

**Speaker: Dr. Worajit Setthapun**

Program Management Unit for Human Resources  
& Institutional Development, Research and Innovation

Chiang Mai Rajabhat University

180 Moo 7, Chotana Rd., Keelek, Mae Rim,

Chiang Mai 50180, Thailand

Email: [worajit.set@nxpo.or.th](mailto:worajit.set@nxpo.or.th), [worajit@g.cmru.ac.th](mailto:worajit@g.cmru.ac.th)

Website: <https://www.nxpo.or.th/B/>, [www.adicet.cmru.ac.th](http://www.adicet.cmru.ac.th)

Mobile: +66-898398049



**Experience**

- 2022 - *Deputy Director*  
Program Management Unit for Human Resources & Institutional Development and Innovation
- 2015 - 2022 *Dean*  
Asian Development College for Community Economy and Technology (adiCET)  
Chiang Mai Rajabhat University, Chiang Mai, Thailand
- 2013-2014 *Acting Director*  
Asian Development Institute for Community Economy and Technology  
Chiang Mai Rajabhat University, Chiang Mai, Thailand
- 2010 - 2013 *Vice-Director*  
Asian Development Institute for Community Economy and Technology  
Chiang Mai Rajabhat University, Chiang Mai, Thailand
- 2007-2009 *Postdoctoral Appointee*  
Argonne National Laboratory, Illinois, USA  
Chemical Sciences and Engineering Division
- 2002 - 2006 *Graduate Student Research Assistant*  
University of Michigan, Chemical Engineering Department
- Fall 2005 *Graduate Student Instructor*  
University of Michigan, Chemical Engineering Department
- 2000 - 01 *Research Assistant*  
King Mongkut's University of Technology Thonburi  
Food Engineering Department
- 2000 *Assistant Manager*  
Procter and Gamble Manufacturing (Thailand) Ltd., Bangkok, Thailand  
Engineering and Technical Support Department

**Education**

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|------|--|--------------------|
| 2006 | Ph.D., Chemical Engineering<br>University of Michigan                            | Ann Arbor, MI, USA |
| 2002 | M.S.E., Chemical Engineering<br>University of Michigan                           | Ann Arbor, MI, USA |
| 2000 | B.Eng., Chemical Engineering<br>King Mongkut's University of Technology Thonburi | Bangkok, Thailand  |

## Research Project Experience

### Project Leader

- 1) The Area based Foresight Study for Social Innovation in Mae Hong Son Province, Thailand, supported by National Innovation Agency, Thailand (2021)
- 2) Integrated Smart Management Platform: Water-Energy-Food Nexus Approach for Smart Green Campus, supported by the Office of Naval Research, USA (2019)
- 3) The development of Real-Time monitoring system for resource management of Smart Community for small rural community in the northern of Thailand, Energy Conservation Fund, Ministry of Energy, Thailand (2018)
- 4) Smart Community and Micro Smart Grid Integration Model for Thai Communities, Energy Conservation Fund, Ministry of Energy, Thailand (2017)
- 5) Distributed Generations and Load Monitoring Platform for Community Power System, NICOP Grant, supported by the Office of Naval Research, USA (2017)
- 6) High-Efficient Smart Home Integrated with DC Appliances, supported by the Office of Naval Research, USA (2015)
- 7) PV-Biodiesel Hybrid-DC Microgrid for Community, supported by the Office of Naval Research, USA (2013)
- 8) 10 Year – Renewable Energy and Energy Conservation Policy with the Ministry of Energy: World Alternative Energy Forum (WAEF 2012), supported by the Department of Alternative Energy Development and Efficiency, Ministry of Energy, Thailand (2012)
- 9) Carbon Storage Road via Waste Plastic Bag in Asphaltic Concrete, supported by Chiang Mai Rajabhat University (2012)
- 10) The Development of Energy Efficiency Classroom from Novel and Natural Materials, supported by Chiang Mai Rajabhat University (2012)
- 11) PV-DC Community Power Grid, supported by the Office of Naval Research, USA (2011)
- 12) Community Bio-gas System in Mae Kapieng Subdistrict for 50 households, Chiang Mai, supported by the National Research Council of Thailand (NRCT) (2011)

### Project Member

- 1) Optimum Energy Management Strategy of Virtual Power Plant (VPP) Model in a University Campus Microgrid, supported by UiTM-CMRU Joint Grant (2021)
- 2) The Study of Renewable Energy Potential in Northern of Thailand, supported by Petroleum Authority of Thailand (PTT) (2013)
- 3) Low Carbon Society Model with Community Power from Renewable Energy, supported by the Energy Policy and Planning Office (EPPO), Ministry of Energy, Thailand (2012)
- 4) The Design and Evaluation of Energy Efficient Building by EPS, supported by NRCT (2011)

## Academic Service, Development & Consultation Project Experience

### Project Overseer/Manager

- 1) Mae Jam Smart Doi with Smart Energy-Agriculture Module for Low Cost Digital agriculture in Mae Jam District, Chiang Mai, Thailand, support by the Digital Economy and Society Development (2021)
- 2) Social Innovation Driving Unit for Northern Thailand 1, Supported by the National Innovation Agency, Thailand (2021)
- 3) Social Innovation Driving Unit for Northern Thailand 1, Supported by the National Innovation Agency, Thailand (2020)
- 4) Community Waste Management in Kud Chang Village, Mae Tang, Chiang Mai (Phase 2), Supported by Chiang Mai Rajabhat University for Community Development (2020)
- 5) EWG 11 2019A – Accommodating Disruptive Technology into RE&EE Policies for Energy Security, supported by APEC Secretariat (2019)
- 6) Waste Management in Kud Chang Village, Mae Tang, Chiang Mai, Supported by Chiang Mai Rajabhat University for Community Development (2019)
- 7) Technology transfer of biomass waste to energy for reducing open field burning in Omkoi, Chiang Mai, supported by National Research Council of Thailand (2017).
- 8) Monitoring and Evaluation of Power Consumer Contract Standard for 13 Energy Districts, supported by the Energy Regulatory Commission of Thailand (2016)
- 9) EWG 14 2015A - Small and Medium PV System Database in the APEC Region, supported by APEC Secretariat (2015-2016)
- 10) Technology Transfer Workshop for Small Rice Mills, supported by National Research Council of Thailand (2015).
- 11) The Promotion of Energy Awareness and Participation of Energy Regulations in Energy District 7 of Thailand, supported by the Energy Regulatory Commission of Thailand (2014)
- 12) Technology Transfer Workshop for the Application of PV Systems, supported by NRCT, Thailand (2014)
- 13) Technology Transfer Workshop for Small PV Systems, supported by NRCT, Thailand (2014)
- 14) Technology Transfer Workshop for Household and Community Biogas System from Animal Wastes, supported by NRCT, Thailand (2014)
- 15) The Campaign for Energy User Protection, supported by the Energy Regulatory Commission of Thailand (2014)
- 16) Workshop on Solar Energy System for Buildings, supported by the Royal Thai Aide-De-Camp Department (2014)
- 17) EWG 06 2013A - APEC Smart DC Community Power Opportunity Assessment, supported by APEC Secretariat (2013)
- 18) The Promotion of Energy Awareness and Participation of Energy Regulations in Energy District 2 of Thailand, supported by the Energy Regulatory Commission of Thailand (2013)
- 19) The Promotion of Energy Awareness and Participation of Energy Regulations in Energy District 3 of Thailand, supported by the Energy Regulatory Commission of Thailand (2013)

- 20) The Promotion and Technology Transfer of Low-Cost Community Renewable Energy System, supported by NRCT, Thailand (2013)
- 21) The Installation of Solar Pumping System for Health Promotion Hospital in Kaojao Subdistrict, Pranburi District, Prajuabkirikan Province, supported by DuPont Co, Ltd. (Thailand) (2013)
- 22) The Promotion of Applied Energy Course for Non-formal and Vocational Education, supported by the Office of Permanent Secretary, Ministry of Energy, Thailand (2012)

### **Project Member**

- 1) Thailand's Directions for Social Innovation to Support Sustainable Development Goals, supported by Thailand National Innovation Agency (2018)
- 2) Recycle Road technology transfer to 4 regions of Thailand, supported by National Research Council of Thailand (2016).
- 3) EWG24 2015A - Case Studies on the Best Practice of Wind Energy Development in APEC Region, Vietnam Ministry of Industry and Trade, supported by APEC Secretariat (2015-2016)
- 4) The Conservation and Promotion of Renewable Energy in the Royal Initiated Area and the Royal Projects at Chiang Mai, Energy Conservation Fund, Ministry of Energy, Thailand (2015)
- 5) The Study of Renewable Energy Potential in the Northern Part of Thailand, supported PTT Company (2013)
- 6) Evaluating and Improving Online Data Collection System for Off-Grid Solar Monitoring Sites, supported by the Department of Alternative Energy Development and Efficiency, Ministry of Energy, Thailand (2010)

### **Expert/Committee**

- 1) Executive Committee of Thai Young Scientists Academy (TYSA), 2020-present
- 2) Executive Committee of Thailand Renewable Energy for Community Association (TREC-A), 2016-present
- 3) Coordinator for TRF-Global Funding Agencies Alliance Program (TRF-GFAA), supported by Thailand Research Fund (TRF), Thailand, 2015-2016
- 4) Expert for SEG 4 - Systems Evaluation Group - Low Voltage Direct Current Applications, Distribution and Safety for use in Developed and Developing Economies, International Electrotechnical Commission (IEC), 2015-2016
- 5) Expert for SEG 6 - Systems Evaluation Group - Non-Conventional Distribution Networks/ Microgrids, International Electrotechnical Commission (IEC), 2015-2016

### **Conference/Workshop Organizer and Committee**

- 1) ASEAN Bioenergy and Bioeconomy Conference, October 15, 2021, BITEC, Bangkok, Thailand, co-organized with Kasetsart University, KMUTT, and Informa Market. (Co-organizer)
- 2) APEC Workshop on Accommodating Disruptive Technology into RE&EE Policies for Energy Security, April 29-30, 2021, Virtual Workshop, supported by APEC Secretariat (Organizer)

- 3) The 1<sup>st</sup> APEC Workshop on Exploring Co-Benefit Opportunities for Renewable Energy and Energy Efficiency Projects in the APEC Region, March 18-29, 2021, Virtual-Hybrid Workshop, supported by APEC Secretariat (Co-Organizer)
- 4) Thailand-Japan Workshop on RE: Grid Stabilization, Smart City, January 25-26, 2021, Virtual Conference, supported by IEEJ, METI, Japan (Organizer)
- 5) ASEAN Bioenergy and Bioeconomy Conference: 2020 (ABB2020), September 24, 2020, BITEC, Bangkok, Thailand, (Co-Organizer)
- 6) The 1<sup>st</sup> International and National Conference on Smart Community Development in the Asia Pacific (iSCAP 2020 & nSCAP 2020), February 20-21, 2020, Chiang Mai, Thailand, (Organizer)
- 7) International Conference on Sustainable Agriculture, Food, and Energy (SAFE2019): “Green Agri-food Energy Production for a Better World in a Chiang Climate”, October 19-20, 2019, Phuket, Thailand, supported by the Asia Pacific Network for Sustainable Agriculture Food and Energy (SAFE NETWORK) (Co-Organizer)
- 8) 2019 APEC YES Challenge: Green Synergy Development and Applications- An Education Platform for STI to SMEs, Supported by APEC Research Center for Advanced Biohydrogen Technology (ACABT), March-August 2019 (Committee)
- 9) ASEAN Bioenergy and Bioeconomy Conference: 2019 (ABB2019), June 6, 2019, BITEC, Bangkok, Thailand, (Co-Organizer)
- 10) The 1<sup>st</sup> ICRU International Conference: Sustainable Community Development, February 18-20, 2019, the Empress Hotel, Chiang Mai, Thailand, supported by Chiang Mai Rajabhat University International Network (Organizing Committee)
- 11) Workshop on Exploring Opportunities for Water-Energy-Food Nexus Collaborative Program for Asia Pacific Region, January 21, 2019, Chiang Mai World Green City, Chiang Mai, Thailand, supported by Office of Naval Research (Organizer)
- 12) Thailand-Japan Green City Workshop 2019, February 4, 2019, Phatumwan Princess Hotel, Bangkok, Thailand, supported by the Institute of Energy Economics, Japan (IEEJ), (Co-Organizer)
- 13) The 4<sup>th</sup> ASEAN Smart Grid Congress (ASGC4), September 10-14, 2018, SGTech, Phitsanulok, Thailand, supported by Naresuan University and Office of Naval Research (Co-Organizer)
- 14) 2018 APEC-ACABT YES Challenge: Smart Power Management for Self-Sustained Green Community in APEC Region - An Education Platform for STI to SMEs, Supported by APEC Research Center for Advanced Biohydrogen Technology (ACABT), April-August 2018 (Committee)
- 15) International Workshop on Developing Smart Communities with Green Technology, February 4-6, 2018, Chiang Mai World Green City, Chiang Mai, Thailand, supported by the Asia Pacific Network for Sustainable Agriculture Food and Energy (SAFE NETWORK) (Co-Organizer)
- 16) ICGHIT 2018: International Conference on Green and Human Information Technology, “Workshop on Smart City & Farm”, January 31 – February 2, 2018, Hilton, Chiang Mai, Thailand, supported by the Institute of Electronics and Information Engineers, IEEE Seoul Section (Co-Organizer, International Advisory Committee)
- 17) The 2<sup>nd</sup> APEC Workshop on Small and Medium Photovoltaic System Database in the APEC Region, October 23, 2017, IEEJ, Tokyo, Japan, supported by the APEC Secretariat (Organizer)



- 18) ASEAN Smart Grid Congress 2, 8-10 November 2016, UiTM, Shah Alam, Malaysia, supported by ONRG (Co-organizer)
- 19) APEC Workshop on Small and Medium Photovoltaic System Database in the APEC Region, September 26-27, 2016, Chiang Mai World Green City, Chiang Mai, Thailand, supported by the APEC Secretariat
- 20) ASEAN Smart Grid Congress 1, 17-18 December 2015, University of Phayao, Phayao, Thailand, supported by ONRG (Co-organizer)

### **Training/ Facilitation/Moderator Experiences**

- Policy Brief Writing Training Workshop for ASEAN S&T Fellows, 18-20 May 2021, Virtual, hosted by ASEAN Foundation.
- The APEC Workshop - APEC Multi Stakeholder Dialogue on Promoting Renewable and Clean Energy (RCE) Policies, May 12-13, 2021, Virtual-Hybrid Hanoi, Vietnam, hosted by Ministry of Industry and Trade, Vietnam (Moderator)
- APEC Leadership Workshop: Inclusive Science Leadership Program for Early- and Mid-Career Researchers in APEC, 1, 2, 4, 5, 24, 25 March 2021, Virtual Online Training, hosted by Ministry of Higher Education, Science, Research and Innovation, endorsed by APEC Secretariat (Facilitator)
- Der Forscher 17<sup>th</sup> Webinar Lecture Series: ASEAN's Outstanding Women in Science "Health Care System", May 15, 2020 (Moderator)
- Impactfulness of Young Scientists by Thai Young Scientists Academy, PRE-COLLOQUIUM WORKSHOPS: Young Researchers Leadership Workshop for 2019 YOUNG SCIENTISTS NETWORK ASM (YSN-ASM) COLLOQUIUM "FUEL THE IMPACT!", 13 December 2019, Majestic II, Palace of the Golden Horses, Seri Kembangan, Selangor, Malaysia. (Facilitator)
- GYA-IAP Leadership Workshop at World Science Forum, 19-20 November 2019, Hungarian Academy of Science, Budapest, Hungary. (Facilitator)
- Facilitation Team Building for the Pioneer Science Leadership Program for Mid-Career Researchers in APEC, 29 July – 2 August 2019, Mandarin Hotel, Bangkok, Thailand. (Facilitator)

### **Keynote/Invited presentation/Panel/Meeting**

- 1) W. Setthapun, The Second UiTM-MSU Joint Colloquium: The Role of Universities in SDG13 on Climate Action, "Chiang Mai World Green City: Living Laboratory for Sustainable Energy Living", Webinar organized by Universiti Teknologi Mara, Malaysia, Management & Science University, 8 July 2020 (Invited)
- 2) W. Setthapun, ASEAN's Amazing Women in Science "The COVID-19 Pandemic and Climate Crisis", DER FORSCHER 22<sup>nd</sup> Webcast Lecture Series, 26 June 2020 (Invited)
- 3) W. Setthapun, "Direct and Indirect Energy Data Monitoring System for Smart Community," ASEAN Emerging Researchers Conference 2019, Sunway University, Malaysia 9 December 2019 (Invited)
- 4) W. Setthapun, "Application of Renewable Energy and Green Technology for Sustainable Community Development," The 16<sup>th</sup> Scientific Conference of Ho Chi Minh City University of Technology "Green and Smart Society", "University – Industry

Linkage towards Global University Ranking and Community Service Responsibility”,  
Ho Chi Minh City University of Technology, Viet Nam, 15 October  
2019 (Invited)

- 5) W. Setthapun, “Rural Village Electrification to Improve the Quality of Life based on Sufficiency Economy in Thailand,” APEC Workshop on Lessons Learned from Promotion Mechanism focused on Boosting Energy Solutions in Remote Area, Castro, Chile, 9-11 October 2019 (Invited)
- 6) W. Setthapun, “The Development of Smart Community from Renewable Energy and Green Technologies,” The 4<sup>th</sup> International Conference on Green Chemical Engineering and Technology, Melaka, Malaysia, 1-2 October 2019 (Keynote)
- 7) W. Setthapun, “Smart Community Development with Application of Renewable Energy and Data Platform,” APEC Workshop on Green Synergy Development and Application, Feng Chia University, Tai Chung, Taiwan, 6-7 September 2019 (Invited)
- 8) W. Setthapun, “Thailand’s Directions for Social Innovation,” 10<sup>th</sup> Year Anniversary Lunch Toward the Next Decade of Innovation organized by National Innovation Agency”, Bangkok, Thailand, 2 September 2019 (Invited)
- 9) W. Setthapun, “Application of Renewable Energy for Smart Community Development,” The 2<sup>nd</sup> International Conference on Industrial Technology for Sustainability Development, Myko Hotel, Makassar, Indonesia, 22 August 2019 (Keynote)
- 10) W. Setthapun, “Smart Community – Living Laboratory for Green Community Development,” Session 1: Technology Trend to promote the Bio-Circular-Green Economy, LES Thailand Annual Conference 2019, Hilton Sukhumvit Hotel, Bangkok, Thailand, 21 March 2019. (Invited)
- 11) W. Setthapun, “International Funding Opportunities & Challenges,” TRF-OHEC Annual Congress 2019, Chonburi, Thailand, 8 January 2019. (Invited)
- 12) W. Setthapun, “PV Microgrid/Smart Grid Systems Examples and Best Practices,” Workshop on PV Minigrid System for Rural Electrification, Myanmar Technological University, Hmawbi, The Republic of Union of Myanmar, 12 December 2018. (Invited)
- 13) W. Setthapun, “Community Development through Research,” ASEAN Emerging Researchers Conference, Sunway University, Malaysia, 4 December 2018.
- 14) W. Setthapun, “The Development of Smart Community from Renewable Energy and Green Technologies”, the 11th Regional Conference on Chemical Engineering 2018 (RCChE 2018) “Leveraging the Role of Chemical Engineering in Achieving Sustainable Development Goals through Natural Resource Based Industries,” AUN/SEEN-Net, Eastparc Hotel, Yogyakarta, Indonesia, 7-8 November 2018. (Keynote)
- 15) W. Setthapun, “Chiang Mai World Green City,” Isolated Power Systems Connect 2018, Maui, Hawaii, USA, 19 October 2018. (Invited)
- 16) W. Setthapun, “Special Session: Sharing experience about the ways and financing mechanism for the setting-up of the Chiang Mai World Green City,” The 4th ASEAN Smart Grid Congress (ASGC4), SGTech, Naresuan University, Phitsanulok, Thailand, 12 September 2018. (Invited)
- 17) W. Setthapun, “DC Microgrid systems and it is applications for Off-Grid Remote Regions – Case Study: Chiang Mai World Green City,” APEC Off Grid Electrification

- Option for Remote Regions in APEC Economies, Le’Meridian Hotel, Chiang Mai, Thailand, 10 September 2018. (Invited)
- 18) W. Setthapun, “Introduction to Smart Community – Living Laboratory at Chiang Mai World Green City,” APEC-ACABT YES Challenge “Smart Power Management for Self-Sustained Green Community in APEC Region”, APEC-ACABT, KMUTT, Bangkok, Thailand, 30 August 2018. (Invited)
  - 19) W. Setthapun, “The 1st Meeting of ERIA Research Project FY2017, Working Group on “Assessment of Electricity Storage Technology for Solar PV,” Economic Research Institute for ASEAN and East Asia (ERIA), The Institute of Energy Economics, Japan (IEEJ), Putrajaya, Malaysia, 23 February 2018. (Country Expert)
  - 20) W. Setthapun, “Progress toward SDG7: Sharing experiences from the ground Interactive Dialogues between panelists and participants,” Global SDG7 Conference, United Nation Department of Economic and Social Affairs, Thailand Ministry of Energy, UN ESCAP, Bangkok, Thailand, 21-22 February 2018. (Panel)

## Publications

- 1) Kumpanalaisatit, M., Setthapun, W., Sintuya, H. and Jansri S.N. (2021). Design and test of agri-voltaic system. *Turkish Journal of Computer and Mathematics Education*, 12(8), 2395-2404.
- 2) Visitthisath, K., Setthapun, W. and Jansri S.N. (2021). Vegetation structure diversity and value-added guideline corresponding to biodiversity for Phu Hung community forest, Thum Tong subdistrict, Mueang Nan sistrict, Nan province, Thailand. *Turkish Journal of Computer and Mathematics Education*, 12(8), 2739-2746.
- 3) Laodee, P., Setthapun, W., & Talungjit, N., and Sawatdeenarunat, C. (2019). The Combustion Characteristic of Biomass Stove with Air-Preheated by Porous Medium. *Asian Journal of Applied Research for Community Development and Empowerment*, 3(1), 1–3.
- 4) Sawetrattanakul, S., Jansri, S. N., Tantranont, N., & Setthapun, W. (2019). Appropriate guidelines of Waste Management for Keudchang Sub-district, Maetang District, Chiangmai Province, Thailand. *AJARCDE| Asian Journal of Applied Research for Community Development and Empowerment*, 3(1), 6-8.
- 5) Kumpanalaisatit, M., Jankasorn, A., Setthapun, W., Sintuya, H., & Jansri, S. N. (2019). The effect of space utilization under the ground-mounted solar farm on power generation. *AJARCDE| Asian Journal of Applied Research for Community Development and Empowerment*, 3(1), 14-16.
- 6) Tonsing M. & Setthapun W. (2019). Big Data Collection Procedure for On-site Monitoring System of Smart Community with PV Microgrid. *Journal of Renewable Energy and Smart Grid Technology (RAST)*, 14(1).
- 7) Tonsing M., Plangklang B., Rakwichian J., Setthapun W. (2019). DC Microgrid Hybrid System Modeling for Small Communities with PV and Diesel Generator. *Journal of Innovation and Business Management*, 8(1), 37-45.
- 8) Tanomkiat P., Sriprapha K., Sintuya H., Tantranont N., Setthapun W. (2019) The Development of Smart Farm with Environmental Analysis. In: Hwang S., Tan S., Bien F. (eds) *Proceedings of the Sixth International Conference on Green and Human*



- Information Technology. ICGHIT 2018. Lecture Notes in Electrical Engineering, vol 502. pp 210-214, Springer, Singapore.
- 9) Songkittirote N., Setthapun W., Sriprapha K., Ninsonti H. (2019) Development of DC Smart Plug Control System. In: Hwang S., Tan S., Bien F. (eds) Proceedings of the Sixth International Conference on Green and Human Information Technology. ICGHIT 2018. Lecture Notes in Electrical Engineering, vol 502. pp. 141-148, Springer, Singapore
  - 10) Chaisombat, P., Setthapun, W., Thanarak, P., & Sintuya, H. (2018). Biogas Grid for Agricultural Community in Mae Tha Sub-district, Mae On District, Chiang Mai, Thailand. Academic Journal: Uttaradit Rajabhat University, 13(2), 27-37. Retrieved from <https://www.tcithaijo.org/index.php/uruj/article/view/117519>
  - 11) Tanomkiat, P., Tantranont, N., Sintuya, H., & Setthapun, W. (2017). Solar-Powered Automatic Watering System from Soil Moisture. Journal of Renewable Energy for Community (J-REC), 1(1), 34-39.
  - 12) Mensin, P., Kijsanayothin, P., & Setthapun, W. (2017). Scalable Data Integration System using REST. Walailak Journal of Science and Technology, 14(4), 299-313.
  - 13) Kamching, R., Pattarapremcharoen, M., Nirunsin, S. & Setthapun, W., (2017). Spatial Mapping Analysis for Renewable Energy Agricultural Water System of Small Community Farm. IIRE International Journal of Renewable Energy, 12(2), 39-51.
  - 14) Poonpolsub, S., Jakrawatana, N., Pattarapremcharoen, M. and Setthapun, W. (2017). Carbon Footprint Reduction from Bangkok Urban Home Vegetable Garden. IIRE International Journal of Renewable Energy, 12(2), 75-86.
  - 15) Lakas, W., Setthapun, W., & Luckhiri, K. (2017). Process of Asphaltic Concrete Pavement Construction to Reduce Plastic Waste Problems in the Community. URU Journal, 12(1), 41-53.
  - 16) Nirunsin, R., Setthapun, W., Dussadee, N., & Ninsonti, H. (2017). Enhancement of Household Biogas Production by Solar Collector and Solar Greenhouse. IIRE International Journal of Renewable Energy, 12(1), 103-116.
  - 17) Pinngarm, P., Ninsonti, H., Pavasant, P., Jesdapipat, S., & Setthapun, W. (2017). Scenario Analysis for Green City Model: Case Study of Chiang Mai World Green City Model, Thailand. IIRE International Journal of Renewable Energy, 12(1), 23 - 36.
  - 18) Asadathorn, P., Rakwichian, W., Kusolsatit, T. and Setthapun, W. (2016). Development of growing media from sugar industrial waste. Research Journal-Rajamangala University of Technology Thanyaburi, 15(2), 14-21.
  - 19) Srikaew, S., Setthapun W., & Ninsonti, H. (2016). PV-Biodiesel Hybrid-DC Grid for Chiang Mai World Green City Community Model. Research Journal Rajamangala University of Technology Thanyaburi “Science and Technology”, 15(2), 7-13.
  - 20) Mensin, Y., Rakwichian, W., Setthapun, W., & Chokmaviroj, S. (2016). Development of a novel software to identify the real-time energy (kWh) flows among multiple loads and sources including renewables in a smart grid. Applied Mechanics and Materials, 839, 107-113.

### Conference Proceedings

- 1) Kumpanalaisatit, M., Setthapun, W., Sintuya, H. and Jansri, S.N. (2021). Design and Test of AgriVoltaic System. In ICTEMR-2021 (pp. 324-331). Thailand (online).

- 2) Visitthisath, K., Setthapun, W. and Jansri, S.N. (2021). Vegetation Structure Diversity and ValueAdded Guideline Corresponding to Biodiversity for Phu Hung Community Forest, Thum Tong Subdistrict, Mueang Nan District, Nan Province, Thailand. In ICTEMR-2021 (pp. 324-331). Thailand (online).
- 3) Paisanburapakul, S. and Setthapun, W. (2020). Community power plant success factor comparison. The 13<sup>th</sup> Thailand Renewable Energy for Community Conference (TREC-13). Thammasat University, Bangkok, Thailand, November 5-7, 2020, 371 – 379.
- 4) Songkittirote, N., Setthapun, W., Sripapa, K., & Sintuya, H. (2020). Development of Low-Cost Online Monitoring System for Home Energy Management Systems through Wi-Fi Network. The 13<sup>th</sup> Thailand Renewable Energy for Community Conference (TREC-13). Thammasat University, Bangkok, Thailand, November 5-7, 2020, 505-511.
- 5) Tanomkiet, P., Kuan, Y. D., Sriprapha, K., & Setthapun, W. (2020). The Design and Development of Smart Farm with Environmental Analysis. The 1<sup>st</sup> International Conference on Smart Community Development in the Asia Pacific (iSCAP 2020). Asian Development College for Community Economy and Technology, Chiang Mai Rajabhat University, Chiang Mai, Thailand, 21 Feb 2020, 107-111.
- 6) Sataklang, T., Sawetrattanakul, S., Kumpanalaisatit, M., and Setthapun, W. (2020), Monitoring and Relationship Analysis of Smart Community Data: Case study adiCET Smart Community. Proceedings of the 1st Smart City Conference, Naresuan University, Phitsanulok, Thailand, March 16-17, 2020.
- 7) Laodee, P., Talungjit, N., Setthapun, W., and Sawatdeenarunat, C. (2019), The effect of biomass stove configuration on thermal efficiency: A case study of double-wall stove. Proceeding of The 12<sup>th</sup> Thailand Renewable Energy for Community Conference (TREC-12). School of Renewable Energy and Smart Grid Technology, Narasuan University Phitsanulok, Thailand, November 6-8, pp. 296 – 302.
- 8) Laodee, P., Setthapun, W., Sawatdeenarunat, C., and Talungjit, N. (2019), The combustion characteristic of biomass stove with air-preheated by porous medium. Proceeding of the 7<sup>th</sup> International conference sustainable agriculture, Food and energy. Phuket, Thailand, October 18-21, pp. 45.
- 9) Kumpanalaisatit, M., Jankasorn, A., Setthapun, W., Sintuya, H., and Jansri, SN. (2019) The effect of space utilization under the ground-mounted solar farm on power generation. Proceedings of 7<sup>th</sup> International Conference on Sustainable Agriculture, Food and Energy (SAFE2019), Phuket. Thailand, October 18-21, 2019, pp. 47.
- 10) Sawetrattanakul, S., Jansri, N. S., Tantranont, N., and Setthapun, W. (2019). Appropriate guidelines of Waste Management for Keudchang Sub-district, Maetang District, Chiangmai province, Thailand. Proceedings of the 7<sup>th</sup> International Conference on Sustainable Agriculture, Food and Energy, Phuket, Thailand, October 18 – 21, 2019, pp. 52.
- 11) Aphichat, W., Songkittirote, N., Setthapun, W., Sintuya, H. (2019). Water monitoring and control system for PV water pump. 15<sup>th</sup> Conference on Energy Network of Thailand "Sustainable Energy Innovations" (E-NEET 15), Nakhon Ratchasima, Thailand, May 21-23. pp. EA0011-1-5
- 12) Tantranont, N., Rattanasuwansiri, I., Setthapun, W., Sawatdeenarunat, C. & Lo, Y.C. (2018). Sustainable Strategies for Green Restaurant Business: A Case Study of adiEAT, in the 2018 International Conference of Annual Meeting of the Operations Research Society of Taiwan. 16<sup>th</sup> Conference on Sustainable Operation and

- Development (pp. LIM006/1-4). Taiwan, R.O.C.: National Chin - Yi University of Technology.
- 13) Sintuya, H., Sintuya, P., Koombuaban, C., Kaewdang, S., Setthapun W. (2018). Inhibition Effect of Furfural on *Saccharomyces Cerevisiae* Growth in Relation to the Chemical Conversion of Waste Paper to Sugar. Proceedings of the Sixth Asian Conference on Innovative and Environmental Chemical Engineering (ASCON-IEEChE). Fleur de Chine, Sun Moon Lake, Taiwan, November 4-7, pp 459-464.
  - 14) Songkittirote, N., Setthapun, W., & Sintuya, H. (2018, December). Smart Plug Control System Development with MySQL Database and MQTT Protocol. In 2018 International Symposium on Computer, Consumer and Control (IS3C) (pp. 76-79). IEEE.
  - 15) Chaisombat, P., Pan-in, S., Setthapun, W., and Sintuya, H. (2018). Renewable energy potential assessment of Mae-Tha Sub-district, Chiang Mai, Thailand. Conference on Green Technology Engineering and Application (GTEA), Taichung, Taiwan, May 25, pp. IV2-1-4.
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  - 18) Tonsing, M., Rakwichian, J., Plangklang, B., & Setthapun, W. (2018). AC/DC Microgrid Hybrid System Modelling Comparison for Small Communities. 6<sup>th</sup> International Conference on Green and Human Information Technology (ICGHIT 2018). Holiday Inn Chiang Mai Hotel, Chiang Mai, Thailand, 31 Jan – 2 Feb 2018, 71-80.
  - 19) Potacharoen, W., Chulasak, R., & Setthapun, W. (2017). Production of RDF-5 from Shorea obtuse Wall Leaves as Renewable Energy to Reduce Haze Issues. The 10<sup>th</sup> Renewable Energy for Community Conference (TREC-10). Thaksin University, Pattalung Campus, Pattalung, Thailand, 29-30 November - 1 December 2017, 100-108.
  - 20) Tonsing M., Rakwichian, J., Plangklang, B., & Setthapun, W. (2017). AC Microgrid System Modelling for Small Communities. The 10<sup>th</sup> Renewable Energy for Community Conference (TREC-10). Thaksin University, Pattalung Campus, Pattalung, Thailand, 29-30 November - 1 December 2017, 593-600.

## Awards

- **ASEAN – U.S. Women in Science Prize (2016)**
- **ASEAN – U.S. Science and Technology Fellows:** ASEAN Secretariat and USAID (2015) with placement at Ministry of Energy, Thailand for 1 year
- **Visitor Support Program Grant:** Office of Naval Research, USA (2013)
- **Outstanding Student Presentation Award:** Michigan Catalysis Society, USA (2005)
- **Fulbright Scholarship:** Thailand-United States Educational Foundation, Open Competition (2001)

## Affiliations

- Thai Young Scientists Academy (TYSA)
- Thailand Renewable Energy for Community Association (TREC-A)
- Asian European Renewable Energy Cooperation Agency (AERECA)
- IEEE Power & Energy Society Member
- Postdoctoral Association at Argonne National Laboratory
- North American Catalysis Society (NACS)
- American Institute of Chemical Engineers (AIChE)
- Michigan Catalysis Society (MCS)
- Society of Women Engineers (SWE)