

Michal Trčka Michal Trčka is a postdoctoral researcher in the OP JAK AMULET project at the J. Heyrovský Institute of the Czech Academy of Sciences and a research fellow at the Czech Institute of Informatics, Robotics and Cybernetics at the Czech Technical University in Prague. He also works as a university lecturer at the Technical University of Liberec. He received his Ph.D. in Political Science from Charles University in 2019. His research focuses primarily on applied ethics, philosophy of science and technology, and interdisciplinary research on moral intuitions and the social impacts of nanotechnology and artificial intelligence. He is particularly interested in the ethical implications of emerging technologies, value-sensitive design methodologies, and the development of expert systems supporting ethical decision-making in science and research. He is a member of the Karel Čapek Center for Values in Science and Technology. Outside academia, he also serves as a co-publisher of the publishing house Academix. His current research projects include AMULET – Advanced MULTISCALE materials for key Enabling Technologies (the Czech Academy of Sciences) and the National Centre for Artificial Intelligence (CIIRC CTU).

Project at IAS-STIS: Non-permeable Data Collection in Open Science

Open Science (OS) has become one of the central frameworks shaping contemporary research policy and scientific practice. While it is commonly associated with transparency or accessibility, the circulation and sharing of research data remain uneven and often

constrained. These limitations are not only technical, such as insufficient metadata standards, but also different disciplinary traditions or interpretations of OS principles significantly influence how data are produced, managed, shared, and reused. The project draws on STS, critical data studies, and applied ethics to examine how digital technologies and AI-mediated workflows transform data practices. Particular attention is paid to questions of scientific creativity, data authorship, ownership, epistemic accountability, and inequalities in access to research infrastructures. Empirically, the research combines semi-structured interviews, ethnographic investigation of research and innovation practices, and analysis of participatory public engagement activities conducted within the AMULET project. Special attention is devoted to digital deliberation and the role of participatory infrastructures. During the fellowship, two main outcomes will be developed: an academic article examining AI-mediated open science and data authorship practices, and a proposal for the further development of an interactive online deliberative platform currently under development, designed to support stakeholder participation, inclusive discussions on scientific governance, and the societal implications of emerging technologies.

Selected Publications

TRČKA, Michal, STÖCKELOVÁ, Tereza, LUKÁŠ, David and SVOBODA, David. Nanoethics for the Plastocene: the value sensitive design of nanofiber materials. *Journal of Responsible Innovation*, 12(1), 2025. DOI: 10.1080/23299460.2025.2476245.

TRČKA, Michal. Tvorba nanovláken pohledem nanoetiky (Nanofiber Formation from the Perspective of Nanoethics). In: Lukáš, D. et al. *Nanovlákná: teorie, technologie a použití (Nanofibers: Theory, Technology and Applications)*. Prague: Academia, 2023. The publication received the prestigious Josef Hlávka Prize for Scientific Literature in the category “Sciences of Inanimate Nature” awarded by the Josef, Marie and Zdeňka Hlávka Foundation and the Czech Literary Fund Foundation.

TRČKA, Michal et al. Expertní systém pro podporu etického rozhodování v oblasti výzkumu a vývoje nanotechnologií (Expert System for Ethical Decision Support in Nanotechnology Research and Development). Software result (R_SOFTWARE), Technical University of Liberec, project TL0400023, 2022. See: <https://starfos.tacr.cz/en/projekty/TL0400023>

TRČKA, Michal. The Limits of Libertarianism in Debates over Euthanasia and the Application of Moral Fictionalism in Bioethics. *Ethics & Bioethics (in Central Europe)*, 10(1–2), 2020. DOI: 10.2478/ebce-2020-0004.