VANJA DJINLEV

Transdisciplinary Researcher

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WORK EXPERIENCE

Postdoctoral Researcher

Urban Energy Systems Laboratory (UESL), Empa - Swiss Federal Laboratories for Materials Science and Technology

March 2025 – ongoing Zurich, Switzerland

- Working on the development of urban energy strategies to support the uptake of Positive Energy Districts (PED);
- Doing research at the intersection of energy research and social science to craft policies for Positive Energy Districts (PED) as part of the Pol4PED project;
- Conducting techno-economic and socio-economic modeling to support a multidomain approach for the development and integration of Positive Energy Districts (PED);

Researcher & Scientific Assistant

Transdisciplinarity Lab (TdLab), ETH Zurich

August 2021 – February 2025 Zurich, Switzerland

- Working at the intersection of energy research and social science as part of the H2020 "ENCLUDE - Energy Citizens for Inclusive Decarbonization";
- Analyzing the role of citizens in realizing a just energy transition;
- Examining the supporting factors of heating and electricity producing collective energy initiatives (including energy communities) in Europe and beyond;
- Designing and implementing the ENCLUDE Academy for Energy Citizen Leadership;

Founder / Data Analyst & Researcher

NAVITAS - Centre for Energy, Environment and Sustainable Development

January 2018 – April 2021 Skopje, N. Macedonia

- Developing models to quantify the pollution levels from stationary and mobile sources in urban areas;
- Generating assessment reports on local and international companies by analysing information on ESG performance alongside other financial and strategic companies' information;
- Conducting energy and environmental assessment reports on a local and national level;
- Analysing the energy-environmental nexus in urban areas and examining the possibilities for improvement;
- Continuously managing various stakeholders in projects with different scale and scope.

EDUCATION

PhD in Environmental Systems Science

ETH Zurich, Switzerland

Graduated in January 2025

- Determining how societal change unfolds based on past collective actions to support the energy transition;
- Examining the factors that help in operationalization of different collective energy initiatives across different contexts.
- Analyzing how different heating systems influence energy justice and citizens' capability for energy decision making;
- Studying the shared visions of different stakeholders regarding the transition of the electricity sector in Switzerland;

MSc in Energy Engineering

Politecnico di Milano, Milan, Italy

Graduated in 2019

- Developed a novel approach for analysing the small-scale Distributed Energy Resources (DERs) integration potential within the existing distribution and transmission grids in the Canton of Zurich, Switzerland;
- Derived the financial feasibility of integrating variety of DERs within different peer-to-peer (P2P) architectures, focusing on the Canton of Zurich, Switzerland;
- Analysed the viability and technical applicability of DERs within the current energy scenario, electricity network and future energy plans of the whole country and of the Canton of Zurich, Switzerland.

Professional Master Degree in Cooperation and Development

University of Pavia, Pavia, Italy

Graduated in 2019

Engineering Project Consultant

Toplifikacija Engineering

January 2013 – March 2015 Skopje, N. Macedonia

- Collecting, consolidating, manipulating and analyzing multiple energy production and consumption data to support the supply of energy forecasts to various types of consumers;
- Distributed energy production analysis and modeling of small-scale energy projects that involve renewable energy sources;
- Developing models for clustering analysis to support the development of new products;
- Conducting techno-economic analysis for different energy technologies and their environmental impact in various scenarios;
- Supported the analysis of the electricity market with optimization and equilibrium models.

Data Analyst Internship

Energetika

May 2012 – October 2012 Ljubljana, Slovenia

- Gathering and structuring the energy supply and demand data for improving the supply and demand forecasts;
- Conducting daily on-site instrument checkups for ensuring the continuous supply of energy;
- Participating in field inspections and fault determination of the natural gas infrastructure.

SELECTED WORKS

Research Articles

- Djinlev, V., Pearce, B. B. and Stauffacher, M. (2025). Evolving Roles and Shared Futures: Challenges and Visions for Switzerland's Electricity Sector Transition. Energy, Sustainability and Society (in review);
- Djinlev, V. and Pearce, B. B. (2024). Heating Up the Energy Transition: Comparing Energy Justice and Energy Decision-making in individual and collective heating systems to support a just heating transition. Energy Research and Social Science, 125;
- Djinlev, V. (2024). Engineering Community Resilience: A Transdisciplinary Early Career Researcher's Journey in Cultivating Bottom-up Energy Initiatives Amidst Uncertainty. Advances in Transdisciplinary Engineering, 60;
- Djinlev, V. and Pearce, B. B. (2024). Collective action lessons for the energy transition: learning from social movements of the past. Sustainability Science, 19;
- Djinlev, V., Dallo, I., Müller, S. M., Surchat, M., von Rothkirch, J., Wenger, A. and Späth, L. (2023). Challenges and strategies in transdisciplinary research - early career researchers' perspectives. Gaia, 32/1;

Reports

- Djinlev, V. (2022), Analysis of alternatives to coal-based district heating for the Bitola region. CEE Bankwatch Network.

Guidebooks

- Pearce, B. B., Verhulst, B., Dagorne, E., Mokay, N. G. and Djinlev, V. (2024). A Changemaker's Guide to the Energy Transition: Citizens designing change one step at a time. H2020 ENCLUDE.

- Developed models for ensuring energy access in emergency and development scenarios by adopting different distributed energy resources (DERs);
- Analysed the energy-environment nexus in the Global South focusing on the current and future possibilities of adopting and integrating variety of distributed energy resources (DERs);
- Explored the possibility and adapted different project and programme management tools and approaches within the Comprehensive Energy Solutions Planning (CESP) paradigm.

MSc in Thermal Engineering

Faculty of Mechanical Engineering - Skopje, N. Macedonia

Graduated in 2016

- Developed a dynamic model for calculating exhaust emissions from mobile sources in urban areas based on EMEP/EEA's Tier 3 framework;
- Analysed the overall emission contribution from the transport sector within the capital city of North Macedonia taking into account different fuels, EURO emission standards, vehicle categories and engine displacements;
- Created a highly adaptable hot emissions quantification model suitable for application in different urban areas and environments.

BSc in Thermal Engineering

Faculty of Mechanical Engineering - Skopje, N. Macedonia

Graduated in 2012

- Determined the efficiency and integration potential of a small-scale solar thermal power plant (STPP) within domestic biomass-based heating systems for heating and DHW purposes;
- Performed a techno-economic analysis of different systems with various sizes in several geographic locations to determine the efficiency and efficacy of STPP integration with domestic biomass-based systems.