

## Paper title in English

## Paper title in Polish

Tomasz Adam Kowalski<sup>a,\*</sup>, Dariusz Nowak<sup>b</sup><sup>a</sup> Department of Computer Science, Lublin University of Technology, Nadbystrzycka 36B, 20-618 Lublin, Poland<sup>b</sup> Another Institution, address**Abstract**

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris.

**Keywords:** stress; spring boot; molecular dynamics simulation

**Streszczenie**

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris.

**Słowa kluczowe:** naprężenia; spring boot; dynamika molekularna

\*Corresponding author

Email address: [kowalski@company.com](mailto:kowalski@company.com) (T. A. Kowalski)

Published under Creative Common License (CC BY 4.0 Int.)

**1. Introduction**

This document has been prepared for authors preparing articles in Polish or English, with the intention of publication in the *Journal of Computer Sciences Institute* (J. Comput. Sci. Inst.). The document should be sent electronically via the website: <https://ph.pollub.pl/index.php/jcsi>.

We submit a document in a two-column format based on a sample template available at: <https://cs.pollub.pl/oldjcsi/jcsi.zip>. The file includes a sample document in docx format. The appearance of the created document should be as close as possible to the sample document. This applies absolutely to margins, spacing, font size and style, position and appearance of captions above/below objects. Formulae, figures and other numbered objects should be automatically numbered. Spacing and font should be the same throughout the document. It is imperative that you use the defined styles to change the formatting of your document. The mandatory standard font is Times New Roman, 10 points in size and with single line spacing. The text should be justified with hyphenation turned on. The margins should be: top and bottom 2.5 cm, left and right 2 cm, width of the columns 8 cm with 1 cm space. The first paragraph after each chapter must be without indentation, for this purpose a special style "Normal text with indent" has been added.

After the titles and authors, we present the abstracts in English and Polish. They should match each other

and should not exceed 800 characters (including spaces). Below we put 2-4 keywords for the English and Polish versions, as in the example, separated by a semicolon. Authors who do not know the Polish language skip the part written in Polish. Then we place the content of the document. The paragraphs immediately at the beginning of each chapter are not indented. Other styles are not allowed. We send the final version of the work via the website. Please send the source file to the publishing house in the format **surname\_of\_correspondence\_author.docx** and a compatible PDF (*Portable Document Format*) file.

The editors reserve the right to change the final graphic design of the document.

**2. Formulae**

The names of constants and numbers should be written in a simple font, for example 3.1415 hPa. Variable names should be written in italics, and vectors should be additionally bold. Formula numbers should be aligned to the right margin, e.g.:

$$S_i = \frac{1}{V_i} \left[ m_i \mathbf{v}_i \otimes \mathbf{v}_i + \frac{1}{2} \sum_{j \neq i}^N \mathbf{r}_{i,j} \otimes \mathbf{f}_{i,j} \right] \quad (1)$$

where  $m_i$  is the mass of the atom  $i$ ,  $\mathbf{v}_i$  is its velocity,  $\mathbf{r}_{i,j} = \mathbf{r}_i - \mathbf{r}_j$  is a vector connecting two atoms  $i$  and  $j$ ,  $V_i$  is the volume of the atom  $i$ ,  $\mathbf{f}_{i,j}$  is the force of interaction and  $N$  is the number of atoms.

### 3. Objects

Figures, tables, examples and algorithms should be placed as close as possible to their first use in the article. Figures, photos, screenshots or graphics in general should be of good quality when included in the content of the article. They should be legible and embedded permanently in the document.

#### 3.1. Figures

Figures should be centred in relation to the column and captions should be below the drawing, as in Figure 1. It is possible to place a drawing that covers the entire width of the page.

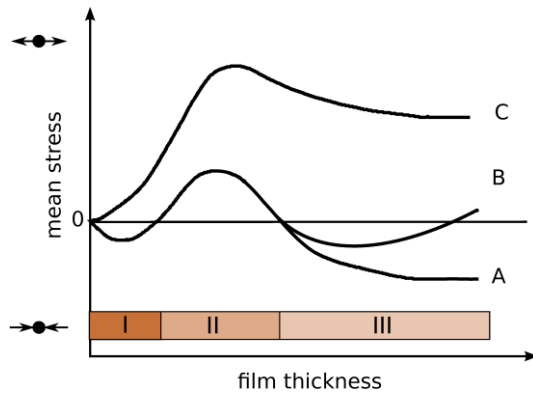


Figure 1: The drawing should be legible, it can be in JPG, PNG, EPS, or PDF format at a resolution of 300 dpi

#### 3.2. Tables

Tables should be numbered and titled above the table as in the example (see Table 1) and centred in relation to the column.

Table 1: Standard deviation of the distance measurement

Model	std.dev. $d_n(3)$ (m)	std.dev. $d_n(20)$ (m)	average cpu time (s)
M1	0.0021	0.0361	0.95
M2	0.0020	0.0377	1.18
M3	0.0013	0.0190	1.38

Table 2: Same table but different appearance

Model	std.dev. $d_n(3)$ (m)	std.dev. $d_n(20)$ (m)	average cpu time (s)
M1	0.0021	0.0361	0.95
M2	0.0020	0.0377	1.18
M3	0.0013	0.0190	1.38

The size of the font used in the table may be smaller than the font used for the text by a maximum of two points. It is possible to insert a table that covers the entire width of the page.

#### 3.3. Listings and source codes

Sample program codes should be placed in text form with proper formatting or in the form of good-quality graphics, with proportionality of the font size used (see Listing 1). To improve the readability of the code, you

can use fonts other than the base one. Regardless of the method of placement, we sign them at the top, as in the sample code.

Listing 1: Sample program code

```
#include <iostream>
using namespace std;
void delta(int a, int b, int c)
{
    int delta=b*b-4*a*c;
    cout<<"Delta wynosi: "<<delta;
}
void szescian(int a)
{
    int szescian=a*a*a;
    cout<<"Szescian wynosi: "<<szescian;
}
int main()
{
    delta(5,3,4);
    szescian(3);
    return 0;
}
```

#### 3.4. Algorithms

A sample Algorithm 1 may look as follows:

Algorithm 1: Sample algorithm

---

```
input :  $N_s$ -number of experimental points for
        each distance
output: An average path-loss exponent
for  $k = 1$  to  $N$  do
    | Generate  $N$  random particles according to
    | propagation model
end
for  $j = 1$  to  $N_s$  do // loop over ...
    | for  $k = 1$  to  $N$  do
    | | Calculate  $N$  samples using 1 and
    | | corresponding weights  $w_k$ 
    | end
    | Calculate total weight:  $w_s = \sum_{i=1}^N w_k^j$ 
    | for  $k = 1$  to  $N$  do
    | | Normalize weights:  $w_k = w_k / w_s$ 
    | end
    | Calculate  $N_{eff}$ 
end
Estimate mean path-loss exponent
```

---

### 4. Ordered and unordered lists

Prepare ordered and unordered lists according to the defined styles. It is allowed to change the list numbering style.

An example of an ordered list:

1. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis.
  - a) Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, lputatea, magna:
    - i. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore.
    - ii. Fugiat nulla pariat. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.
  - b) Lorem ipsum dolor sit amet, consectetur.

2. Lorem ipsum dolor sit amet, consectetur adipiscing elit Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis.
3. Lorem ipsum dolor sit amet, consectetur adipiscing elit Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis.

An example of an unordered list:

- lorem ipsum dolor sit amet, consectetur adipiscing elit Ut purus elit,
- lorem ipsum dolor sit amet, consectetur adipiscing elit Ut purus elit:
  - lorem ipsum dolor sit amet, consectetur adipiscing elit Ut purus elit,
  - lorem ipsum dolor sit amet, consectetur adipiscing elit Ut purus elit,
- lorem ipsum dolor sit amet, consectetur adipiscing elit Ut purus elit.

## 5. Conclusions

Conclusions should contain a short summary of the most interesting results contained in the work. In addition, you may provide information on the conduct of research under a funded research programme, acknowledgements of companies/people cooperating in the research, as well as the consent of the Research Ethics Committee when experiments involving human participants were carried out in the research.

## References

Items in the reference list [1-3] should be numbered [4] in square brackets [3, 5-19] in the order in which they appear in the article. The **References** section name should not be numbered. Subsequent references should be placed as in the given example. We prefer descriptions of literature in English (items in the literature list). References to the website [3, 4] in the reference list and to DOI addresses should be active and placed as in the example [6-9].

## References

- [1] G. Dziewit, J. Korczyński, M. Skubiewska-Paszkowska, Performance analysis of relational databases Oracle and MS SQL based on desktop application, *Journal of Computer Sciences Institute* 8 (2018) 263–269, <https://doi.org/10.35784/jcsi.693>.
- [2] W. Bolesta, Analysis of query execution speed in the selected NoSQL databases, *J. Comput. Sci. Inst.* 7 (2018) 138–141, <https://doi.org/10.35784/jcsi.662>.
- [3] Insert a short description of the link. TEX–basics, [https://en.wikibooks.org/wiki/LaTeX/Plain\\_TeX](https://en.wikibooks.org/wiki/LaTeX/Plain_TeX), [23.01.2024].
- [4] J. Hsu, C. Fuentes-Hernandez, A.R. Ernst, J.M. Hales, J.W. Perry, B. Kippelen, Linear and nonlinear optical properties of Ag/Au bilayer thin films, *Optics Express* 20 (2012) 8629–8640.
- [5] D. V. Nesterenko, Surface plasmon sensing with different metals in single and double layer configurations, *Appl. Opt.* (2012) 6673–6682, <http://dx.doi.org/10.1007/s11468-013-9575-1>.
- [6] E. Casalicchio, V. Percibali, Measuring Docker Performance: What a mess!!!, *Proceedings of the 8th ACM/SPEC on International Conference on Performance Engineering Companion* (2017) 11–16, <https://doi.org/10.1145/3053600.3053605>.
- [7] C. Wressnegger, F. Yamaguchi, A. Maier, K. Rieck, Twice the bits, twice the trouble: Vulnerabilities induced by migrating to 64-bit platforms, *Proceedings of the ACM Conference on Computer and Communications Security* (2016) 541–552, <https://doi.org/10.1145/2976749.2978403>.
- [8] J. Stubbs, W. Moreira, R. Dooley, Distributed systems of microservices using Docker and Serfnode, In *7th International Workshop on Science Gateways* (2015) 34–39, <https://doi.org/10.1109/iwsg.2015.16>.
- [9] P. G. de Gennes, *Scaling Concepts in Polymer Physics*, Cornell University Press, London, 1979.
- [10] S. Ambler, *User Interface Design: Tips and Techniques*, Cambridge University Press, Toronto, 2000.
- [11] M. Gajewski, W. Zabierowski, Analysis and comparison of the Spring framework and play framework performance, used to create web applications in Java, In *IEEE XVth International Conference on the Perspective Technologies and Methods in MEMS Design* (2019) 170–173.
- [12] S. Pavkov, I. Franković, N. Hoić-Božić, Comparison of game engines for serious games, In *2017 40th International Convention on Information and Communication Technology, Electronics and Microelectronics (MIPRO) IEEE* (2017) 728–733.
- [13] N. Ndou, R. Ajoodha, A. Jadhav, Music genre classification: A review of deep-learning and traditional machine learning approaches, In *2021 IEEE International IOT, Electronics and Mechatronics Conference (IEMTRON-ICS)* (2021) 1–6.
- [14] A. M. Potdar, D. G. Narayan, S. Kengond, M. M. Mulla, Performance evaluation of docker container and virtual machine, *Procedia Computer Science* 171 (2020) 1419–1428.
- [15] J. Jagiełło, Performance comparison between React Native and Flutter, Bachelor thesis, Umeå University, Umeå, 2019.
- [16] M. Olsson, A comparison of Performance and Looks Between Flutter and Native Applications: When to prefer Flutter over native in mobile application development, Bachelor thesis, Blekinge Institute of Technology, Karlskrona, 2020.
- [17] M. Jusiega, Comparative analysis of selected versions of the Symphony programming framework, Master thesis, Lublin University of Technology, Lublin, 2020.
- [18] R. Torkar, Towards Automated Software Testing: Techniques, Classifications and Frameworks, PhD dissertation, Blekinge Institute of Technology, 2006.
- [19] T. Zientarski, D. Chocyk, Structure and stress in Cu/Au and Fe/Au systems: A molecular dynamics study, *Thin Solid Films* 562 (2014) 347–352.