**SUMMARY INFORMATION ON NEW FINDINGS
IN DOCTORAL THESIS**

Thesis title: ***Research and development of models, algorithms for weighted itemsets and high utility itemsets mining***

Major: Mathematical Foundations for Informatics

Major code: 62.46.01.10

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Educational institution: Military Technical Academy

**The new findings of the research:**

1. The Candidate Weighted Utility (CWU) model reduces the number of candidates is generated. From the CWU model, two high utility itemsets mining algorithms are proposed: HP uses the projection index, CTU-PRO+ uses the tree structure.

2. The Remaining Transaction-Weighted Utility (RTWU) structure is based on the value of the remaining transaction utility and the expanded utility list of the pair of items that reduce the join cost and the candidates are generated. From the RTWU structure proposed EAHUI-Miner algorithm and the PEAHUI-Miner parallel algorithm for high utility itemsets mining.

3. The PPB parallel algorithm for high utility itemsets data mining uses projection index, utility list, and a method of storing the utility value of the item on transactions to quickly calculate the iutil and rutil value of utility list.

4. The HUI-Growth algorithm uses Compressed Utility Pattern tree (CUP-tree) combined with utility list for high utility itemsets mining.

5. The VMWFP algorithm and PVMWFP parallel algorithm for Vertical Mining of Weighted Frequent Patterns Using Diffset.

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| *Ha Noi, 24th July 2018* |
| **SUPERVISOR**  | **Ph.D Student** |
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