**Special Criteria for Student Research Papers Submitted for the HSE University NIRS Competition in Computer Science**

Dear students,

So that the experts may effectively assess your paper, please make sure to format it in line with the following criteria. Please see the outline below along with a brief description of each section.

**Title Page**

The title page should feature the title of your paper and its keywords (please refer to [Regulation 1](https://www.hse.ru/mirror/pubs/share/304739392)).

**Abstract**

The second page of your paper should include an abstract.

**Paper classification according to** [**ACM CCS**](https://dl.acm.org/ccs)

Please include your paper classification details on the second page under the abstract.

Examples of classification details:

**ACM CSS:** •Software and its engineering~Software creation and management~Designing software~Software design engineering•Software and its engineering~Software organization and properties~Contextual software domains•Applied computing~Document management and text processing~Document management

**Contents**

**Introduction** *(1-2 pages)*

Please provide a short description of the subject area.

**Relevance.** Show that your work features a solution to a real problem.

Describe what is being researched in your paper (**object of research**) and which part of this object is being analyzed (**subject of research**).

What is the **key goal** of your paper?

What **objectives** should be met in order to achieve your goal?

**Overview of Sources**

1. Description of the current situation in the subject field;
2. Comparative analysis of current analogues;
3. Selection of relevant methods/models/algorithms.

*(don’t forget to provide correct links to your sources)*

**Main Part**

**Theoretical section**: prove relevant theorems, describe newly designed / utilized models/methods/algorithms;

and/or

**Practical section**: describe implementation / experiments and analyze generated results.

*If one of the key results of your research is a software product/IT solution, you must provide a link to a repository with its source code / execution file / information system. You may also include a link to a video demonstrating the operation of your software product / hardware and software package / information system.*

**Conclusion**

1. Provide a list of **key results generated.**
2. Specify the **academic innovation / practical value of your solution** *(each aspect of innovation/practical value should be concisely formulated in one sentence. E.g., “… was developed…, and it differs in that it…”);*
3. Highlight **your individual contribution** *(e.g., “section XXX describes the author’s ideas for modifying the algorithm”);*
4. Possible applications of the generated results;
5. Areas of further research.

**Bibliography**

For works **in English**, we recommend relying on international formatting rules, e.g., IEEE or Springer: Examples: <ftp://ftp.springernature.com/cs-proceeding/svproc/guidelines/Springer_Guidelines_for_Authors_of_Proceedings.pdf>*.*

For works **in Russian**: put them in alphabetical order and in line with GOST standards.

Examples:

# Bibliography

1. Aggarwal, C. Mining text data / Charu C. Aggarwal, Checng X. Zha. – USA: Springer Publisher Company, 2012 – 522 с.

For books

1. Agrawal, S. Dbxplorer: a system for keyword-based search over relational databases / S. Agrawal, S. Chaudhuri, and G. Das // Proceeding of the 18th Intl. Conference on Data Engineering. – IEEE Computer Society – 2002 – С. 5-16.

For articles in conference collections

1. Banerjee, A. A generalized maximum entropy approach to Bregman co-clustering and matrix approximation / A. Banerjee, I. Dhillon, J. Ghosh, S. Merugu, D. Modha // Journal of Machine Learning Research – 2007 – vol. 8 – С. 1919-1986.

For journal publications

1. Brin, S. The pagerank citation ranking: Bringing order to the web / L. Page, S. Brin, R. Motwani, and T. Winograd // [Электронный ресурс]: Stanford InfoLab, Technical Report 1999-66. – Режим доступа: <http://ilpubs.stanford.edu:8090/422/>, свободный. (дата обращения: 05.04.15).

For articles published on the Internet

1. Dhillon, I. Co-clustering documents and words using bipartite spectral graph partitioning / I. Dhillon // Proceedings of the Seventh ACM SIGKDD International Conference on Knowledge Discovery and Data Mining – New York, NY, USA: ACM – 2001 – С. 269–274.

For articles in conference collections

1. Hadoop MapReduce [Электронный ресурс] / Apache. Режим доступа: <http://hadoop.apache.org/docs/r1.2.1/mapred_tutorial.html>, свободный. (дата обращения: 25.05.15)

For Internet sources

1. Kramarenko, A. Approximate bicluster and tricluster boxes in the analysis of binary data / B. Mirkin, A. Kramarenko // Rough Sets, Fuzzy Sets, Data Mining and Granular Computing, ser. Lecture Notes in Computer Science / S. Kuznetsov, D. lzak, D. Hepting, and B. Mirkin (редакторы). – Springer Berlin Heidelberg, 2011. – С. 248–256.

For book chapters / articles in collections

1. Manning, C. Introduction to Information Retrieval / C. Manning, P. Raghavan, and H. Schutze. – New York, NY, USA: Cambridge University Press, 2008 – 544 c.

For books

1. Ramos, J. Using TF-IDF to Determine Word Relevance in Document Queries [Электронный ресурс]: Technical Report, 2003 – Режим доступа: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.121.1424&rep=rep1&type=pdf>, свободный. (дата обращения: 15.04.15).

For articles published on the Internet

1. Дубов, М.С. Аннотированные суффиксные деревья: особенности реализации / М.С. Дубов, Е.Л. Черняк // Доклады по компьютерным наукам и информационным технологиям – 2013 – №2 – Доклады всероссийской научной конференции «Анализ изображений, сетей и текстов» (АИСТ 2013). М: Национальный Открытый Университет ИНТУИТ, апрель 2013 – С. 49-57.

For articles in conference collections

1. Маркин, А.К. Bianalyzer is a Python package for bicluster analysis over unstructured text data [Электронный ресурс] / GitHub. Режим доступа: <https://github.com/luntos/bianalyzer>, свободный. (дата обращения: 25.05.15)

For Internet sources

1. Миркин, Б.Г. Использование мер релевантности строка-текст для автоматизации рубрикации научных статей / Е.Л. Черняк, Б.Г. Миркин // Бизнес-информатика – 2014 – №2 (28) – С. 51–62.

For journal publications