

**INFORMATION ON ACADEMIC AND THEORETICAL CONTRIBUTIONS
OF THE DOCTORAL DISSERTATION**

1. Dissertation title: *Research on the effects of global climate change to some climate extremes and extreme climate events in Vietnam*

Code: 62440222

Specialization: Meteorology and climatology

2. PhD candidate: Chu Thi Thu Huong

Advisor: Prof. Dr. Phan Van Tan and Dr. Hoang Duc Cuong

Place of education: Institute of Meteorology, Hydrology and Climate Change

3. Dissertation introduction:

Climate change (CC) has been occurring over the globe, but its manifestations are different from place to place. Because of the surface air temperature over land increases more rapidly than over the ocean resulting in changes in intensity and activity scale of monsoon, atmospheric pressure centers, etc. Recently, changeable and complex weather and climate conditions have been happening, especially extreme climate events (ECEs). The questions are: do these changes relate to global warming, and what are the relationships between them?

For the purpose of assessing impacts of global CC on some climate extremes and ECEs in Vietnam, the thesis focus on analysing the trends of some climate extremes, ECEs, intensity of the main atmospheric pressure centers affecting Vietnam, as well as the relationships between them. The results indicate that the increase in global temperature, the weakening of Siberian High and the strengthening of North Pacific High as well as the decrease of cold days (SNRD) in North Vietnam and the increase of monthly maximum temperatures (TXx), monthly minimum temperatures (TNn) and number of hot days (SNNN) in most of Vietnam climate subregions. Furthermore, the increase of daily maximum rainfall (RXx) and number of heavy rain days (SNML) in South Central subregion Vietnam in fall is consistent with the strengthening of the equatorial low pressure trough. It can also be one of the reasons causing the decreasing trends of TXx and TNn similar to 90th percentiles (TX90) and 10th percentiles (TN10) respectively in this period.

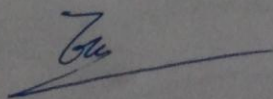
4. New academic contributions of the thesis

- Identify the variations in intensity and activity scale of some main atmospheric pressure centers which play an important role in weather conditions and formation of climate in Vietnam as well as the relationships between the changes of some climate extremes and extreme climate events over Vietnam and the global warming.

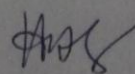
- Some explanations on the impacts of global climate change on some climate extremes and extreme climate events in Vietnam.

Advisors

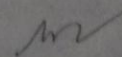
PhD Candidate



Prof. Dr. Phan Van Tan



Dr. Hoang Duc Cuong



Chu Thi Thu Huong