Curriculum Vitae

Personal Data

-Name: Dr. Serm Janjai

- Date of birth: 31 May 1952
- Place of birth: Nakhon Pathom, Thailand
- Citizenship: Thai
- Address: 6/12 Ratchamankanai Road, Silpakorn University Campus, Nakhon Pathom 73000, Thailand, Tel. (66)-34-255758
- Email: serm.janjai@gmail.com

Affiliation

Department of Physics, Faculty of Science, Silpakorn University, Nakhon Pathom, Thailand, Tel. (66)-34-270761, Fax (66)-34-271189

Position

Professor

Education

- B.Sc. (Physics), Chulalongkorn University, Thailand, 1971-1975
- M.Sc. (Physics), Chulalongkorn University, Thailand, 1976-1978
- Doctorat de troisième cycle (Energétique), Université de Perpignan, France 1981-1985

Additional education / training

- Marie-Curie Post-Doctoral Fellowship of European Union, Hohenheim University, Germany, 1995
- UNESCO course on solar energy, Université de Perpignan, France 1982
- DAAD research fellowship, Hohenheim University, Germany, 1992
- Study and research visit, University of Tasmania, Australia, April-May, 1989
- Regional College on Microprocessors: Technology and Applications, University of Science and Technology, Hefie, People's Republic of China September-October, 1986

- Workshop on Materials Science and Physics of Non-conventional Energy Resources, International Center for Theoretical Physics, Trieste, Italy 29 August-17 September, 1993
- Wind Energy Analysis, Riso National Laboratory, Roskild, Denmark, 1-7 November, 2007

Scholarships

- Scholarship for master degree study from Ministry of University Affair of Thailand (1975-1977)
- Scholarship for doctoral degree study from the French Government (1981-1985)
- Scholarship for post-doctoral research from European Union (1995-1996)

Experience in Administration

- Associate Dean of the Faculty of Industrial Technology, Silpakorn University, 1992-1995

Foreign Language Abilities

- English
- French (Certificat Pratique de Langue Francaisé, Première degré, Université de Grenoble, Grenoble, France, 1982)
- German (basic) (Volkshochschule, Stuttgart, Germany, 1992)

Fields of Interest

- Atmospheric Physics (Solar radiation & Atmospheric remote sensing)
- Solar energy (Solar drying technology)

International Work

- Member of the Scientific Advisory Group on UV radiation of WMO (UV-SAG), 2003-present
- Coordinator of Silpakorn University in the Upland program of DFG (Germany), 2003-2012
- Coordinator of AERONET of NASA for Thailand and Laos (2012-present)
- Co-author of the ozone assessment 2010 of WMO (2010)

- Principal investigator of solar radiation mapping projects in Laos, Cambodia, Myanmar and Vietnam (2005-2015)
- Coordinator for the dissemination of "parabola dome dryer" in Asian countries (2014-present)

Research Experiences

Prof. Serm Janjai is the principal investigator of the following projects:

1) Correlation and statistical characteristic of diffuse and total solar radiation in Nakhon Pathom (Project funded by the Faculty of Science, Silpakorn University, 1986-1987)
2) Performance studies of an evacuated tubular solar collector (Project funded by the Faculty of Science, Silpakorn University, 1987-1988)
3) A drying model of longan and litchi (Project funded by the Faculty of Science, Silpakorn University, 1988-1989)
4) Performance study of a drying-storage system for paddy (Project funded by the National Research Council of Thailand, 1988-1990)
5) A study of mathematical models and statistical characteristic of diffuse and global solar radiation in Thailand (Project funded by the National Research Council of Thailand, 1994-1998)
6) Development of a solar radiation map using satellite data for Thailand (Funded by the Department of Energy Development and Promotion of Thailand, 1997-1999)
7) Development of solar monitoring station network for Thailand (Funded by Department of Energy Development and Promotion of Thailand, 1997-1999)
8) A study of solar ultraviolet radiation in Thailand (Project funded by Thailand Research Fund, 2002-2005)
9) A study of daylight models and its potential application of daylight for energy conservation in buildings of various regions in Thailand (Project funded by Institute of Research and Development of Silapkorn University, 2002-2003)
10) Development, demonstration and dissemination of solar crop dryers (Funded by Department of Alternative Energy Development and Efficiency, 2003-2004)
11) Development of daylight potential maps and database from satellite data for Thailand (Funded by Department of Alternative Energy Development and Efficiency, 2003-2004)

12) Development of drying technology for mountainous areas of Northern Thailand (Collaborative Research project between Hohenheim University, Chiang Mai University and Silpakorn University, funded by Research Council of Germany (DFG), 2003-2012)
13) Handbook of solar radiation and climatic data for renewable energy applications (Funded by Department of Alternative Energy Development and Efficiency, 2004-2005)
14) A study of the sky luminance angular distribution in Thailand for energy conservation applications in buildings (Project funded by Institute of Research and Development of Silpakorn University, 2005-2006)
15) Development and demonstration of solar drying systems for drying timber and rattan (Funded by Department of Alternative Energy Development and Efficiency, 2005-2006)
16) Potentials of concentrating solar power technologies in Thailand (Funded by Department of Alternative Energy Development and Efficiency, 2005-2006)
17) Assessment of solar energy potentials for Lao People's Democratic Republic (Funded by Department of Alternative Energy Development and Efficiency, 2006-2007)
18) Development and demonstration of solar drying technologies for Lao People's Democratic Republic (Funded by Department of Alternative Energy Development and Efficiency, 2007)
19) Investigation of direct radiation in Thailand (Funded by Department of Alternative Energy Development and Efficiency, 2007)
20) Assessment of solar energy potentials for Cambodia (Funded by Department of Alternative Energy Development and Efficiency, 2007-2008)
21) Investigation of the effect of aerosols on climate change in Thailand (Research project funded by Thailand Research Funded, 2007-2009)
22) Assessment of solar energy potentials for Myanmar (Funded by Department of Alternative Energy Development and Efficiency, 2008-2009)
23) Assessment of wind energy potential for Cambodia (Funded by Department of Alternative Energy Development and Efficiency, 2006)
24) Development of wind energy maps for Thailand (Funded by Department of Alternative Energy Development and Efficiency, 2009)

25) Revision of solar radiation maps of Thailand (Funded by Department of Alternative Energy Development and Efficiency, 2010)
26) Greenhouse solar crop dryer (Project funded by the Thailand Research Fund, 2010)
27) Assessment of off-shore wind farm in Thailand (Funded by Department of Alternative Energy Development and Efficiency, 2011)
28) A study of photosynthetically active radiation over Thailand from satellite data (Project funded by Institute of Research and Development of Silpakorn University, 2011)
29) A pilot project on the promotion of greenhouse solar dryers for Communities (Funded by Department of Alternative Energy Development and Efficiency, 2011-2014)
30) Revision of the handbook of solar radiation and climatic data for renewable energy applications (Funded by Department of Alternative Energy Development and Efficiency, 2012)
31) Generation of microscale wind maps for promotion wind energy utilization in Thailand (Funded by Department of Alternative Energy Development and Efficiency, 2012)
32) A study of solar infrared radiation over Thailand by using satellite data. (Project funded by Institute of Research and Development of Silpakorn University, 2012)
33) Rainfall estimation from satellite data over Thailand and Southwestern China (Project funded by the Thailand Research Fund, 2014)
34) Solar radiation maps of Vietnam from satellite data (Project funded by Office of the Naval Research Global (ONRG), USA, 2015)
35) Investigation of physical properties of cloud in Thailand (Project funded by the Thailand Research Fund, 2015)
36) Promotion of greenhouse type solar dryers for banana drying community (Funded by Department of Alternative Energy Development and Efficiency, 2015)
37) An investigation of the potential for the utilization of domestic solar water heating system in Thailand (Funded by Department of Alternative Energy Development and Efficiency, 2016)
38) A study of atmospheric ozone over Thailand (Project funded by Institute of Research and Development of Silpakorn University, 2016)
39) Development of a large-scale solar dryer for drying medicinal plants (Funded by Department of Alternative Energy Development and Efficiency, 2016)

40) Development of laboratory for calibration of solar radiation measuring instruments (Funded by Department of Alternative Energy Development and Efficiency, 2016)
41) Investigation of potential area for installation of roof top PV on factory buildings (Funded by Department of Alternative Energy Development and Efficiency, 2016)
42) Development of heat storage system using phase changed material for greenhouse solar dryer (Funded by Department of Alternative Energy Development and Efficiency, 2016)
43) Development of solar dryer for drying banana in Phetchaburi (Project funded by Thailand Research Fund and Silpakorn Univeristy, 2016)
44) Investigation of atmospheric water vapour in Thailand (Project funded by Thailand Research Fund, 2016)
45) Revision of solar radiation map from satellite data of Thailand (Funded by Department of Alternative Energy Development and Efficiency, 2017)
46) Development of typical meteorological data set for Thailand (Funded by Ministry of Energy, 2017)
47) Development of a large-scale solar dryer for drying rubber sheet with a control system (Funded by Department of Alternative Energy Development and Efficiency, 2019)
48) Development of a large-scale solar dryer for drying banana equipped with monitoring and control systems via internet (Funded by Department of Alternative Energy Development and Efficiency, 2019)
49) An investigation of tropical expansion in Great Mae Klong Sub-region (GMS) (Project funded by Thailand Research Fund, 2019-2022)

Patent

- Prof. Serm Janjai obtained the patent on the invention of a solar dryer for tropical fruits from the Department of Intellectual Property of Thailand, patent number 10041, February, 1996.

Book

1. Solar Radiation, Department of Physics, Faculty of Science, Silpakorn University, 2014 (in Thai)
2. Solar Drying Technology, Department of Physics, Faculty of Science, Silpakorn University, 2017 (in Thai)

Book chapters

1. **Janjai S.,** Generation of Solar Radiation Maps from Long-Term Satellite Data, in V. Badescu (editor): "Recent Advances in Modeling Solar Radiation on Earth Surface" Springer, Berlin (2008)
2. **Janjai S.,** A Solar Crop Drying System with Roof-integrated Solar Collectors: Experimental and Modelling Performance, in F. Columbus (editor): "Solar Collectors: Energy Conservation, Design and Applications" NOVA Science, New York, USA (2009)
3. Bala B.K., **Janjai S.,** Solar Drying Technology: Potentials and Developments, in M.A. Uqaili and H. Khanji (editors): "Energy, Environment and Sustainable Development", Springer, Vienna (2011)
4. Wattan R., **Janjai S.,** Development of a Luminous Efficacy ModelUsing Ground and Satellite-Based Data from the Tropics, In Sayigh (editor): "Renewable Energy in the Service of Mankind Vol I, pp 569-576" Springer (2014)

Award /recognition

- National outstanding researcher in Physics of National Research Council of Thailand for the year 2017
- Emeritus Professor of Silpakorn University
- Recognition to be World's Top 2% Scientists (in Energy Research) by Stanford University, 2020.

Publication in peer review journals

Prof. Dr. Serm Janjai have been doing research in two fields namely, solar energy and atmospheric science and his publications in the two fields are as follows:

- **Solar Energy**

1. Guevezov, V., **Janjai, S.,** Daguenet, M. Analyse Théorique comparative des systèmes de séchage solaire du tabac Virginie -I. Analyse de système comportant des insolateur à air. **Annales du Tabac** 19: 123-141, 1985 (in French)
2. **Janjai**, **S.**, Guevezov, V., Daguenet, M. Analyse Théorique comparative des systèmes de séchage solaire du tabac Virginie -I. Analyse de système comportant des insolateur à eau. **Annales du Tabac** 19: 143-156, 1985 (in French)

3. **Janjai**, **S.,** Guevezov, V., Daguenet, M. Technico-economical feasibility of solar-assisted Virginia tobacco curing. **Drying Technology** 4(4), 605-632, 1986
4. Hirunlabh, J., Keovimol, S., **Janjai**, **S.,** Khedari, J., Daguenet, M., Elegant, L. Méthode graphique de dimensionnement de la surface d'insolateur assurant à la couverture solaire d'um séchoir à chauffage partiellement solaire, une valeur choisie, **COMPLES** 1, 2-7, 1990 (in French)
5. **Janjai**, **S.,** Esper, A., Mühlbauer, M. Modelling the performance of a large area plastic solar collector, **Renewable Energy** 21,363-376, 2000
6. **Janjai**, **S.,** Esper, A., Mühlbauer, W. A procedure for determining the optimum collector area for a solar grain dryer, **Renewable Energy** 4(4), 409-416, 1994
7. Schirmer, P.**,** **Janjai**, **S.,** Esper, A., Smittabhindu, R., Mühlbauer, W. Experimental investigation of the performance of the solar tunnel dryer for drying bananas, **Renewable Energy** 15(4), 186-192, 1996
8. Bala, B. K., Mondol, M.R.A., Biswas, B. K., Das Chowdury, B. L., **Janjai**, **S.** Solar drying of pineapple using solar tunnel drier, **Renewable Energy** 28, 183-190, 2003
9. **Janjai**, **S.,** Laksanaboonsong, J., Nunez M., Thongsathiya, A. Development of a method for generating operational solar radiation maps from satellite data for a tropical environment, **Solar Energy** 78, 739-751, 2005
10. **Janjai**, **S.,** Tung, P. Performance of a solar dryer using hot air from roof-integrated solar collectors for drying herbs and spices, **Renewable Energy** 30 (14), 2085-2095, 2005
11. Bala, B.K., Ashraf, M.A., Uddin, M.A., **Janjai**, **S.** Experimental and neural network prediction of the performance of a solar tunnel drier for drying jackfruit bulbs and leather, **Journal of Food Process Engineering** 28, 552-566, 2005
12. Bala, B.K., **Janjai**, **S.** Solar drying of fish (Bombay Duck) using solar tunnel dryer, **Journal of International Energy** 6 (2), 91-102 , 2005
13. **Janjai**, **S.,** Bala, B.K., Tohsing, K., Mahayothee, B., Haewsungcharern, M., Mühlbauer, W., Müller, J. Equilibrium Moisture Content and Heat of Sorption of Longan (Dimocarpus longan Lour.) **Drying Technology**, 24, 1691–1696, 2006
14. **Janjai**, **S.,** Keawprasert, T. Design and Performance of a Solar Tunnel Dryer with a Polycarbonate Cover, **International Energy Journal** 7(3), 187-194, 2006

15. **Janjai**, **S.,** Bala, B.K., Lumlert, N., Mahayothee, B., Haewsungcharern, M., Mühlbauer, W., Müller, J. Moisture diffusivity determination of different parts of longan fruit, **International Journal of Food Properties** 10, 471–478, 2007
16. **Janjai**, **S.,** Khamvongsa, V., Bala, B.K. Development, Design, and Performance of a PV-Ventilated Greenhouse Dryer, **International Energy Journal** 8, 249-258, 2007
17. **Janjai**, **S.,** Bala, B.K., Tohsing, K., Mahayothee, B., Haewsungcharern, M., Müller, J. Moisture sorption isotherms and heat of sorption of longan (*Magnifera Indica* L. cv. NAM DOK MAI), **International Agricultural Engineering Journal** 16(3-4), 159-168, 2007
18. **Janjai**, **S.,** Tohsing, K., Bala, B.K. Moisture sorption isotherms of lincheu mushroom (Ganoderma lucidum), **Food Science and Technology Research** 13(4), 315-320, 2007
19. **Janjai**, **S.,** Srisittipokakun, N., Bala, B.K. Experimental and modelling performances of a roof-integrated solar drying system for drying herbs and spices, **Energy** 33, 91-103, 2008
20. Smitabhindu, R., **Janjai**, **S.,** Chankong, V. Optimization of a solar-assisted drying system for drying bananas, **Renewable Energy** 33, 1523-1531, 2008
21. **Janjai**, **S.,** Lamlert, N., Intawee, P., Mahayothee, B., Haewsungcharern, M., Bala, B.K., Müller, J. Finite element simulation of drying of mango, **Biosystems Engineering** 99, 523-531, 2008
22. **Janjai**, **S.,** Lamlert, N., Intawee, P., Mahayothee, B., Haewsungcharern, M., Bala, B.K., Nagle, M., Müller, J. Finite element simulation of drying of longan, **Drying Technology** 26, 666-674, 2008
23. Smitabhindu, R., **Janjai**, **S.** An Investigation of the performance of a solar-assisted drying system for drying bananas, **Journal of Research in Engineering and Technology** 5 (1), 73-80, 2008.
24. Nagle, M. Gonzalez-Azcarraga, J.C., Phupaichitkun, S., Mahayothee, B., Haewsungcharern, M., **Janjai**, **S.,** Leis, H., Müller, J. Effects of operating practices on performance of a fixed-bed convection dryer and quality of dried longan, **International Journal of Food Science and Technology** 43, 1979–1987, 2008

25. **Janjai**, **S.,** Deeyai, P. Comparison of methods for generating typical meteorological year using meteorological data from a tropical environment, **Applied Energy** 86, 528-537, 2009
26. Roman, F., Nagle, M., Leis, H., **Janjai**, **S.,** Mahayothee, B., Haewsungcharoen, M., Müller, J. Potential of roof-integrated solar collectors for preheating air at drying facilities in Northern Thailand, **Renewable Energy** 34, 1423–1429, 2009
27. **Janjai**, **S.,** Intawee, P., Tohsing, K., Mahayothee, B., Bala, B.K., Ashraf, M.A., Müller, J. Neural network modeling of sorption isotherms of longan (*Dimocarpus longan* Lour.), **Computers and Electronics in Agriculture** 66, 209-214, 2009
28. **Janjai**, **S.,** Lamlert, N., Intawee, P., Mahayothee, B., Boonrod, Y., Haewsungcharern, M., Bala, B.K., Nagle, M., Müller, J. Solar Drying of Peeled Longan Using a Side Loading Type Solar Tunnel Dryer: Experimental and Simulated Performance, **Drying Technology** 27, 595-605, 2009
29. **Janjai**, **S.,** Pankaew, P., Laksanaboonsong, J. A model for calculating hourly global solar radiation from satellite data in the tropics, **Applied Energy** 86, 1450-1457, 2009
30. Mahayothee, B., Udomkun, P., Nagle, M., Haewsungcharoen, M., **Janjai**, **S.,** Müller, J. Effects of pretreatments on colour alterations of litchi during drying and storage, **European Food Research and Technology** 229, 329-337, 2009
31. **Janjai**, **S.,** Lamlert, N., Intawee, P., Mahayothee, B., Bala, B.K., Nagle, M., Müller, J. Experimental and simulated performance of a PV-ventilated solar greenhouse dryer for drying of peeled longan and banana, **Solar Energy** 83, 1550-1565, 2009
32. **Janjai**, **S.,** Mahayothee, B., Lamlert, N., Bala, B.K., Precoppe, M., Nagle, M., Müller, J. Diffusivity, shrinkage and simulated drying of litchi fruit (Litchi Chinensis Sonn.), **Journal of Food Engineering** 96, 214-221, 2010
33. **Janjai**, **S.,** Tohsing, K., Bala, B.K., Müller J., Mühlbauer, W. Measurement and modeling of moisture sorption isotherms of litchi (Litchi Chinensis Sonn, **International Journal of Food Properties** 13, 251-260, 2010
34. **Janjai**, **S.** A method for estimating direct normal solar irradiation from satellite data for a tropical environment, **Solar Energy** 84, 1685–1695, 2010
35. Nagle, M., Azcarraga, J.C.G., Mahayothee, B., Haewsungcharern, M., **Janjai**, **S.,** Müller, J. Improved quality and energy performance of a fixed-bed longan dryer

by thermodynamic modifications, **Journal of Food Engineering** 99, 392–399, 2010

36. Nagle, M., Mahayothee, B., Rungpichayapichet, P., **Janjai**, **S.,** Müller, J. Effect of irrigation on near-infrared (NIR) based prediction of mango maturity, **Scientia Horticulturae** 125, 771–774, 2010
37. **Janjai**, **S.,** Intawee, P., Kaewkiew, J. A Solar Timber Drying System: Experimental Performance and System Modeling, **International Energy Journal** 11, 131-144, 2010
38. Precoppe, M., Nagle, M., **Janjai**, **S.,** Mahayothee, B., Müller, J. Analysis of dryer performance for the improvement of small-scale litchi processing, International **Journal of Food Science and Technology** 46, 561–569, 2011
39. **Janjai**, **S.,** Intawee, P., Kaewkiew, J., Sritus, C., Khamvongsa, V. A large-scale solar greenhouse dryer using polycarbonate cover: Modeling and testing in a tropical environment of Lao People's Democratic Republic, **Renewable Energy** 36 1053-1062, 2011
40. **Janjai**, **S.,** Pankaew, P., Laksanaboonsong, J., Kitichantaropas, P. Estimation of solar radiation over Cambodia from long-term satellite data, **Renewable Energy** 36, 1214-1220, 2011.
41. **Janjai**, **S.,** Precoppe, M., Lamlert, N., Mahayothee, B., Bala, B.K., Nagle, M., Müller, J. Thin-layer drying of litchi (*Litchichinensis* Sonn.), **Food and Bioproducts Processing** 89, 194-201, 2011.
42. **Janjai**, **S.,** Lamlert, N., Mahayothee, B., Bala, B.K., Precoppe, M., Müller, J. Thin Layer Drying of Peeled Longan *(Dimocarpus longan Lour.)*, **Food Science and Technology Research** 17(4), 279-288, 2011
43. Intawee, P.**,** **Janjai**, **S.** Performance evaluation of a large-Scale polyethylene covered greenhouse solar dryer, **International Energy Journal** 12, 39-52, 2011
44. **Janjai**, **S.,** Lamlert , N., Mahayothee, B., Sruamsiri, P., Precoppe, M., Bala, B.K., Müller**,** J. Experimental and Simulated Performances of a Batch Type Longan Dryer with Air Flow Reversal Using Biomass Burner as a Heat Source**, Drying Technology** 29, 1439-1451**,** 2011
45. **Janjai**, **S.,** Sricharoen, K., Pattarapanitchai, S. Semi-empirical models for the estimation of clear sky solar global and direct normal irradiances in the tropics, **Applied Energy** 88, 4749–4755, 2011

46. **Janjai**, **S.,** Laksanaboonsong, J., Seesaard**,** T. Potential application of concentrating solar power systems for the generation of electricity in Thailand, **Applied Energy** 88, 4960–4967, 2011
47. Nagle, M., Habasimbi, K., Mahayothee, B., Haewsungcharern, M., **Janjai, S.,** Müller, J. Fruit processing residues as an alternative fuel for drying in Northern Thailand, **Fuel** 90(2), 818-823, 2011.
48. **Janjai, S.,** Pattarapanitchai, S., Laksanaboonsong, J. An Improved Model for the Estimation of Solar Radiation from Satellite Data for Thailand**, Journal of the Institute of Engineering** 8 (3), 130–139**,** 2012
49. Nilnont, W., Thepa, S., **Janjai, S.,** Kasayapanand, N., Thamrongmas, C., Bala B.K. Finite element simulation for coffee (*Coffea arabica*) drying, **Food and Bioproducts Processing** 90, 341–350, 2012
50. Promsen, W., Masiri, I., **Janjai S.** Development of microscale wind maps for Phaluay Island, Thailand, **Procedia Engineering** 32, 369-375, 2012
51. Pattarapanitchai, S., **Janjai S.** A semi-empirical model for estimating diffuse solar irradiance under a clear sky condition for a tropical environment**, Procedia Engineering** 32, 421-426, 2012
52. Kaewkiew, J., Nabnean, S., **Janjai, S.** Experimental investigation of the performance of a large-scale greenhouse type solar dryer for drying chilli in Thailand, **Procedia Engineering** 32, 433-439, 2012
53. Promsen,W., Masiri, I., **Janjai, S.** Development of microscale wind maps for Phaluay Island, Thailand, **Procedia Engineering** 32, 369-375, 2012
54. **Janjai, S.,** Bala, B.K. Solar Drying Technology, **Food Engineering Reviews** 4, 16-54, 2012.
55. **Janjai, S.,** A greenhouse type solar dryer for small-scale dried food industries: Development and dissemination, **International Journal of Energy and Environment** 3(3), 383-398, 2012
56. **Janjai, S.,** Diffuse - global correlation models at four locations in Thailand**, International Journal of Renewable Energy** 7, 11-21, 2012.
57. **Janjai, S.,** Masiri, I., Laksanaboonsong, J., Satellite-derived solar resource maps for Myanmar**, Renewable Energy** 53, 132-140, 2013
58. **Janjai, S.,** Masiri, I., Pattarapanichchai, S., Laksanaboonsong, J., Mapping global solar radiation from long-term satellite data in the tropics using an improved model, **International Journal of Photoenergy** 2013, ID 210159, 1-11, 2013

59. **Janjai, S.,** Masiri, I., Promsen, W., Pattarapanitchai, S., Pankaew, P., Laksanaboonsong, J., Bischoff-Gauss, I., Kalthoff, K., Evaluation of wind energy potential over Thailand by using an atmospheric mesoscale model and a GIS approach. **Journal of Wind Engineering and Industrial Aerodynamics** 129, 1–10, 2014
60. Precoppe, M., Nagle, M., Mahayothee, B., Udomkun, P., **Janjai, S.,** Müller, J. Optimal physicochemical properties of dried litchis for Thai consumers. **Int J Agric & Biol Eng** 7, 103-110, 2014
61. **Janjai, S.,** Phusampao, C., Nilnont, W., Pankaew, P. Experimental performance and modeling of a greenhouse solar dryer for drying macadamia nuts. **International Journal of Scientific & Engineering Research** 5(6), 1155-1161, 2014
62. Precoppe, M., **Janjai, S.,** Mahayothee, B., Müller, J. Batch uniformity and energy efficiency improvements on a cabinet dryer suitable for smallholder farmers. J **Food Sci Technol**, DOI 10.1007/s13197-014-1544-y
63. **Janjai, S.,** Piwsaoad, J., Nilnont, W., Pankaew, P. Experimental Performance and Neural Network Modeling of a Large-scale Greenhouse Solar Dryer for Drying Natural Rubber Sheets, **Journal of Control Science and Engineering** 1, 48-53, 2015
64. Udomkun, P., Argyropoulos, D., Nagle, M., Mahayothee, B., **Janjai, S.,** Müller, J., Single layer drying kinetics of papaya amidst vertical and horizontal airflow. **LWT - Food Science and Technology** 64 , 67-73, 2015
65. Wattan, R., **Janjai, S.,** An investigation of the performance of 14 models for estimating hourly diffuse irradiation on inclined surfaces at tropical sites. **Renewable Energy** 93 667-674, 2016
66. Nabnean, S., **Janjai, S.,** Thepa, S., Sudaprasert, K., Songprakorp, R., Bala, B.K. Experimental performance of a new design of solar dryer for drying osmotically dehydrated cherry tomatoes. **Renewable Energy** 94, 147-156, 2016
67. Nabnean, S., Thepa, S., **Janjai, S.,** Bala, B.K. Drying kinetics and diffusivity of osmotically dehydrated cherry tomatoes. **Journal of Food Processing and** Preservation DOI: 10.1111/jfpp.12735, 2016
68. Pankaew, P., **Janjai, S**., Nilnont, W., Phusampao,C., Bala, B.K. Moisture desorption isotherm, diffusivity and finite element simulation of drying of

macadamia nut (Macadamia integrifolia). **Food and Bioproducts Processing** 100, 16–24, 2016.

69. Aumporn, O., Zeghmati, B.,Chesneau, X., **Janjai, S.,** Numerical study of a solar greenhouse dryer with a phase-change material as an energy storage medium. **Heat Transfer Research** 49(6), 509–528, 2018.
70. Tohsing, K., **Janjai, S**., Lamlert, N., Mundpookhier, T., Chanalert, W., Bala, B. K., Experimental performance and artificial neural network modeling of solar drying of litchi in the parabolic greenhouse dryer. **Journal of Renewable Energy and Smart Grid Technology** 13, 1-12, 2018.
71. Pankaew, P., Aumporn, O., **Janjai, S.**, Mundpookhier, T., Bala, B. K., Performance of parabolic greenhouse solar dryer equipped with rice husk burning system for banana drying. **Journal of Renewable Energy and Smart Grid Technology** 14(1), 52-65, 2019
72. López-Cerino, I., López-Cruz, I.L., **Janjai, S.,** Mahayothee, B., Nagle, M., Müller, J., Mathematical modelling of the thin layer drying of pineapple (Ananas comosus, L.): experiment at village-scale in a greenhouse type solar dryer. **Ingeniería Investigación y Tecnología**, April-June, 1-10, 2019
73. Mahayothee, B., Thamsala, T., Khuwijitjaru, P., **Janjai, S.**, Effect of drying temperature and drying method on drying rate and bioactive compounds in cassumunar ginger (Zingiber montanum). **Journal of Applied Research on Medicinal and Aromatic Plants** 18, 1-10, 2020
74. Pankaew, P., Aumporn, O., **Janjai, S**., Pattarapanitchai, S., Sangsan, M., Bala, B. K., Performance of a large-scale greenhouse solar dryer integrated with phase change material thermal storage system for drying of chili. **International Journal of Green Energy**, 1-12, https://doi.org/10.1080/15435075.2020.1779074, 2020

- **Atmospheric science**

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