

**INFORMATION ON NEW CONCLUSIONS OF DOCTORAL
DISSERTATION**

(Information will be posted on the Website)

Name of dissertation: Research on signal processing techniques to enhance performance for next-generation multi-carrier wireless systems.

Major: **Electronic Engineering** Code No: **9520203**

Name of PhD. Student: Dang Trung Hieu

Advisors: **1. Assoc. Prof. Dr. Nguyen Le Cuong**

2. Dr. Tran Van Nghia

Training Institution: **Electric Power University**

Summary of new contributions of the Dissertation

1. Propose three methods to improve the efficiency of PAPR reduction for OFDM signals, while ensuring system criteria and maintaining low computational complexity, including:

- The constrained clipping noise filtering (CCNF) method;
- The suboptimal non-iterative active constellation extension (ACE) method;
- The hybrid method, ACE-CCNF, that combines the proposed CCNF algorithm with the proposed suboptimal non-iterative ACE algorithm

2. Propose a new parallel phase rotation algorithm for FFT/IFFT applied in general multi-carrier wireless communication systems and specifically for OFDM, aiming to enhance accuracy and reduce complexity, processing delay, power consumption as well as hardware resource utilization.

Hanoi, April 5th, 2024

Advisors

PhD. Student

Assoc.Prof.Dr. Nguyen Le Cuong Dr. Tran Van Nghia

Dang Trung Hieu