case (final review) at Central Taiwan Science Park Bureau, Nov 2016
 - Professional examiner of the Technical Review Committee of the Ministry of Economic Affairs (Taiwan), Feb 2012
- [6] Section chair of national and international conferences
- Session chair of 2022 Symposium on Engineering, Medicine, and Biology Application (SEMBA 2022), 3-4 Sep 2022, Taichung, Taiwan
 - Session chair of The International Symposium on Applied Science (ISAS2019), 18-19 Oct, 2019, Ho Chi Minh City, Vietnam
 - Session chair of the 8th WACBE World Congress on Bioengineering, 30 Jul – 2 Aug 2017, Hong Kong
 - Session chair of The 2017 ISSMD & 22nd SACST, 20 May 2017, Taiwan
 - Session chair of The 11th Annual IEEE International Conference on Nano/Micro Engineered and Molecular Systems, 17-20 April 2016, Matsushima Bay and Sendai MEMS City, Japan
 - Session chair of the 2015 Taiwan Academic Network Conference, 21-23 Oct 2015, Puli, Taiwan
 - Session chair of the 2014 International Conference of Systems Biology and Bioengineering, 2-4 Jul 2014, London, United Kingdom
 - Session chair of the 2013 International Conference on Bioinformatics, Computational Biology and Biomedical Engineering, 14-15 Apr 2013, Venice, Italy
 - Session chair of 2013 Electron Devices and Materials Symposium, 28-29 Nov 2013, Taiwan
 - Session chair of the 2012 International Conference on Bioinformatics, Computational Biology and Biomedical Engineering, 27-28 Jun 2012, Paris, France
 - Session chair of the 2012 Annual Symposium on Biomedical Engineering and Technology, 17-18 Nov 2012, Taiwan

- Session chair of the 2011 Annual Symposium on Biomedical Engineering and Technology, 19-20 Aug 2011, Taiwan
- [7] Committee of national and international conferences
- Conference Chair of the 4th International Symposium on Engineering and Technology (ISET 2022), 11-13 Nov 2022, Nantou County, Taiwan
 - Technical Program Chair of International Electron Devices and Materials Symposium (IEDMS), 27-28 Oct 2022, Nantou County, Taiwan
 - Conference Chair of The 11th Symposium on Engineering, Medicine, and Biology Applications (SEMBA 2022), 3-4 Sep 2022, Taichung, Taiwan
 - Technical Program Committee of The Fifth International Conference on Biological Information and Biomedical Engineering (BIBE2021), 20-22 Jul 2021, Hangzhou, China
 - Technical Committee of the 3rd International Conference on Bioscience and Medical Engineering (ICBME2021), 29-30 Jun 2021, Johor Bahru, Malaysia
 - Conference Chair of the 3rd International Symposium on Engineering and Technology (ISET 2021), 19-20 Nov 2021, Taichung, Taiwan.
 - Conference Chair of the 2nd International Symposium on Engineering and Technology (ISET 2020), 14-16 Nov 2020, Nantou County, Taiwan.
 - Conference Chair of the 1st International Symposium on Engineering and Technology (ISET 2020), 14-16 Nov 2020, Nantou County, Taiwan.
 - Technical Committee of 2019 6th International Conference on Biomedical and Bioinformatics Engineering (ICBBE 2019), 13-15 Nov 2019, Shanghai, China
 - Technical Program Committee of The Third International Conference on Biological Information and Biomedical Engineering (BIBE 2019), 20-22 Jul 2019, Hangzhou, China
 - Technical Program Committee of 2019 International Symposium on Chemical–Environmental–Biomedical Technology (isCEBT 2019), 12-16 Dec 2019, Nantou County, Taiwan
 - Program Committee of The 18th IEEE International Conference on Bioinformatics and Bioengineering, 29-31 Oct 2018, Taichung Taiwan
 - Program Committee of International Conference on Biological Information and Biomedical Engineering (BIBE 2018), 6-8 Jul 2018, Shanghai, China
 - Program Committee of 2017 ISSMD & 22nd SACST, 20 May 2017, Tainan, Taiwan
 - Technical program committee of The Eighth International Conference on Sensor Device Technologies and Applications, SENSORDEVICES 2017, 10-14 Sep 2017, Rome, Italy
 - General chair of The 2nd International Conference on Biomedical and Biological Engineering (BBE2017), 26-28 May 2017, Guilin, China
 - Program co-chair of the 2017 7th International Conference on Bioscience, Biochemistry and Bioinformatics, 21-23 Jan 2017, Bangkok, Thailand
 - Technical Program Committee of The 3rd International Conference on Biomedical Engineering (ICBE 2016), 16-17 Dec 2016, Guangzhou, China
 - Technical program chair of the 2016 3rd International Conference on Biomedical and Bioinformatics Engineering (ICBBE 2016), 12-14 Nov 2016, Taipei, Taiwan
 - Program committee of The 16th IEEE International Conference on Bioinformatics and Bioengineering, 31 Oct – 2 Nov 2016, Taichung, Taiwan
 - General chair of The International Conference on Biomedical and Biological Engineering (BBE2016), 15-17 Jul 2016, Shanghai, China
 - Technical program committee of The 2016 IEEE International Conference on System Science and Engineering, 7-9 Jul 2016, Nantou County, Taiwan
 - Technical program committee of The Seventh International Conference on Sensor Device Technologies and Applications, SENSORDEVICES 2016, 24-28 Jul 2016, Nice, France
 - Program Committee of The 2016 International Conference of Systems Biology and Bioengineering, 29 Jun – 1 Jul 2016, London, United Kingdom
 - Program co-chair of the 2016 6th International Conference on Bioscience, Biochemistry and Bioinformatics, 23-25 Jan 2016, Pattaya, Thailand
 - International program committee of the International Conference on Sensors Engineering and Electronics Instrumental Advances (SEIA' 2015), 21-22 Nov 2015, Dubai, UAE
 - Program committee of the 2015 Taiwan Academic Network Conference, 21-23 Oct 2015, Puli, Taiwan
 - Program chair and technical committee of the 2014 4th International Conference on Bioscience, Biochemistry and Bioinformatics, 4-5 Jan 2014, Melbourne, Australia
 - Organizing committee and publication committee members of 2013 Electron Devices and Materials Symposium, 28-29 Nov 2013, Taiwan
 - Program committee member of The 7th International Conference on Complex, Intelligent, and Software Intensive Systems, 3-5 Jul 2013, Taiwan
 - Technical committee member of 2012 2nd International Conference on Environment and Bioscience, 28-29 Sep 2012, Phnom Penh, Cambodia
 - Organizing committee member of the 2011 Taiwan and Mainland China Chi Nan Universities Cross-Disciplinary Academic Conference, 6-7 Aug 2011, Taiwan

- [8] Judging panel
- Judging panel of 2023 Global Student Innovation Challenge Rehabilitation Engineering and Assistive Technology (REAT) Taiwan, 13 May 2023, Taiwan
 - Judging panel of The 2023 Science Exhibition Competition of Junior High and Elementary School in Changhua County, Mar 2023, Taiwan
 - Judging panel of The 2022 Science Exhibition Competition of Junior High and Elementary School in Changhua County, Mar 2022, Taiwan
 - Judging panel of 2022 Global Student Innovation Challenge Rehabilitation Engineering and Assistive Technology (REAT) Taiwan, 31 Jul 2022, Taiwan
 - Judging panel of The 5th National Medical Engineering Creativity Competition, Taipei Medical University, 23 Oct 2021, Taiwan
 - Judging panel of Special Research Competition of the Department of Biomedical Engineering, Taipei Medical University, 19 Jun 2021, Taiwan
 - Judging panel of National Medical Engineering Creativity Competition, Taipei Medical University, 17 Oct 2020, Taiwan
 - Judging panel of The 2017 Science Exhibition Competition of Junior High and Elementary School in Changhua County, Apr 2017, Taiwan
 - Judging panel of the 2016 Symposium on Joint Research Projects Exhibition of Taichung Veterans General Hospital and Central-Region Universities, 25 Jun 2016, Taiwan
 - Judging panel of The 2015 Science Exhibition Competition of Junior High and Elementary School in Changhua County, Apr 2015, Taiwan
 - Judging panel of The 2014 Science Exhibition Competition of Junior High and Elementary School in Changhua County, Mar 2014, Taiwan
 - Judging panel of The 2013 Science Exhibition Competition of Junior High and Elementary School in Changhua County, Mar 2013, Taiwan
 - Judging panel of The 2012 Science Exhibition Competition of Junior High and Elementary School in Changhua County, Mar 2012, Taiwan
 - Judging panel of the 2009 Symposium on Joint Research Projects Exhibition of Taichung Veterans General Hospital and 10 Central-Region Universities, 30 May 2009, Taiwan
- [9] College Dean Selection Committee member, College of Science and Technology, National Chi Nan University, Taiwan, 2023
- [10] Assessor for national and international (like University of Malaya and etc) academic scholars seeking for promotion to various professorial grades (Assistant Professor, Associate Professor, and Professor)
- [11] Examiner for national and international postgraduate research theses. International PhD theses examiner like University of Malaya, Universiti Teknologi Malaysia, and etc.
- [12] Reviewer for academic journals
- Biosensors and Bioelectronics; Sensors and Actuators B; Sensors and Actuators A; Analytica Chimica Acta; Medical Engineering and Physics; Journal of Medical and Biological Engineering; Medical & Biological Engineering & Computing; BioMedical Engineering OnLine; Clinical Biomechanics; Journal of Biomechanics; International Journal of Nanomedicine; PLOS ONE; Journal of Electrical and Computer Engineering; International Journal of Physical Sciences; Thin Solid Films; Materials Science and Engineering B; etc.
- [13] Certificated biomedical engineer, Biomedical Engineering Society of the R.O.C., since 2009
- [14] Membership of Societies
- Member, Prosthetics and Orthotics Society of Taiwan, since 2016
 - Life Member, Taiwan Engineering Medicine Biology Association, since 2023
 - Life Member, Association of Chemical Sensors in Taiwan, since 2015
 - Life Member, Taiwan Rehabilitation Engineering and Assistive Technology Society, 2013
 - Life Member, The Chinese Institute of Engineers, Since 2013
 - Member, IEEE, since 2010
 - Member, IEEE Engineering in Medicine and Biology Society, since 2010
 - Life Member, World Association for Chinese Biomedical Engineers, since 2009
 - Member, International Association of Engineers (IAENG), since 2009
 - Life Member, Biomedical Engineering Society of the R.O.C., since 2008
 - Member, The Royal Society of Edinburgh Entrepreneurs' Club, since 2005