

## Information on Doctoral thesis of Fellows Cong Thanh

Official thesis title: Study on prediction of ensemble typhoon track affecting Vietnam with a forecast period up to 5 days using breeding method

1. Full name: Cong Thanh

2. Sex: male

3. Date of birth: 14/09/1977

4. Place of birth: Ha Noi

5. Admission decision number: No. 2048 /SDH dated 09/07/2010 signed by President of Vietnam National University, Hanoi.

6. Changes in academic process: Changed the name of doctoral thesis as decision No. 2567/QD-SDH dated 28/7/2011 signed by the Rector of VNU University of Science.

7. Official thesis title: Study on prediction of ensemble typhoon track affecting Vietnam with a forecast period up to 5 days using breeding method

8. Major: Meteorology and Climatology

9. Code: 62440222

10. Supervisors: Prof.Dr Tran Tan Tien

11. Summary of the new findings of the thesis

- The Breeding method has been improved and successfully applied for creating initial condition for RAMS model in typhoon forecast for Vietnam.

- An ensemble prediction method had been developed and applied in typhoon track forecast for typhoons affecting Vietnam with forecast time up to 5 days

12. Paratical applicability, if any: my results can paratical applicability

13. Further research directions, if any

- Study on prediction of ensemble typhoon track affecting Vietnam with a forecast period up to 5 days using breeding method for other model

- Study on prediction of ensemble typhoon intensity affecting Vietnam with a forecast period up to 5 days using breeding method

14. Thesis-related publications:

Tran Tan Tien, Cong Thanh, Nguyen Thi Phuong, 2012, Forecasting hurricane intensity over on Eastern Sea of Viet Nam using WRF model for 5-day term, *VNU Journal of Science*. Vol. 28, No3S, 155-160.

Tran Tan Tien, Hoàng Thị Thuy, Cong Thanh, Bui Minh Tuan (2013), "ENSEMBLE FORECASTS OF TC TRACKS IN THE BIEN DONG FOR 5 DAY LEAD TIME", National Conference on Meteorology, Hydrology, environment and climate change, Ho Chi Minh, Viet Nam. Pp. 77-81.

Tran Tan Tien, Cong Thanh, Hoang Thanh Van, and Chanh Kieu (2012), "Two-dimensional Retrieval of Typhoon Tracks from an Ensemble of Multi-Model Outputs", *Wea. Forecasting*, pp. 451-461.

Tran Tan Tien, Cong Thanh, Nguyen Thi Hoang Anh (2012) FORECASTING HURRICANE TRACK OVER ON EASTERN SEA OF VIETNAM USING WEIGHTED ENSEMBLE METHOD.. *Journal of sciences, natural sciences and technologies*. Vol. 26, No3S. T. 26 (3S), 457-462.

Tran Tan Tien, Cong Thanh, (2010), "Ensemble forecast of tropical cyclone motion using RAMS model and Breeding of Growing Modes method", International Conference on QPE and QPF and hydrology, Nanjing, China.

Tran Tan Tien, Công Thanh, (2009), "Ensemble forecast of tropical cyclone motion using RAMS model and Breeding of Growing Modes method", *Journal of sciences, natural sciences and technologies*. Vol. 26, No3S. T. 25 (3S) 523-529.

Cong Thanh, Tran Tan Tien, 2013. Assessing Ensemble Prediction System ability to forecast TC Track in the Bien Dong for 5 – day lead time. *VNU Journal of Science*. Vol. 29, No1S, 141-146.

Cong Thanh, Tran Tan Tien, 2013. Constructing breeding method for tropical cyclone in the Bien Dong for 5-day lead time. *VNU Journal of Science*. Vol. 29, No1S, 147-153

Cong Thanh, Tran Tan Tien, 2011, Experimental tropical cyclone forecast in the South China Sea by ensemble prediction system using breeding method. *VNU Journal of Science*. Vol. 27, No1S, 254-265.

Cong Thanh, Nguyen Tien Toan (2010), "Experimental prediction of heavy rainfall over Da Nang-Quan Nam- Quang Ngai area of Vietnam using RAMS model.. *Journal of sciences, natural sciences and technologies*. Vol. 26, No3S. T. 26 (3S), 449-456.