

## LIST OF SCIENTIFIC WORKS

| No. | Title of the work                                                                                               | Manuscript or publication | Place of publication, name of journal (No., year), copyright certificate No.                                                                                            | Number of printer's sheets or pages | Co-authors' surnames                                |
|-----|-----------------------------------------------------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------------|
| 1.  | A CUDA Performance Study of Global- and Shared-Memory Kernels for the Buckley–Leverett Polymer-Flooding Problem | Published                 | Appl. Sci. 2026, 16(11), 5449; <a href="https://doi.org/10.3390/app16115449">https://doi.org/10.3390/app16115449</a> (registering DOI)                                  | 33                                  | Timur Imankulov, Sergei Gorlatch, Bazargul Matkerim |
| 2.  | Parallel Implementation of Muskat–Leverett Equation Using CUDA                                                  | Published                 | Journal of Mathematics, Mechanics and Computer Science. – 2023. – Vol. 119, No. 3.                                                                                      | 13                                  | Imankulov T., Daribayev B                           |
| 3.  | Development of Hybrid Parallel Computing Models to Solve Polymer Flooding Problem                               | Published                 | European Association of Geoscientists & Engineers, ECMOR 2022. – September 2022. – Vol. 2022. – P. 1–14.                                                                | 15                                  | Imankulov T., Daribayev B., Akhmed-Zaki D           |
| 4.  | Solving the Oil Displacement Problem Using a Hybrid MPI+OpenMP Parallel Algorithm                               | Published                 | Bulletin of Abai KazNPU, Series of Physical and Mathematical Sciences. – 2023. – No. 1(81).                                                                             | 10                                  | Kenzhebek Y.G., Imankulov T.S.                      |
| 5.  | Design and Development of a Hybrid (MPI+CUDA) Parallel Program for Solving the Oil Displacement Problem         | Published                 | Bulletin of the National Engineering Academy of the Republic of Kazakhstan. – 2024. – No. 1(91).                                                                        | 10                                  | Imankulov T.S., Matkerim B.                         |
| 6.  | Comparative Analysis of Reduction Algorithms in CUDA for the Pressure Equation                                  | Published                 | Journal of Problems in Computer Science and Information Technologies. – 2023. – Vol. 1, No. 2.                                                                          | 10                                  | Imankulov T.                                        |
| 7   | Using Machine Learning Algorithms to Solve Polymer Flooding Problem                                             | Published                 | Conference Proceedings, ECMOR 2022, Sep. 2022, Vol. 2022, p. 1–9. <a href="https://doi.org/10.3997/2214-4609.202244056">https://doi.org/10.3997/2214-4609.202244056</a> | 9                                   | T. Imankulov, Y.G. Kenzhebek,                       |

