

JOURNAL OF HYDRO - METEOROLOGY

ISSN 2525 - 2208



VIETNAM METEOROLOGICAL AND
HYDROLOGICAL ADMINISTRATION

No 22
03-2025



Acting Editor-in-Chief
Assoc. Prof. Dr. Doan Quang Tri

- | | |
|--------------------------------------|-------------------------------------|
| 1. Prof. Dr. Tran Hong Thai | 13. Assoc. Prof. Dr. Doan Quang Tri |
| 2. Prof. Dr. Tran Thuc | 14. Assoc. Prof. Dr. Mai Van Khiem |
| 3. Prof. Dr. Mai Trong Nhuuan | 15. Assoc. Prof. Dr. Nguyen Ba Thuy |
| 4. Prof. Dr. Phan Van Tan | 16. Dr. Tong Ngoc Thanh |
| 5. Prof. Dr. Nguyen Ky Phung | 17. Dr. Dinh Thai Hung |
| 6. Prof. Dr. Phan Dinh Tuan | 18. Dr. Vo Van Hoa |
| 7. Prof. Dr. Nguyen Kim Loi | 19. TS. Nguyen Dac Dong |
| 8. Assoc. Prof. Dr. Nguyen Van Thang | 20. Prof. Dr. Kazuo Saito |
| 9. Assoc. Prof. Dr. Duong Van Kham | 21. Prof. Dr. Jun Matsumoto |
| 10. Assoc. Prof. Dr. Duong Hong Son | 22. Prof. Dr. Jaecheol Nam |
| 11. Dr. Hoang Duc Cuong | 23. Dr. Keunyong Song |
| 12. Dr. Bach Quang Dung | 24. Dr. Lars Robert Hole |
| | 25. Dr. Sooyoul Kim |

Publishing licence

No: 166/GP-BTTTT - Ministry of Information and Communication dated 17/04/2018

Editorial office

No 8 Phao Dai Lang, Dong Da, Ha Noi
Tel: 024.39364963
Email: tapchikttv@gmail.com

Engraving and printing

Vietnam Agriculture Investment Company Limited
Tel: 0243.5624399

JOURNAL OF HYDRO-METEOROLOGY

Volume 22 - 3/2025

TABLE OF CONTENT

- 1** **Trong, N.G.; Hien, N.X.; Manh, V.D.; Vinh, T.D.** Spatiotemporal data analysis using deep learning models: A case study with drifting buoy data
- 10** **An, D.D.; Phi, N.Q.; Binh, D.T.T.; Huong, C.T.T.; Linh, L.V.; Lam, N.Q.; Vy, V.K.; Hiep, N.H.; Manh, V.D.** Assessment of the trend in PM₁₀ and PM_{2.5} concentrations during the period 2018-2021 in the Hanoi area
- 20** **Nam, N.D.; Thanh, C.; Thang, V.V.; Kien, T.B.** Data assimilation for tropical cyclone-induced rainfall forecasting for central Viet Nam
- 35** **An, N.L.; Long, T.Q.; Huynh, T.N.; Son, N.H.** Water level forecasting at Hanoi station using transformer-based AI models
- 45** **Nguyet, V.T.M.; Hung, V.P.; Tha, H.V.; Lam, H.T.; Quynh, B.V.** Microclimate characteristics and tourist carrying capacity of Phong Nha cave, Phong Nha - Ke Bang National Park
- 55** **Dung, H.M.; Thanh, N.T.** Application of TAPM-AERMOD model system to assess pollution spread and propose odor control solutions at Dap Da landfill, Dong Thap province
- 71** **Anh, T.D.; Hung, M.K.; Quan, D.D.; Trang, D.T.; Nam, H.G.; Lars, R.H.; Tien, D.D.** Improving skill precipitation forecast of the European Centre for Medium-Range Weather Forecasts (ECMWF) Integrated Forecasting System (IFS) model by using the quantile mapping method for Central Vietnam
- 82** **Chung, P.V.** Analysis of borehole stratigraphy combined geomechanical model with field monitoring methods to determine displacement angles in Seam I (12) of the Mong Duong coal mine

Table of content

- 1 Trong, N.G.; Hien, N.X.; Manh, V.D.; Vinh, T.D. Spatiotemporal data analysis using deep learning models: A case study with drifting buoy data. *J. Hydro-Meteorol.* **2025**, 22, 1–9.
- 10 An, D.D.; Phi, N.Q.; Binh, D.T.T.; Huong, C.T.T.; Linh, L.V.; Lam, N.Q.; Vy, V.K.; Hiep, N.H.; Manh, V.D. Assessment of the trend in PM₁₀ and PM_{2.5} concentrations during the period 2018–2021 in the Hanoi area. *J. Hydro-Meteorol.* **2025**, 22, 10–19.
- 20 Nam, N.D.; Thanh, C.; Thang, V.V.; Kien, T.B. Data assimilation for tropical cyclone-induced rainfall forecasting for central Viet Nam. *J. Hydro-Meteorol.* **2025**, 22, 20–34.
- 35 An, N.L.; Long, T.Q.; Huynh, T.N.; Son, N.H. Water level forecasting at Hanoi station using transformer-based AI models. *J. Hydro-Meteorol.* **2025**, 22, 35–44.
- 45 Nguyet, V.T.M.; Hung, V.P.; Tha, H.V.; Lam, H.T.; Quynh, B.V. Microclimate characteristics and tourist carrying capacity of Phong Nha cave, Phong Nha - Ke Bang National Park. *J. Hydro-Meteorol.* **2025**, 22, 45–54.
- 55 Dung, H.M.; Thanh, N.T. Application of TAPM-AERMOD model system to assess pollution spread and propose odor control solutions at Dap Da landfill, Dong Thap Province. *J. Hydro-Meteorol.* **2025**, 22, 55–70.
- 71 Duc, T.A.; Hung, M.K.; Quan, D.D.; Trang, D.T.; Nam, H.G.; Lars, R.H.; Tien, D.D. Improving skill precipitation forecast of the European Centre for Medium-Range Weather Forecasts (ECMWF) Integrated Forecasting System (IFS) model by using the quantile mapping method for Central Vietnam. *J. Hydro-Meteorol.* **2025**, 22, 71–81.
- 82 Chung, P.V. Analysis of borehole stratigraphy combined geomechanical model with field monitoring methods to determine displacement angles in Seam I (12) of the Mong Duong coal mine . *J. Hydro-Meteorol.* **2025**, 22, 82–91.