

Dr. Drasko Tomic

Rudjer Boskovic Institute, Zagreb, Croatia

Email: drasko@irb.hr | ORCID: 0000-0002-8784-7081

Education

- Ph.D. in Mechanical Engineering, Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb, Croatia – 2005
- Diploma Study in Management, Faculty of Electrical Engineering and Computing, University of Zagreb, Croatia – 1996
- M.Sc. in Computer Science, Faculty of Electrical Engineering and Computing, University of Zagreb, Croatia – 1985
- B.Sc. in Electrical Engineering, Faculty of Electrical Engineering and Computing, University of Zagreb, Croatia – 1981

Current Position

- **Expert Advisor, Rudjer Boskovic Institute, Zagreb, Croatia (08/2023 – Present)**
 - Leads the development and application of the AI_Pathway based VINI in silico cancer model to discover new anticancer drugs.
 - Develops large-scale DNA methyltransferase 1 (DNMT1) molecular simulations for cancer drugs discovery.
 - Principal investigator of EU projects aimed at discovering new cancer drugs.
 - Leads students in summer internships focused on further improving virtual drug screening methods.

Professional Affiliations & Memberships

- **Active Member, American Association for Cancer Research (AACR) – 2026–Present**
 - Actively contributing to oncology research through advanced computational platforms and dissemination at major AACR channels.

Research Leadership (Selected Projects)

- 2024 – 2026: Principal Investigator, JUPITER Early Access Project – Improving accuracy and speed of virtual drug screening using NAMD
- 2023 – 2024: Principal Investigator, EuroHPC Project – Towards more effective therapies against prostate cancer
- 2022 – 2023: Principal Investigator, EuroHPC Project – VINI in silico cancer model
- 2022: Presenter, 1st DrugBank Academic Research Webinar – The VINI in silico model of cancer

Awards & Recognition

- 2022: Invited Presenter, 1st DrugBank Academic Research Webinar – The VINI in silico model of cancer
- 2017: Election to a Scientific Position, University of Rijeka
- 2015: Innovation Award, Hewlett-Packard – Contribution to HPC Cloud systems
- 2011: Inducted into Hewlett-Packard Blade Ambassador Hall of Fame

Previous Positions

- Researcher, Faculty of Electrical Engineering and Computing (05/2023 – 07/2023)
- Expert Advisor, Rudjer Boskovic Institute (03/2019 – 04/2023)
- Postdoctoral Researcher, University of Rijeka (04/2016 – 03/2019)
- Chief Technologist, Hewlett-Packard (07/2000 – 02/2016)
- Software Engineer, Infosistem d.d. (10/1990 – 06/2000)
- Software Engineer, Benninger AG (06/1986 – 08/1990)
- Software Engineer, Ericsson Nikola Tesla (01/1983 – 05/1986)

Selected Publications

(Full bibliography provided in a separate document)

[1] Tomic, D. (2026). VINI: A multimodal in silico platform for discovering rational drug combinations in KRAS-mutant pancreatic cancer. *Cancer Research (AACR)*, 86(7_Supplement), 977. <https://doi.org/10.1158/1538-7445.AM2026-977>

[2] Tomic, D., Murgic, J., Fröbe, A., Skala, K., Vrljicak, A., Medved Rogina, B., Kolarek, B., Bojovic, V. (2024). Exploring potential therapeutic combinations for castration-sensitive prostate cancer using supercomputers: a proof of concept study. *Scientific Reports*, 14(1), 18824. <https://doi.org/10.1038/s41598-024-69880-9>

[3] Tomic, D., Davidovic, D., Szasz, A.M., Rezeli, M., Pirkic, B., Petrik, J., et al. (2021). The screening and evaluation of potential clinically significant HIV drug combinations against the SARS-CoV-2 virus. *Inform Med Unlocked*, 23, 100529. <https://doi.org/10.1016/j.imu.2021.100529>

[4] Tomic, D., Pirkic, B., Skala, K., Kranjcevic, L. (2019). Predicting the effectiveness of multi-drug cancer therapies. In *42nd International Convention on Information and Communication Technology, Electronics and Microelectronics (MIPRO)*, Opatija, Croatia, pp. 375–380. <https://doi.org/10.23919/MIPRO.2019.8757131>

[5] Tomic, D., Skala, K., Kranjcevic, L., Pirkic, B., Stifter, S., Smit, I. (2018). Evaluation of the efficacy of cancer drugs by using the second largest eigenvalue of metabolic cancer pathways. *Journal of Computer Science & Systems Biology*, 11(3), 240–248. <https://doi.org/10.4172/jcsb.1000280>

[6] Tomic, D. (2002). Spectral performance analysis of parallel processing systems. *Chaos, Solitons & Fractals*, 13(1), 25–38. [https://doi.org/10.1016/S0960-0779\(00\)00223-X](https://doi.org/10.1016/S0960-0779(00)00223-X)