CURRICULUM VITAE
SARINNAPAKORN, Kanoksri

I. PERSONAL

Name:	SARINNAPAKORN, Kanoksri
E-mail:	kanoksri@hii.or.th
Position:	Researcher,
	Acting Head of Climate and Weather Section,
	Acting Head of Hydro Data Science Section,
	Hydro-Iinformatics Innovation Division,
	Hydro-Informatics Institute (Public Organization)
Office Address:	901 Ngam Wong Wan Rd., Ladyao, Chatuchak, Bangkok 10900, Thailand
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II. HIGHER EDUCATION

Institution	Degree Awarded	Year Conferred	Program of Study
University of Miami, FL, USA	Ph.D.	2007	Electrical and Computer Engineering
Fairleigh Dickinson University, NJ, USA	M.S.	2002	Computer Science
Kasetsart University,Thailand	M.S.	1997	Statistics
Kasetsart University,Thailand	B.S.	1990	Statistics

III. EXPERTISE/RESEARCH INTEREST

- o Geospatial data science for climate and weather research
- o Weather and seasonal climate prediction and modeling
- o Data mining, machine learning, and advanced statistical analysis
- o Data quality management in hydro-meteorological research
- o Developing meteorological and hydrological early warning systems

IV. PROFESSIONAL HISTORY

2017 – Present	Researcher, Acting Head of Climate and Weather Section and Acting Head of Hydro Data Science, Hydro-Informatics Innovation Division, Hydro-Informatics Institute, Thailand
2011 - 2017	Researcher, Hydro-Informatics Division, Hydro and Agro Informatics Institute, Thailand
2008 - 2011	Database Analyst/Manager, Behavioral Medicine Research Center Psychology Department, University of Miami, USA
2003 - 2007	Research Assistant, Behavioral Medicine Research Center Psychology Department, University of Miami, USA
2004 - 2005	Research Assistant, Electrical and Computer Engineering Department, University of Miami, USA
2001 - 2002	Research/Teaching Assistant, Computer Science Department, Fairleigh Dickinson University, USA
1995 - 2000	Supervisor/Senior Supervisor, Thai Airways International PCL., Thailand
1991 - 1994	Systems Analyst, Micronetic PCL., Thailand
1990 - 1991	Programmer Analyst, Royal Rainmaking R&D Institute, Thailand Under a special project supported by U.S. Agency for International Development (USAID)

V. ACADEMIC SERVICES

2023	Master's Thesis Committee, Computer Engineering Department, Chulalongkorn University, 1 student
	Doctoral Committee, the King Mongkut's University of Technology Thonburi, 2 students

2019	Special Instructor, "Data Science and Data Engineering," Computer Engineering Department, Chulalongkorn University, Bangkok, Thailand
2016	Doctoral Committee, Computational Science, Walailak University, 1 student
2015-2016	Master's Thesis Committee, the King Mongkut's University of Technology Thonburi, 5 students
2010	Instructor, Short Course "SAS Programming for Researchers," Statistics Department, Kasetsart University, Bangkok, Thailand
2008-2010	Reviewer - IEEE Transactions on Knowledge and Data Engineering (TKDE)
2008	Instructor, Short Course "Data Management in SAS for Advanced Data Analysis," Statistics Department, Kasetsart University, Bangkok, Thailand
2008	Special Lecturer, Graduate Course "Statistical Data Mining," Statistics Department, Kasetsart University, Thailand

VI. PROFESSIONAL TRAINING

- o Second Workshop of the ASEAN Regional Climate Data, Analysis and Projections Series (ARCDAP-2) Workshop, 25-29 March 2019, Singapore
- o COAWST Modeling System Training, 25-28 February 2019, North Carolina State University - Raleigh, North Carolina, USA
- o International Lecture Course on Atmospheric Aerosol, 25-27 September 2016, Organized by CAS-TWAS-WMO, IAP, ICCES, Peking University, Beijing, China.
- o COAWST Modeling System Training, 15-19 August 2016, Woods Hole Oceanographic Institution Quissett Campus Woods Hole, MA, USA
- o Data Assimilation Summer School, 1-3 July 2015, Organized by CAS-TWAS-WMO, IAP, ICCES, Peking University, Beijing, China.
- o Seasonal Forecasting using Climate Predictability Tools (CPT), International Research Institute for Climate and Society, 12-16 January 2015, Organized by Center of Excellence for Climate Change Knowledge Management (CCKM), Geo-Informatics and Space Technology Development Agency (GISTDA), Thai Research Fund (TRF), Thailand and Asian-Pacific Network for Global Change Research (APN).
- o APCC Training Program on "Producing High Resolution Climate Information and its Application Using Downscaling Schemes," 25-30 August 2014, Organized by APEC Climate Center (APCC), Busan, Korea.
- o WRF and WRFDA Tutorial, 21 July - 1 August 2014, Organized by NCAR Foothills Laboratory, Boulder, Colorado, USA.
- o gWRF Workshop in Thailand, 5-6 February 2013, Organized by ASGC, NECTEC, and HAII, Bangkok, Thailand
- o Regional Atmospheric Modeling System (RAMS) Training, 22-23 January 2013, Organized by Hydro and Agro Informatics Institute, Bangkok, Thailand
- o Seasonal Prediction and Extreme Events Workshop, 15 March 2012 - 15 July 2012, Organized by ICCES, IAP/CAS, Beijing, China.

VII. PUBLICATIONS

Journal Articles

Chaowiwat, W., **Sarinnapakorn**, **K.**, and Weesakul, S., "Future Changes in Extreme Rainfall Over Thailand Using Multi Bias Corrected GCM Rainfall Data," Journal of Climate Change Science, 2019,

Chaowiwat, W., **Sarinnapakorn**, **K.**, and Boonya-Aroonnet, S., "Bias Correction of Seasonal Rainfall Forecasts of Thailand from General Circulation Model by Using the Ratio of Gamma CDF Parameter Method," Naresuan University Engineering Journal, Volume 11, Supplement 1, 2016, pp. 7-13.

Vateekul, P., Kubat, M., and **Sarinnapakorn**, **K.,** "Top-down Optimized SVMs for Hierarchical Multi-label Classification: A Case Study in Gene Function Prediction," Intelligent Data Analysis, Volume 18, Issue 4, January 2014, pp. 717-738.

Kubat, M., **Sarinnapakorn**, **K.**, and Dendamrongvit, S., "Induction in Multi-label Text Classification Domains," Edited by Koronacki, J., Ras, Z.W., Wierzchon, S.T. and Kacprzyk, J., Advances in Machine Learning II, Dedicated to the memory of Professor Ryszard S. Michalski, Series: Studies in Computational Intelligence, Vol. 262, 2010, ISBN: 978-3-642-05176-0.

Sarinnapakorn, K. and Kubat, M., "Induction from Multi-label Examples in Information Retrieval Systems: A Case Study," Applied Artificial Intelligence, Volume 22, Issue 5, May 2008, pp. 407-432.

Sarinnapakorn, K. and Kubat, M., "Combining Subclassifiers in Text Categorization: A DST-Based Solution and a Case Study," IEEE Transactions on Knowledge and Data Engineering, Volume 19, Number 12, December 2007, pp. 1638-1651.

Shyu, M-L., Chen, S-C., Chen, M., Zhang C., and **Sarinnapakorn**, **K.**, "Capturing High-Level Image Concepts via Affinity Relationships in Image Database Retrieval," Journal of Multimedia Tools and Applications, Volume 32, Number 1, January 2007, pp. 73-92.

Shyu, M-L., Chen, S-C., **Sarinnapakorn**, **K.,** and Chang, LW. "Principal Component-based Anomaly Detection Scheme," Edited by T.Y. Lin, S. Ohsuga, C.J. Liau, and X. Hu, Foundations and Novel Approaches in Data Mining, Springer-Verlag, Vol. 9, 2006, ISBN: 3-540-28315-3, pp. 311-329.

Technical Report

Manomaiphiboon, K., Boonya-Aroonnet, S., **Sarinnapakorn, K.,** Chaowiwat, W., Assareh, N., Aman, N., Kamma, J., Trang, H. T., Sawangwattanaphaibun, R., and Jinvong A. (2018) Development of a Numerical Atmospheric Moisture Tracking System to Identify Potential Sources and Its Application to Enhance Rainfall Analysis for Thailand. Final Report, jointly conducted by Hydro and Agro Informatics Institute and the Joint Graduate School of Energy and Environment, funded by Hydro and Agro Informatics Institute. (with Thai abstract)

Manomaiphiboon, K., Boonya-Aroonnet.S., **Sarinnapakorn, K.**, Assareh, N., Aman, N., Tantianuparp, P., Thodsan, T., and Pratumthong, A. (2017) "Improvement of Input Spatial Information to Support Meteorological Modeling." Final Report, jointly conducted by Hydro and Agro Informatics Institute (Public Organization) and the Joint Graduate School of Energy and Environment, funded by Hydro and Agro Informatics Institute. (with Thai abstract)

Conferences/Workshops

Torsri, K., Faikrua, A., Peangta, P., Sawangwattanaphaibun, R., Akaranee, J. and **Sarinnapakorn, K.** "Simulating Heavy Rainfall Associated with Tropical Cyclones and Atmospheric Disturbances in Thailand Using the Coupled WRF-ROMS Model - Sensitivity Analysis of Microphysics and Cumulus Parameterization Schemes," The 20th Annual Meeting Asia Oceania Geosciences Society (AOGS), July 30 - August 4, 2023, Singapore.

Prakaisak, I., Phaisangittisagul, E., Maleewong, M., **Sarinnapakorn, K.**, and Chantrapornchai, C., "Detecting Anomaly and Replacement Prediction for Rainfall Open Data in Thailand," The 18th International Joint Conference on Computer Science and Software Engineering (JCSSE), 2021

Manokij, F., **Sarinnapakorn, K.**, and Vateekul, P., "Forecasting Thailand's Precipitation with Cascading Model of CNN and GRU," the 11th International Conference on Information Technology and Electrical Engineering (ICITEE), 2019

Sarinnapakorn, **K.,** "Space Technologies for Integrated Water Resources Management in Thailand," The Space Application Working Group (SAWG) Session in the 25th Asia-Pacific Regional Space Agency Forum (APRSAF), November 6-7, 2018, Singapore.

Saengprapai, K., Wimala, S., Tanyong, S., and **Sarinnapakorn, K.,** "Analysis of Rainfall Characteristics over Thailand from 1988 to 2017," The 17th CAS-TWAS-WMO Forum, Ecohydrology and Climate Change, September 17-19, 2018, Beijing, China

Sarinnapakorn, K., "Data Science Driven Weather Forecasting Solutions," Workshop on e-Science and High-Performance Computing 2018, The 15th International Joint Conference on Computer Science and Software Engineering (JCSSE 2018), Mahidol University (Salaya Campus), July 11-13, 2018, Nakhon Pathom, Thailand.

Chaowiwat, W., **Sarinnapakorn, K.**, and Weesakul, S., "Prediction of Extreme Events under Changing Climate," The 4th EIT International Conference on Water Resources Engineering, January 23-24, 2017, Chonburi, Thailand.

Chaowiwat, W., **Sarinnapakorn, K.**, and Weesakul, S., "Seasonal Drought Indices Prediction by Using Seasonal Forecast GCM Weather," The 4th EIT International Conference on Water Resources Engineering, January 23-24, 2017, Chonburi, Thailand.

Sarinnapakorn, K., Thodsan, T., Torsi, K., Boonya-Aroonnet, S., and Qin, X., "Numerical Simulation of Bangkok Heavy Rainfall with Urbanization Effects," SEE 2016 in conjunction with ICGSI 2016 and CTI 2016, on Energy & Climate Change: Innovating for a Sustainable Future, November 28-30, 2016, Bangkok, Thailand.

Sarinnapakorn, K., Chaowiwat, W., Thodsan, T., Saengprapai, K., and Boonya-Aroonnet, S., "ENSO and Extreme Weather in Thailand," The 13th Annual Meeting Asia Oceania Geosciences Society (AOGS), Jul 31 - Aug 5, 2016, Beijing, China.

Sarinnapakorn, K., Chankarn, A., Saengprapai, K., Thodsan, T., Boonya-Aroonnet, S., and Chitradon, R., "Tele-connectivity and Predictability of Thailand Annual Rainfall," The 12th Annual Meeting Asia Oceania Geosciences Society (AOGS), August 2-7, 2015, Singapore.

Pattanavijit, N., Vateekul, P., and **Sarinnapakorn, K.,** "A Linear-Clustering Algorithm for Controlling Quality of Large Scale Water-Level Data in Thailand," The 12th International Joint Conference on Computer Science and Software Engineering (JCSSE), July 22-24, 2015, Hatyai, Thailand

Sarinnapakorn, K., Thodsan, T., Torsri, K., Chaiwiwat, W., and Boonya-Aroonnet, S., "Precipitation Data Assimilation WRFDA (4DVar) for Heavy Rainfall in Thailand," The 14th CAS-TWAS-WMO Forum, International Symposium on Coupled Data Assimilation, July 5-8, 2015, Beijing, China

Sarinnapakorn, K., Chankarn, A., Saengprapai, K., Thodsan, T., Boonya-Aroonnet, S., and Chitradon, R., "Predicting Thailand's Extreme Rainfall Events based on Similarity of Teleconnection Indices," The 13th CAS-TWAS-WMO Forum, International Symposium on Extreme Weather and Climate: Past, Present, Future, September 8-11, 2014, Beijing, China

Torsri, K., Wannawong, W., **Sarinnapakorn, K.**, Boonya-Aroonnet, S., and Chitradon, R., "An Application of Air-Sea Model Components in the Coupled Ocean-Atmosphere-Wave-Sediment Transport (COAWST) Modeling System over an Indochina Peninsular Subregion: Impact of high spatiotemporal SST on WRF model in precipitation prediction," AOGS, The 11th Annual Meeting, July 28 – August 1, 2014, Sapporo, Japan.

Thodsan, T., Chankarn, A., Kittirart, S., **Sarinnapakorn, K.**, and Boonya-Aroonnet, S., "Accuracy Assessment of Thailand's Short Term Rainfall Forecasts Using the Weather Research and Forecasting Model (WRF)," Proceedings of the 19th National Convention on Civil Engineering, May 14-16, 2014, KhonKaen, Thailand.

Kittirart, S., Chankarn, A., Thodsan, T., **Sarinnapakorn, K.**, and Boonya-Aroonnet, S., "Using MET in Evaluating Thailand's Short-term Rainfall Forecast by WRF model," Proceedings of the 19th National Conventionon Civil Engineering, May 14-16, 2014, KhonKaen, Thailand.

Markpeng, P., Wongnimmarn, P., Champreeda, N., Vateekul, P., and **Sarinnapakorn, K.,** "Controlling Quality of Water-Level Data in Thailand," Proceedings of the 6th Asian Conference Intelligent Information and Database Systems (ACIIDS), April 7-9, 2014, pp. 503-512, Bangkok, Thailand.

Sarinnapakorn, K., Chankarn, A., Boonya-Aroonnet, S., and Chitradon, R., "Thailand Seasonal Rainfall Prediction Using Large Scale Climate Factors," The Third China - Thailand Joint Seminar on Climate Change, October 27-31, 2013, Phuket, Thailand

Thodsan, T., **Sarinnapakorn, K.**, Boonya-Aroonnet, S., and Chitradon, R., "Flash Flood Warning based on Rainfall Thresholds in Nan Basin," The 5th National Convention on Water Resources Engineering, September 5-6, 2013, Chiang Rai, Thailand

Sarinnapakorn, K., Chankarn, A., Torsri, K., Aroonnet, S., and Chitradon, R., "Predicting Thailand's Extreme Precipitation Events using Climate Factors," ICCES-COMSATS Workshop on Extreme Weather and Climate Events, July 21, 2013, p. 25, Beijing, China.

Vateekul, P. and **Sarinnapakorn, K.**, "Tree-based Approach to Missing Data Imputation," Domain Driven Data Mining Workshop, in conjunction with the IEEE International Conference on Data Mining (ICDM), December 6, 2009, Miami, Florida, USA.

Sarinnapakorn, K. and Kubat, M., "Induction from Multi-label Training Examples in Text Categorization: Combining Subclassifiers (a Case Study)," Proceedings of the 2007 International Conference on Artificial Intelligence (ICAI'07), June 25-28, 2007, pp. 351-357, Las Vegas, Nevada, USA.

Sarinnapakorn, K., Gellman, M.D., Llabre, M.M., Gutt, M., and Schneiderman, N., "The Trajectory of Depression and Its Association with CRP Levels in Post-MI Patients," Proceedings of the Ninth International Congress of Behavioral Medicine, November 29 – December 2, 2006, Bangkok, Thailand, International Journal of Behavioral Medicine, ISSN 1070-5503, Volume 13, Supplement, 2006, p 229.

Shyu, M-L., **Sarinnapakorn, K.**, Kuruppu-Appuhamilage, I., Chen, S-C., Chang, LW., and Goldring, T., "Handling Nominal Features in Anomaly Intrusion Detection Problems," Proceedings of the 15th International Workshop on Research Issues on Data Engineering (RIDE Workshop of Stream Data Mining and Applications RIDE-SDMA 2005), in conjunction with the 21st International Conference on Data Engineering (ICDE 2005), April 3-4, 2005, National Center of Sciences, Tokyo, Japan.

Shyu, M-L., Chen, S-C., **Sarinnapakorn, K.,** and Chang, LW., "A Novel Anomaly Detection Scheme Based on Principal Component Classifier," Proceedings of the IEEE Foundations and New Directions of Data Mining Workshop, in conjunction with the Third IEEE International Conference on Data Mining (ICDM'03), November 19, 2003, pp. 172-179, Melbourne, Florida, USA.

Shyu, M-L., Chen, S-C., Chen, M., Zhang C., and **Sarinnapakorn, K.**, "Image Database Retrieval Utilizing Affinity Relationships," Proceedings of the First ACM International Workshop on Multimedia Databases (ACM MMDB'03), November 7, 2003, pp. 78-85, New Orleans, Louisiana, USA.