

## Co-Authorship Form

This form is to accompany the submission of any PhD that contains published or unpublished co-authored work. **Please include one copy of this form for each co-authored work.** Completed forms should be included in all copies of your thesis submitted for examination and library deposit (including digital deposit), following your thesis Acknowledgements. Co-authored works may be included in a thesis if the candidate has written all or the majority of the text and had their contribution confirmed by all co-authors as not less than 65%.

Please indicate the chapter/section/pages of this thesis that are extracted from a co-authored work and give the title and publication details or details of submission of the co-authored work.

Cooper, J. and Nicolescu, R. (2021) 'Revisiting Sorting and Selection, Applied to Median Filtering: Extended Abstract', in Vaszil, G., Zandron, C., and Zhang, G. (eds) Proceedings. Debrecen, Hungary: University of Debrecen (International Conference on Membrane Computing). Available at:  
[https://konferencia.unideb.hu/sites/default/files/upload\\_documents/icmc-2021-proceedings-august-2021.pdf](https://konferencia.unideb.hu/sites/default/files/upload_documents/icmc-2021-proceedings-august-2021.pdf).

This work forms part of Chapter 6 "Statistical Operations and Median Filtering in cP Systems"

Nature of contribution  
by PhD candidate

Wrote paper. Devised most statistical operations, and the median filtering rules.

Extent of contribution  
by PhD candidate (%)

85


### CO-AUTHORS

| Name           | Nature of Contribution   |
|----------------|--|
| Radu Nicolescu | Provided editorial support. Contributed to the 'sorting multisets into a range' and 'selecting over multisets' rulesets. |
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|                |  |

### Certification by Co-Authors

The undersigned hereby certify that:

- ❖ the above statement correctly reflects the nature and extent of the PhD candidate's contribution to this work, and the nature of the contribution of each of the co-authors; and
- ❖ that the candidate wrote all or the majority of the text.

| Name           | Signature   | Date       |
|----------------|---|------------|
| Radu Nicolescu |  | 17/09/2021 |
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