Environmental System Sciences (Climate and Environmental Monitoring)
Masterarbeitsthemen 2024/2025 **W. Sprengel / A. Wischgala (April 2025)**

abgeschlossen Masterarbeiten (2024 / 2025)

Feld	Titel	TU Institut	KFU Institut
MAT	Adsorption of xylan on pulp fibers	6610 Inst. für Biobasierte Produkte und Papiertechnik	
R	Corporate Sustainability Reporting Directive and European Sustainability Reporting Standards - Compliant Sustainability Reporting: The Case of Technische Universität Graz - Fundamentals, Data Points and Conclusions	7060 Inst. of Human-Centred Computing (Science and Technology Studies)	
E	Application of batteries for fast charging stations in a power-limited grid using the example of Kelag e-mobility	6670 Inst. für Chemische Verfahrenstechnik und Umwelttechnik	
R	Circular economy assessment - A comparison of indicators and requirements for their implementation		404 Inst. für Umweltsystemwissenschaften
E	Battery Electric Mobility and Climate Change: Selected Consequences of the Supposed Transition from Internal Combustion Engines to Battery Electric Vehicles		646 Inst. für Chemie
R	Impact of the New EU Methane Emissions Regulation on Gas Distribution Network Operations: A Case Study of Energienetze Steiermark GmbH	7060 Inst. of Human-Centred Computing (Science and Technology Studies)	
M	Remote Sensing and GIS Analysis of Land Cover Changes Caused by the Gaziantep Earthquake-Induced Floods	5220 Inst. für Geodäsie	
E	Modelling of the Isolation Resistance of a PEM Fuel Cell System	4320 Inst. für Elektrische Anlagen und Netze	

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Feld	Titel	TU Institut	KFU Institut
R	The evolution of circular business models in the context of repair		404 Inst. für Umweltsystemwissenschaften
E	Performance of the transformation between electrical energy and heat with the use of Peltier elements		653 Inst. für Physik
T	Implementation of Rapid Transport Systems for regional bus lines in Graz		404 Institut für Umweltsystemwissenschaften
M	Evaluation of the utility of radio occultation data for monitoring the Hadley cell under climate change		411 Wegener Center für Klima und Globalen Wandel
R	Ecological Evaluation of different types of Austrian diets using the Sustainable Process Index (SPI) - A concept for an interactive didactic strategy	6690 Inst. für Prozess- und Partikeltechnik	
C	Sensitivity of changes in precipitation extremes in pseudo global warming simulations to the choice of boundary condition changes		411 Wegener Center für Klima und Globalen Wandel
C	Double jet stream states and impacts on European heatwaves with a special focus on Austria		411 Wegener Center für Klima und Globalen Wandel

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Masterarbeiten in Bearbeitung (2025 -->)

Feld	Titel	TU Institut	KFU Institut
MAT	Bio-based nanofiber hydrogel composites for 3D printing	6430 Inst. für Chemie und Technologie Biobasierter Systeme	
R	Modeling Rebound Effects from a Shift to Electric Vehicles in Private Mobility in Styria		404 Inst. für Umweltsystemwissenschaften
R	Development and analysis of system integration concepts and optimized operation strategies of a large-scale thermal energy storage	6670 Insti. für Chemische Verfahrenstechnik und Umwelttechnik	
M	Behaviour of Fluorinated Pharmaceuticals and Pesticides in Wastewater and Surfacewater		646 Inst. für Chemie
M	Strain measurements with leaser induced surface acoustic wave measurements		653 Insti. für Physik
E	Modeling of Storage Chains for climate- friendly Energy Systems	4340 Inst. für Elektrizitätswirtschaft und Energieinnovation	
C	Analysis of climate feedbacks and radiative response and integration into the Graz Climate Change Indicators portal		411 Wegener Center für Klima und Globalen Wandel
M	Characterisation of biofuel combustion products		646 Inst. für Chemie
R	Resilience of societies against intolerance - An agent-based modelling approach for exploring tolerance dynamics		404 Inst. für Umweltsystemwissenschaften
T	Substitution effects of an autonomous trolley system in Weiz and Feldkirchen - A model-based analysis of environmental substitution effects from a shift towards alternative transportation modes		404 Inst. für Umweltsystemwissenschaften

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Feld	Titel	TU Institut	KFU Institut
T	Solar Powered E-Cargo Bikes	7060 Inst. of Human-Centred Computing (Science and Technology Studies)	
E	CFD simulation and analysis of gas diffusion layer degradation in PEM fuel cells	6670 Inst. für Chemische Verfahrenstechnik und Umwelttechnik	
R	CSRD-compliant sustainablility reporting for a hospital corporation - using the example of the Steiermärkische Krankenanstaltengesellschaft m.b.H. with a focus on the standards ESRS E1 and ESRS S1	7060 Inst. of Human-Centred Computing (Science and Technology Studies)	
M	Product carbon footprint analysis of a wood and green waste shredder: estimating CO2 emissions with pre-existing data		404 Inst. für Umweltsystemwissenschaften

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