

Curriculum Vitae



Name – Surname	:	Name: Assoc. Prof. Dr. Punpim Puttaraksa Surname: Mapiam
Date of birth	:	23 January 1977
Nationality	:	Thai
Email	:	fengppm@ku.ac.th , punpim.m@ku.th
Age	:	48 years
Years of experience	:	26 years

Educational Background:

2009	Doctor of Engineering (Water Resources Engineering), Kasetsart University, Bangkok, Thailand
2004	Master of Engineering (Water Resources Engineering), Kasetsart University, Bangkok, Thailand
1999	Bachelor of Engineering (Water Resources Engineering), Kasetsart University, Bangkok, Thailand

Professional association members:	Member of the Engineering Council, License for Professional Engineer, Engineer Level, Civil Engineering Branch, Registration Number 27010
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Employment Record:

2024-Present	Associate Professor, Water Resources Engineering, Department of Water Resources Engineering, Faculty of Engineering, Kasetsart University, Bangkok, Thailand
2011 – February 2024	Assistant Professor, Water Resources Engineering, Department of Water Resources Engineering, Faculty of Engineering, Kasetsart University, Bangkok Thailand

2009 – 2011	Lecturer, Department of Civil Engineering, Faculty of Engineering, King Mongkut's University of Technology North Bangkok
2009	Senior Water Resources Engineer, YP Consultant Co., Ltd.
1999-2004	Hydrologist/Water Resources Engineer/Mathematical Modeler, Southeast Asia Technology Co., Ltd.

Main discipline/ Specialisation

- Hydrology, Water Management, Hydrological and Hydrodynamic modelling,
- Radar rainfall assessment, near real-time bias correction, composite radar analysis, nowcasting radar rainfall, citizen observation, flood monitoring and forecasting, near real-time flash floods and landslides early warning systems.
- Feasibility studies of water resource development projects, reservoir and river basin management.

Internet record

<https://orcid.org/0000-0003-2601-9992>
<https://scholar.google.com/citations?user=YIfTnHQAAAAJ&hl=th>
<https://www.scopus.com/authid/detail.uri?authorId=24477560700>

Training/ Seminars/ Study Visits:

2024	Speaker at the workshop “ <i>Hydrology in Water Resources Development</i> ” on 15-16 February 2024 at the 1 st floor meeting room, Water Resources Information Institute (Public Organization), Bangkok.
2022	Speaker in the workshop “ <i>Runoff-Inundation and Water Assessment Course Using Rainfall-Runoff-Inundation Model (RRI Model)</i> ” during 21-25 February 2022 at Dong Tal Meeting Room, 99 th Anniversary Building, Mom Luang Chuchai Kampu, Royal Irrigation Department, Samsen, Bangkok, Thailand.
2020	Guest Speaker on the topic of “ <i>What does the Dutch mobile applications mean for hydrometeorological data collection and agricultural water management system in Thailand?</i> ”, Agri Water Nexus Webinar: Water Solutions for the Agribusiness, 25 November 2020, hosted by Embassy of the Kingdom of the Netherlands.

- 2019 Attended the meeting and discussed cooperation with Delft University of Technology at the Water Resources Section, Department of Water Management, Faculty of Civil Engineering and Geosciences, Delft University of Technology, the Netherlands from 21 September 2019 to 6 October 2019 in the Kingdom of the Netherlands.
- 2016 Participate in the academic cooperation project between Kasetsart University and 4 educational institutions in the Kingdom of the Netherlands from 27 August - 4 September in the Kingdom of the Netherlands.
- 2016 Study visits on *“Construction and development of Xayaburi hydroelectric power plant”* on 15-17 January 2016 in Lao People's Democratic Republic.
- 2015 Participate in the seminar on *“Water Management to Alleviate Drought Problems”* on 26 August 2015 at the meeting room on the 6th floor of the WSAT building.
- 2014 Attend the training course on *“Weather and natural disaster forecasting with water resource management”* between 26-28 March 2014 at the Meteorological Department.
- 2013 1st Training Program *“Advances in integrated flood management”* 28 January – 2 February 2013, Kasetsart University, Thailand.
- 2010 Participated in the seminar of *“MWH Soft Thailand Flood Modelling”* on 9 February 2010 at the Royal River Hotel, Thailand.
- 2009 Participated in the training on *“5th DHI Thailand User Group Meeting”* on 18-19 June 2009 at Chuchat Kampu Auditorium, Pakkret Research and Development Office, Royal Irrigation Department.
- 2007 Attended a seminar on *“Risk Analysis in Water Engineering”*, The University of New South Wales (UNSW), Sydney, Australia.
- 2004 Training on *“Application of URBS model for flood forecasting and warning system”* at the Department of Water Resources Engineering, Faculty of Engineering, Kasetsart University
- 2004 Training on *“Geographic Information Systems (GIS) for Water Resources Engineering”* at the Department of Water Resources Engineering, Faculty of Engineering, Kasetsart University

Awards and Scholarships:

2024	<i>Kasetsart University International Publication Research Award 2024</i> (Published data 2022) in the category of award for researchers who create published research, Kasetsart University
2023	<i>“Outstanding Agricultural Research Project No. 2” for the project of High-resolution spatial rainfall estimation using radar for flash flood simulation</i> ” by the Agricultural Research Development Agency (Public Organization) or ARDA. The certificate award ceremony will be held on 21 November 2023 at Hall 5, Queen Sirikit National Convention Center.
2020	<i>Kasetsart University International Publication Research Award 2020</i> (Published data 2018) in the category of award for researchers who create published research, Kasetsart University
2016	Award for <i>“Researcher who created internationally published research in 2014”</i> from Kasetsart University, given on 25 January 2016
2009	<i>Outstanding Thesis Award for Doctoral Degree in Applied Science Group</i> , Academic Year 2008, on the topic “Applications of Rain Gauge and Radar Rainfall to A Hydrologic Model for Flood Estimation” from the Graduate School, Kasetsart University.
2004	<i>PhD Scholarship from the Kanchanaphisek PhD Program</i> , Thailand Research Fund (TRF)

Selected Projects

2024-2025	Research Project: Near Real-Time Flood Forecasting and Soil Erosion Detecting System Based on Radar Rainfall Products in the Klong Suan Mak River Basin Funder: Agricultural Research Development Agency (Public Organization) Responsibilities: Project Leader
2024-2025	Research Project: Strengthening and sustaining a community-based early monitoring system for heavy rainfall and flooding using weather radar rainfall data for the Tubma and Klong Saphan basins Funder: Agricultural Research Development Agency (Public Organization)

	Responsibilities: Project Leader
2024-2025	Academic Service: Inflow Prediction System for Kaeng Krachan Reservoir Using Weather Radar Technology, Hydrology Division, 2024, Kaeng Krachan Subdistrict, Kaeng Krachan District, Phetchaburi Province Employer: Royal Irrigation Department Responsibilities: Project Leader
2024	Academic Service: Inflow Prediction into Nam San 3A and Nam San 3B Dams Using Hydrologic Modelling Employer: Bangchak Corporation Public Company Limited Responsibilities: Project Leader
2023-2024	Research Project: The development of combined Landslide and Flash Flood Early Warning system for south-east Asia Funder: Delft University of Technology (TU Delft), the Netherlands Responsibilities: Project Partner
2023-2024	Research Project: Development of flash flood and landslide prediction system using high resolution of radar rainfall Funder: Agricultural Research Development Agency (Public Organization) Responsibilities: Project Leader
2022-2023	Research Project: Rainfall Threshold for Flash Floods and Landslides Warning in Khao Yai National Park Funder: Faculty of Engineering, Kasetsart University Responsibilities: Project Leader
2021-2022	Research Project: Radar-Based Quantitative Precipitation Estimation for Flash Flood Simulation (Continuing research project) Funder: Agricultural Research Development Agency (Public Organization) Responsibilities: Project Leader, responsible for hydrological studies
2018-2019	Research Project: Radar-Based Quantitative Precipitation Estimation for Flash Flood Simulation Sponsor: Agricultural Research Development Agency (Public Organization) Responsibilities: Project Leader
2018	Research Project: Mobile Monitoring Applications for The Phetchaburi River Basin Project (Collaboration project between the Department of

Water Resources Engineering, Kasetsart University and Delft University of Technology, Netherlands)

Responsibilities: Project coordinator

- 2017 **Academic Service:** Water Management Development Plan Study Project in Phang Nga Reservoir
Employer: Goldshores Co., Ltd.
Responsibilities: Hydrology/Water Resources Expert
- 2016 **Academic Service:** Feasibility Study and Design Survey of Sand and Wave Barrier at the Mouth of Huai Yang Canal, Huai Yang Subdistrict, Thap Sakae District, Prachuap Khiri Khan Province
Employer: Marine Department
Responsibilities: Hydrology Expert
- 2014 **Academic Service:** Water Potential Study Project from Private Water Reservoir, Chonburi Province
Employer: Chonkij Sakon Co., Ltd.
Responsibilities: Project Leader
- 2013 **Academic Service:** Feasibility Study and Design Survey of Sand and Wave Barrier, Salt Channel, Takua Pa District, Phang Nga Province
Employer: Marine Department
Responsibilities: Hydrology Expert
- 2012 **Academic Service:** Project Evaluation Study of the Diduyon Hydropower Project
Employer: Ratchaburi Electricity Generating Holding PCL
Responsibilities: Hydrology Expert
- 2012 **Academic Service:** Project Evaluation Study of the Nam Mouan Hydropower Project
Employer: Ratchaburi Electricity Generating Holding PCL and Chubu Electric Power Co., Inc.
Responsibilities: Hydrologic Expert
- 2011 **Research Project:** Feasibility Study Project for Importing Coal for Use as Fuel for the New Krabi Power Plant Project
Employer: Electricity Generating Authority of Thailand
Responsibilities: Hydrologist / Hydraulic Engineer
- 2007 **Research Project:** “Application of Radar for Area-based Rainfall Assessment for the Upper Ping River Basin”

	Responsibilities: Researcher
2006	Research Project: Project to develop a system linkage program for spatial analysis and processing in the flood forecasting and warning system of the upper Ping River Basin. Responsibilities: Researcher
2004	Research Project: “Application of Hydrological Model (URBS Model) for Simulating Runoff and Flood Volume for Upper Ping and Yom River Basins” Responsibilities: Researcher
2003-2004	Research Project: Feasibility Study of Lam Pao Dam Improvement Project, Kalasin Province Employer: Royal Irrigation Department Responsibilities: Hydrologist and Water Resources Engineer,
2001-2002	Academic Service: Study of the master plan for solving coastal erosion problems from the mouth of the Phetchaburi River, Phetchaburi Province to the mouth of the Pranburi River, Prachuap Khiri Khan Province Employer: Office of Environmental Policy and Planning Responsibilities: Hydrologist
2000-2001	Academic Service: Initial Environmental Impact Assessment for 4 Medium-Sized Reservoir Projects: Doi Ngu Project, Chiang Rai Province; Huai Mae Ramphan and Huai Thuang Project, Sukhothai Province; and Mae On 2 Project, Lampang Province Employer: Royal Irrigation Department Responsibilities: Water Resources Engineer
1999-2000	Academic Service: Study of master plan, feasibility study and detailed design of water resource efficiency improvement project and efficient water usage with water pipe system in the Northeast Employer: Department of Alternative Energy Development and Efficiency Responsibilities: Water Resources Engineer (Assistant)

International Publications

- Monton, M. Bogaard, T., and **Mapiam, P.P.**, (Revision). Enhancing the accuracy of weather radar heavy rainfall estimates in mountainous regions using combined radar quality indices. *Journal of Hydrology*.
- **Mapiam, P. P.**, Sakulnurak, S., Methaprayun, M., Makmee, C., and Marjang, N.: 2023. Downscaling the Z–R relationship and bias correction solution for flash flood assessment in a data-scarce basin, Thailand, *Water Science & Technology* Vol 87 No 5, 1259-1272. doi: 10.2166/wst.2023.056.
- **Mapiam, P. P.**, Methaprayun, M., Bogaard, T., Schoups, G., and Ten Veldhuis, M.-C. 2022.: Citizen rain gauges improve hourly radar rainfall bias correction using a two-step Kalman filter, *Hydrol. Earth Syst. Sci.*, 26, 775–794, <https://doi.org/10.5194/hess-26-775-2022>.
- **Mapiam, P. P.**, and Chautsuk, S., (2018). Improving runoff estimates by increasing catchment subdivision complexity and resolution of rainfall data in the Upper Ping River Basin, Thailand. *Chiang Mai University Journal of Natural Sciences*. 17(2), 127-143.
- **Mapiam, P. P.**, Sharma, A., and Sriwongsitanon, N., (2014). Defining the Z~R relationship using gauge rainfall with coarse temporal resolution: Implications for flood forecasting. *ASCE's Journal of Hydrologic Engineering*, 19(8), 04014003.
- **Mapiam, P. P.** and Sriwongsitanon, N. 2009. Estimation of the URBS model parameters for flood estimation of ungauged catchments in the upper Ping River basin, Thailand. *ScienceAsia*, 35, 49-56.
- **Mapiam, P. P.**, Sriwongsitanon, N., Chumchean, S. And Sharma, A., 2009. Effect of rain-gage temporal resolution on the specification of a Z-R relationship. *Journal of Atmospheric and Oceanic Technology*, 26, 1302–1314.
- **Mapiam, P. P.** and Sriwongsitanon, N., 2008. Climatological Z-R Relationship for Radar Rainfall Estimation in the Upper Ping River Basin. *ScienceAsia*, 34, 215-222.
- **Puttaraksa, P.**, Sriwongsitanon, N., and Lipiwattanakarn, S. 2004. Development of One Dimensional Implicit Dynamic Wave Model. *Kasetsart Journal*, 38(3), 409-418.

Internation Conference

- Jonathan, Monton Methaprayun, Apinit Jotisankasa, **Punpim Puttaraksa Mapiam** and Thom Bogaard. Flash Flood – Landslide Early Warning System Using Rain Radar Composites and Spatially Distributed Physical-Based Model in Northeastern Thailand. AGU Annual Meeting 2024, Washington, D.C. 9-13 December 2024.

- Monton Methaprayun, Thom Adrianus Bogaard, **Punpim Puttaraksa Mapiam**. Developing a relative quality index scheme for improving radar composite products and bias adjustment in mountainous regions, Thailand. The EGU General Assembly 2024, Vienna, Austria, 14–19 April 2024.
- **Punpim Puttaraksa Mapiam**, Monton Methaprayun, Apiniti Jotisankasa, Thom Bogaard. Near Real-time Flash Flood and Landslide Early Warning System Using Combined Low-cost Sensors and Rain Radar Composites in Northeastern Thailand. The 28th IUGG General Assembly 2023, 11-20 July 2023 at the Messe Berlin – City Cube, Berlin, Germany
- Monton Methaprayun, Thom Adrianus Bogaard, **Punpim Puttaraksa Mapiam**. Developing a relative quality index scheme for improving radar composite products and bias adjustment in mountainous regions, Thailand. The EGU General Assembly 2024, Vienna, Austria, 14–19 April 2024.
- Monton Methaprayun, Apiniti Jotisankasa, Ratchanon Khunwisetkul, Thom Bogaard, and **Mapiam, P.P.** 2023. Low-cost sensor observations for flash flood and landslide early warning systems in the mountainous area. The EGU General Assembly 2023, Vienna, Austria, 23–28 April 2023.
- **Mapiam, P.P.**, Monton Methaprayun, Apiniti Jotisankasa, and Thom Bogaard. 2023. Investigating the quality of radar composites in a mountainous region in northeastern Thailand. The EGU General Assembly 2023, Vienna, Austria, 23–28 April 2023.
- **Mapiam, P. P.**, and Chauysuk, S. 2016. Influence of Rainfall Data Resolution and Catchment Subdivision on Runoff Modelling. The EGU General Assembly 2016, Vienna, Austria, 17–22 April 2016.
- **Mapiam, P. P.**, Sharma, A., Chumchean, S., and Sriwongsitanon, N. 2009. Runoff estimation using radar and rain gage data, The 18th World IMACS Congress and MODSIM09 International Congress on Modelling and Simulation, Cairns Australia, 13-17 July 2009.
- **Mapiam, P. P.**, Sriwongsitanon, N. 2007. Flood Estimations for Ungauged Catchments in the Upper Ping River Basin. AOGS 2007, 4th Annual meeting, Bangkok, Thailand, 30 July – 4 August 2007.
- **Mapiam, P. P.**, Sriwongsitanon, N., and Sharma, A. 2007. The effect of gauge temporal resolution on the specification of the radar rainfall relationship. AOGS 2007, 4th Annual meeting, Bangkok, Thailand, 30 July – 4 August 2007.