

KOTCHAKARN NANTASAKSIRI

E-mail address: kotchakarn.pond@gmail.com

Address: 287 m.1 Chok-charoen alley, Racthasima-chokchai road, Huatalee, Mueng, Nakhonratchasima 30000

TEL: +668-2085-1523



RESEARCH INTERESTS

- Land potential evaluation using ecological modelling (SWAT model)
- Land suitability analysis
- Life-cycle assessment
- Cost-benefit analysis
- Energy policy

EDUCATIONS

Osaka University (Osaka, Japan)

Doctoral of Philosophy in Sustainable energy and environmental engineering, 2022

- Thesis titled: "A multidisciplinary assessment framework of biomass energy plantation to support regional planning: A case study of Napier grass plantation in Thailand"

Thai-Nichi Institute of Technology

Master of Engineering in Engineering Technology, 2015

GPAX of 3.45/4.00

- Thesis titled: "A GIS-based potential evaluation of Napier grass plantation in Thailand"

Thai-Nichi Institute of Technology

Bachelor of Engineering in Automotive Engineering, 2014

GPAX of 3.15/4.00

- Thesis titled: "Design and Development of a Small-Scale Hot Press Machine for PEFCs Applications"

WORKING EXPERIENCES

- Teaching Assistant, Enhancing Technological Skills for Personnel in Automotive Industry, Suranaree University of Technology, Thailand, 2021
- Teaching Assistant, Electric Drive Train Design, Suranaree University of Technology, Thailand, 2021
- Research Assistant, Green Engineering for Global Environment lab, Osaka University, 2017-2018
- Lecturer (Part-time), Thai-Nichi Institute of Technology, 2014 – 2016
 - General Physics Laboratory, General Chemistry Laboratory, Engineering Drawing
- Research Assistant, Research Center for Advanced Energy Technology, Thai-Nichi Institute of Technology, 2014 – 2016

SKILLS

- **Language Proficiencies**
 - Thai – Native Language
 - English – Good (TOEIC 790/990)
- **Computer Skills**
 - ArcGIS
 - SWAT model
 - Microsoft Office (Word, Excel, PowerPoint)
 - CAD/CAE Software (CATIA, ANSYS)
 - SPSS

PUBLICATIONS

Refereed International Journals

- **Nantasaksiri, K.**, Charoen-amornkitt, P., Machimura, T. “The environmental and economic analysis of Napier-grass based power systems in Thailand””, (In preparation)
- **Nantasaksiri, K.**, Charoen-amornkitt, P., Machimura, T. Hayashi, K. “Multi-disciplinary assessment of Napier grass plantation on local energetic, environmental and socioeconomic industries: A watershed-scale study in Southern Thailand”, *Sustainability* 13(24), 13520, 2021.
- **Nantasaksiri, K.**, Charoen-amornkitt, P., Machimura, T. “Integration of multi-criteria decision analysis and GIS for site suitability assessment of Napier grass-based biogas power plant in Southern Thailand”, *Renewable and Sustainable Energy Transition* 1 (100011), 2021.
- **Nantasaksiri, K.**, Charoen-amornkitt, P., and Machimura, T. “Land Potential Assessment of Napier Grass Plantation for Power Generation in Thailand Using SWAT Model. Model Validation and Parameter Calibration”, *Energies* 14(5), 1326, 2021.
- Limjeerajarus, N., **Nantasaksiri, K.**, Nerdnoi, W. and Charoen-amornkitt, P. “Application of FEA to Design and Develop a Small-scale Hot Press Machine for PEFC MEA Application”, *International Energy Journal* 15, 43-56, 2015.

Refereed International/National Conferences

- **Nantasaksiri, K.**, Charoen-amornkitt, P., Machimura, T., and Hayashi, K. “Modeling Watershed Scale Impacts of Napier Grass Bioenergy Crop Cultivation on Water Resources and Quality Using SWAT Model”, *International Conference on Materials and Systems for Sustainability*, Japan, 2021
- **Nantasaksiri, K.**, Charoen-amornkitt, P., and Machimura, T. “GIS assessment and suitability analysis for Napier grass-based biogas power plant in southern Thailand”, *The 2nd International Conference on Science and Technology (SUT-IVCST 2021)*, Thailand, 2021
- **Nantasaksiri, K.**, and Machimura, T. “Application of SWAT model on Napier Grass Yield Prediction in Thailand”, *International Symposium on Agricultural Meteorology (ISAM2021)*, Japan, 2021
- **Nantasaksiri, K.**, Charoen-amornkitt, P., Ratpunpairaj, P., and Limjeerajarus, N. “Comparison of Multiple Regression Analyses for Napier Grass Dry Matter Yield Prediction”, *Proceedings of the 4th Joint Conference on Renewable Energy and Nanotechnology*, Japan, 2015
- Wongsuwan, W., Burapornpong, S., Supachutikul, P., Cherdkeattikul, S., **Nantasaksiri, K.**, and Chaichanawong, J. “Effect of Temperature on Properties of Biocoke from Soybean Residues” *Proceedings of the Advanced Technology in Experimental Mechanics Asian Conference*, Japan, 2015.
- **Nantasaksiri, K.**, Fakkao, M., Rakwatin, P., Limjeerajarus, N, “A GIS-based Potential Evaluation of Napier Grass Plantation in Sa Kaeo Province of Thailand” *Proceedings of the 3rd Joint Conference on Renewable Energy and Nanotechnology*, Thailand, 2014
- Chaithanee, N, Charoen-amornkitt, P, **Nantasaksiri, K.**, Limjeerajarus, N. “A 3-D Numerical Simulation of Temperature Distribution across the Contact Surface of a Small-scale Hot Press Machine”, *Proceedings of the 5th TSME International Conference of Mechanical Engineering*, Thailand, 2014
- Keawprachum, B, **Nantasaksiri, K.**, Charoen-amornkitt, P, Limjeerajarus, N. “Design and Development of a Small-scale Hot Press Machine for PEFC Membrane Electrode Assembly Application”, *Proceedings of the 5th TSME International Conference of Mechanical Engineering*, Thailand, 2014
- Limjeerajarus, N, Charoen-amornkitt, P, **Nantasaksiri, K.**, and Khanviboon, V. “Improvement of Computer Numerical Control Machining Process to Reduce Cycle Time of The Water Pump Body”, *The 4th TSME International Conference of Mechanical Engineering*, Thailand, 2013

- Limjeerajarus, N, **Nantasaksiri, K**, Charoen-amornkitt, P, and Khanviboon, V. "Improvement of Machining Process of Computer Numerical Control Machine to Reduce Cycle Time of Water Inlet Housing", The IE Network 2013, Thailand, 2013

SERVICE TO PROFESSION

- Reviewer, journal articles: Energy Science & Engineering

SCHOLARSHIP

- Rotary Yoneyama Memorial Scholarship 2016
- Scholarship granted by Thai-Nichi Institute of Technology covering tuition fees (Bachelor and master study)

TRAINING AND SEMINAR RECORDS

- Instrumental Analysts of PAI-NET, Thai-Nichi Institute of Technology, 2014
- Valve & Fitting Safety Seminar by Swagelok, Thai-Nichi Institute of Technology, 2014
- Tube Bending Seminar by Swagelok, Thai-Nichi Institute of Technology, 2014
- Introduction to Finite Element Analysis (FEA) Training Course with ANSYS 14.5, Thai-Nichi Institute of Technology, 2013
- Recent Technology on Electric Vehicle, Thai-Nichi Institute of Technology, 2012
- Building Techniques of Electric Vehicle and Solar Car for Competition, Thai-Nichi Institute of Technology, 2012

RESEARCH GRANTS

2016

- "A Study on Non-linear Relationship of Geographic factors and Napier Grass Yield and Determination of the Suitable Area for Napier Grass Plantation using GIS Techniques ", funded by Thai-Nichi Institute of Technology, Research Assistant, 2015–2016, 152,000 Baht.

2015

- "Design and Development of a Small-Scale Hot Press Machine for PEFC Applications", funded by Thai-Nichi Institute of Technology, Research Assistant, 2014–2015, 205,000 Baht.

REFERENCE PERSON (WITH PERMISSION)

Prof. Takashi MACHIMURA

Department of Sustainable energy and environmental engineering
Graduate School of Engineering, Osaka University
E-mail address: mach@see.eng.osaka-u.ac.jp

