

CHILE-GERMANY ACADEMIC FORUM 2027

13 Selected Working Groups

Santiago de Chile, April 5–7, 2027

Working Groups:

1. Food Systems, Food Justice and Contemporary Transitions
2. Beyond the Hazard: Understanding Systemic Climate Risks, Cascading Maladaptation, and Climate Resilience Through Interdisciplinary Research and Science Communication
3. Science and Society in an Age of Disruption: Knowledge Governance between Chile and Germany
4. From Flood Hazard to Resilience: Evidence, Models, and Decisions
5. Responsible AI for Criminal Investigations: Experiences and Challenges in Tackling Organized Crime in Chile and Germany
6. Digital Mental Health for Children, Adolescents and Young People: Advancing Research, Innovation and Implementation through Chile-Germany Collaboration
7. From Biomedical Data to Clinical Insight: Human-Centered AI Across Chile and Germany
8. Criminal Threats to the Rule of Law: Criminal Law, Transitional Justice and the Search for a Post-Cosmopolitan Toolbox in an Age of Global Fragmentation
9. Water: A Strategic Resource for the Future
10. German-Chilean Working Group on Mountain Cryosphere and Water Systems
11. Long-Term Urban Ecosystem Monitoring – Benchmarks and Standardization
12. Earth Systems, Critical Minerals, and Society: Toward Sustainable Copper and Lithium Development
13. Political Behavior, Economic Expectations, and Financial Markets

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WORKING GROUP 1

Food Systems, Food Justice and Contemporary Transitions



Claudia Giacoman

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Her areas of specialization are the sociology of food and the sociology of the body. She has conducted research on commensality, veganism, food insecurity, obesity, meal timing, and reducing meat consumption. She is the founder of the Social Studies Group on Food (GESA) and organizer of the Permanent Seminar on Qualitative Methods.



Renata Motta Campos

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Professor and Deputy Director of the Heidelberg Center for Ibero-American Studies (HCIAS). She was Principal Investigator of the BMBF-funded "Food for Justice" research group (2019–2025), with recent major publications in The Sociological Review and Routledge.

Working Group Summary

This Working Group explores how ecological, technological, economic, and social transformations are reshaping food systems and food justice. Based on an interdisciplinary, comparative, and multilevel approach, the group examines the impacts of these changes on everyday food practices and social reproduction. It also looks at the role of social movements and other actors in developing alternatives, as well as the influence of digitalization, emerging technologies, and globalization on food cultures and systems. The group invites scholars from various fields, including sociology, anthropology, political ecology, science and technology studies, ethics, public health, nutrition, agronomy, and economics, interested in food systems, social movements and intersectionality. The group aims to create a binational network and to potentially develop joint publications, funding proposals, and academic exchanges.

Disciplines invited: Sociology, Anthropology and Political Ecology; Engineering, Science and Technology Studies (STS), Philosophy of Science, and AI Ethics; Public Health, Nutrition, Agronomy, and Economics.

WORKING GROUP 2

Beyond the Hazard: Understanding Systemic Climate Risks, Cascading Maladaptation, and Climate Resilience Through Interdisciplinary Research and Science Communication



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Executive Director of the UC Global Change Center, a research center at the Universidad Católica de Chile. His research interests are related to water resources, hydrologic modelling and integrated watershed management.



Michael Handke

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Associate Senior Lecturer of Economic Geography at Heidelberg University and director of the M.Sc. Governance of Risk and Resources master program at the Heidelberg Center for Latin America in Santiago de Chile.

Working Group Summary

Climate risks rarely occur in isolation. They emerge from interactions between hazards, vulnerabilities, infrastructure, ecosystems, economies, and institutions, and can cascade across sectors, communities, and territories. Adaptation itself can also create new vulnerabilities or transfer risks elsewhere. This Working Group brings together researchers and practitioners from climate science, engineering, social sciences, governance, risk management, economics, and communication to explore these systemic and cascading risks. Drawing on experiences from Chile and Germany, we will examine how interdisciplinary research, comparative case studies, and innovative risk communication can make complex and uncertain climate risks more tangible and actionable. A particular focus will be on how to better communicate the benefits of prevention and adaptation, often invisible because they represent avoided future losses, and support anticipatory, equitable, and resilient climate action.

Disciplines invited: Climate science; Social sciences; Communication studies; Governance; Engineering and Disaster Risk Management.

WORKING GROUP 3

Science and Society in an Age of Disruption: Knowledge Governance between Chile and Germany



Bárbara Silva

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Historian of science and technology in Chile and contemporary Latin America. Her research examines astronomy, solar energy, seismology, and water governance through politics, culture, science diplomacy, and international collaboration. She is Director of Research at College UC and Chile's representative to the IUHPST.



Kathia Serrano-Velarde

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Professor of Political Sociology at Heidelberg University's Max Weber Institute of Sociology. Her research examines the transformation of European education and science, focusing on organizational governance, academic careers, and institutional change.

Working Group Summary

How is science changing, and what does this mean for the future of knowledge? AI, digital infrastructures, new evaluation systems, and shifting expectations of public value are transforming how research is produced, assessed, and communicated. At the same time, researchers face declining trust, academic precarity, territorial inequalities, and growing pressures on scientific autonomy, and international collaboration. This WG brings Germany and Chile into conversation to explore these transformations from complementary perspectives. The working group aims to develop a discussion on how research systems respond to technological disruption, geopolitical polarization, and demands for socially and territorially relevant knowledge, and how these pressures are reshaping the values, practices, and futures of science. The WG seeks participants whose work engages, from any disciplinary or interdisciplinary point of view - including basic sciences- with the following or related areas: knowledge governance and science policy; science diplomacy and international research cooperation; science communication and public trust in expertise; ethics of science and research integrity; and science governance and funding systems.

Disciplines invited: Knowledge governance and science policy; Science diplomacy and international cooperation; Science communication and public trust; Responsible research assessment and open science; AI and technological change; Bibliometric studies.

WORKING GROUP 4

From Flood Hazard to Resilience: Evidence, Models, and Decisions



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Associate Professor at the Pontificia Universidad Católica de Chile. His research focuses on environmental fluid mechanics in fluvial and coastal systems, including turbulent flows, flood hazards, sediment transport and morpho dynamics. He is an associate researcher at CIGIDEN R+.



Mário Franca

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Professor of Hydraulic Engineering and Water Resources Management at KIT, Germany. His research focuses on flood hazards and river hydraulics, including sediment and debris transport, turbulent open-channel processes, and morpho dynamics.

Working Group Summary

Flood risk in Chile and Germany is rising under climate change and rapid urban development. Despite substantial uncertainty in hazards, exposure, and cascading impacts, decisions must rely on risk estimates that are shaped by human activities at local and global scales. This Working Group brings together earth and environmental sciences, engineering, hydrology and climate/meteorology, data science, urban planning, and risk governance to build a shared, resilience-oriented framework linking evidence and models to decision-relevant outcomes. Using benchmark case studies across settings with different data availability, we will integrate metrics and diagnostics, compare monitoring and remote-sensing strategies, and assess how uncertainty propagates into preparedness, emergency response, and long-term planning. We will also address cross-cutting themes, such as water quality and ecosystems, infrastructure performance, social vulnerability, and policy design, so that diverse disciplines can contribute and benefit. Deliverables include a transferable workflow for multi-hazard resilience assessment and a Chile-Germany collaboration roadmap.

Disciplines invited: Civil and Environmental Engineering; Data Science; Earth Sciences (hydrology, geomorphology, climate, sediments, ocean); Risk governance; Urban planning; Public policy.

WORKING GROUP 5

Responsible AI for Criminal Investigations: Experiences and Challenges in Tackling Organized Crime in Chile and Germany



Robert Pelzer

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Sociologist and criminologist who received his PhD in criminology from the University of Hamburg in 2016. Since 2014 he has been a research associate at the Center for Technology and Society at TU Berlin, where he has headed the research unit "Security – Risk – Criminology" since 2019.



Richard Weber

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Professor at the Department of Industrial Engineering at Universidad de Chile. His research interests include data mining, dynamic data mining, and computational intelligence with applications in crime analytics. He holds a Ph.D. in operations research from Aachen University, Germany.

Working Group Summary

TEXTO A REEMPLAZAR:

Law enforcement agencies in Chile and Germany face increasingly sophisticated organized crime and share core challenges such as money laundering, though within distinct legal and institutional contexts. This Working Group examines how digital tools (particularly AI) should be designed, governed, and implemented for lawful, effective use against organized crime while minimizing risks such as discrimination or over-surveillance. It contrasts Chile's more advanced use of AI on heterogeneous investigative data with Germany's more cautious, data-protection-driven approach, to identify transferable good practices in financial forensics, open-source intelligence, and criminal network analysis. We invite researchers from different disciplines (STEM, social sciences, law, anthropology, among others) as well as practitioners from all kinds of law enforcement agencies to participate in this working group to share their experiences and foster the development of strategies and tools to combat organized crime.

Disciplines invited: Artificial intelligence and responsible innovation; Criminology and organized crime; Prosecutors and police, as end users of the tools.

WORKING GROUP 6

Digital Mental Health for Children, Adolescents and Young People: Advancing Research, Innovation and Implementation through Chile- Germany Collaboration



Vania Martínez
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Child and adolescent psychiatrist and Full Professor at the Faculty of Medicine at Universidad de Chile. An internationally recognized leader in youth mental health, her research focuses on depression, suicide prevention, and digital mental health innovations.



Stephanie Bauer
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Director of the Center for Psychotherapy Research at Heidelberg University Hospital. A leading researcher in psychotherapy, mental health services, and digital mental health, she has over 20 years of experience developing and evaluating digital interventions.

Working Group Summary

Mental health problems are a major challenge for children, adolescents, and young people, while timely and equitable access to care remains limited. Digital technologies (including mobile and web-based interventions, telehealth, serious games, and AI-based conversational agents) offer new opportunities for promotion, prevention, early intervention, and care. This Chile-Germany Working Group will bring together researchers from complementary disciplines to advance high-quality research on the development, evaluation, implementation, and governance of digital mental health innovations. Through comparative research, participatory co-design, and knowledge exchange, we will strengthen sustainable, inclusive, and long-term academic collaboration between Chile and Germany. The group will foster new partnerships, support early-career researchers, and generate joint outputs, including publications and funding proposals.

Disciplines invited: Clinical psychology and psychotherapy; Child and adolescent psychiatry and public mental health; Implementation science; Digital health and AI; Ethics, law, and digital governance; Education and social sciences.

WORKING GROUP 7

From Biomedical Data to Clinical Insight: Human-Centered AI Across Chile and Germany



Stefan Bonn

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Professor and Director of the Institute of Medical Systems Bioinformatics at the University Medical Center Hamburg-Eppendorf. His research combines artificial intelligence, machine learning, bioinformatics, and systems biology to analyse complex biomedical and clinical data.



Denis Parra

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Associate Professor in the Department of Computer Science at Pontificia Universidad Católica de Chile, where he leads the Human-Centered AI and Visualization group. He is a principal researcher at the iHealth Millennium Institute and CENIA.

Working Group Summary

Medical AI models are often trained on narrow, single-site populations and fail to generalize across institutions and healthcare systems. This new binational Working Group, led by Prof. Stefan Bonn (Universität Hamburg) and Prof. Denis Parra (Pontificia Universidad Católica de Chile), unites experts in medical imaging, multi-omics, bioinformatics and human-centered AI to study population bias, domain shift and model transferability between Chile and Germany, using resources such as the PUC-CXR chest X-ray dataset, toward more robust and transparent clinical AI.

Disciplines invited: Biomedical and medical AI; Population bias and algorithmic health equity; Domain adaptation and generalization; Human-centered and explainable AI; Multimodal biomedical data integration; Information visualization and visual analytics; Bioinformatics and systems biology.

WORKING GROUP 8

Criminal Threats to the Rule of Law: Criminal Law, Transitional Justice and the Search for a Post-Cosmopolitan Toolbox in an Age of Global Fragmentation



Milan Kuhli

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Works on the historical and international dimensions of criminal law, with dedicated research on terrorism and corruption, including a comparative study of corruption, democracy and criminal law between Brazil and Germany.



Claudia Cárdenas

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Works principally on international criminal law, transnational criminal law and Transitional Justice, and is among the editors of the 2025 Routledge volume on transitional justice and the criminal responsibility of judges.

Working Group Summary

We examine how the rule of law can be defended, against specific criminal law phenomena in the present age of global fragmentation. Multilateral cooperation is giving way to renewed bloc-building. This shift confronts the entire legal system that should rest on shared principles. Against this background, criminal-law mechanisms of conflict resolution are reaching their limits. The Working Group therefore develops the notion of a post-cosmopolitan global criminal law. Our guiding question is to what extent the classic instruments of international and domestic criminal law, and in particular the experience of Transitional Justice in the reckoning with systemic injustice, can be adapted to present-day phenomena endangering the rule of law. Three contemporary phenomena – trafficking in persons and smuggling of migrants, terrorism, and corruption – serve as empirical strands through which this question is pursued from a historical and comparative perspective, with Germany and Chile as the principal reference jurisdictions. We hope to attract experts from several disciplines.

Disciplines invited: law, philosophy, history, psychology, and political sciences (non-exhaustive list).

WORKING GROUP 9

Water: A Strategic Resource for the Future



Luis Pino

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Assistant Professor in Chemical Engineering at the Universidad de Concepción. With more than 12 years of experience in membrane separation processes, his work focuses on water treatment, desalination, lithium brine processing, and advanced membrane materials.



Florencia Saravia

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Head of the Division Water Chemistry and Water Technology at the DVGW Research Center at EBI, KIT. With more than 15 years of experience, her work focuses on membrane fouling, lithium extraction from geothermal brines, and sustainable water management.

Working Group Summary

Water is a strategic resource for sustainable development, climate resilience, public health, and territorial equity. This Working Group will bring together Chilean and German researchers to explore how water systems can be managed, protected, recovered, and reused under increasing environmental, social, and economic pressures. The group will: a) identify shared and context-specific challenges compare Chilean and German experiences in integrated water resources management under climate uncertainty; b) exchange and assess technological and socio-technical approaches for water security, including desalination, water reuse, irrigation, wastewater treatment and extraction of raw materials; c) promote interdisciplinary collaboration among researchers from different fields and d) develop a binational research agenda aimed at future joint proposals, academic mobility, and recommendations for policy and practice. Through these objectives, the group will foster mutual learning, moving beyond one-directional knowledge transfer toward co-developed strategies for responsible water use, recovery, governance and resilience.

Disciplines invited: Integrated water resources management; Hydrology and hydrogeology; Drinking-water quality and sanitation; Wastewater treatment, reuse, and recovery; Desalination and alternative water sources; Agricultural, mining, and industrial water management; Water governance and territorial equity.

WORKING GROUP 10

German–Chilean Working Group on Mountain Cryosphere and Water Systems

**David Farías-Barahona***Universidad de Concepción*

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Associate Professor at the Universidad de Concepción, whose research focuses on glaciers, permafrost, snow, and mountain hazards across the Andes, Patagonia, and Antarctica, combining geodetic methods, remote sensing, numerical modelling and field observations.

**Lucas Menzel***Universität Heidelberg*

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Menzel's research focuses on the quantification of the impact of environmental change on hydrologic dynamics and water resources, with a key research region in the mountainous areas of Southern Siberia and Northern Mongolia, studied through field studies and hydrological models.

Working Group Summary

Mountain regions are experiencing rapid environmental change, with major consequences for water resources, ecosystems, natural hazards, and societies. This Working Group will bring together researchers from Germany and Chile to advance comparative research across the Andes, European Alps, and Asian mountain regions. By integrating in-situ and remote observations, and numerical modelling, the group will investigate interactions among snow, glaciers, permafrost, hydrology, climate variability, and natural hazards. Cross-regional comparisons will help identify common drivers, contrasting responses, and transferable methodologies for understanding and predicting mountain change. The Working Group will also strengthen long-term German–Chilean collaboration through joint workshops, field campaigns, methodological exchanges, and scientific outputs, while supporting capacity building and knowledge relevant to climate adaptation, water security, hazard mitigation, and sustainable mountain management.

Disciplines invited: Mountain cryosphere (glaciers, snow, permafrost); Cryosphere-related hazards (GLOFs, debris flows, avalanches); Mountain hydrology and hydrometeorology; Geomorphology and geophysics; Ecology and environmental sciences; Disaster risk assessment and reduction.

WORKING GROUP 11

Long-Term Urban Ecosystem Monitoring: Benchmarks and Standardization

**Christopher Ryan***Technische Universität Berlin*

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Has degrees in Anthropology, Women's Studies & Gender Research, and Environmental Horticulture, and a PhD in Earth and Environmental Sciences (CUNY). He is currently a postdoctoral researcher at TU Berlin studying Urban Ecosystem Science, focusing on urban ecosystem monitoring and carbon dynamics in Berlin.

**Francisco de la Barrera***Universidad de Concepción*

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Associate Professor at the Faculty of Environmental Sciences and Director of the EULA-Chile Environmental Sciences Center at the Universidad de Concepción. His work focuses on urban and landscape ecology, ecosystem services, nature-based solutions, and socio-ecological resilience.

Working Group Summary

Urban ecosystems have long been monitored, but many approaches are simply adapted from non-urban contexts while urban specific considerations remain neglected. These oversights impact the quality of data, as well as the ability for cross-site comparability. This working group will assess and evaluate existing urban ecosystem monitoring approaches in Germany and Chile, identify approaches to serve as baseline standards for holistic urban monitoring, and establish an action plan for advancing and testing this developed standardized urban ecosystem monitoring approach. Priority will be given towards transferable and feasible interdisciplinary and transdisciplinary approaches addressing environmental justice, community health, and stakeholder adoption.

Disciplines invited: Urban ecology, climatology, hydrology, biogeochemistry, geology, and biology; Urban history, geography, public health, anthropology, and sociology; Data and methodological standardization; Remote sensing, sensor deployment, and environmental engineering; Environmental justice, community, Indigenous, feminist, and queer perspectives on the urban context.

WORKING GROUP 12

Earth Systems, Critical Minerals, and Society: Toward Sustainable Copper and Lithium Development

**Sergio Leon-Rios***Universidad de Chile*sergio.leon-rios@amtc.uchile.cl

Geophysicist and seismologist specialized in seismic imaging and tectonics. He earned a PhD from KIT, Germany, and is currently an Associate Researcher at the Advanced Mining Technology Center (AMTC), Universidad de Chile, focusing on Chilean tectonics and Andean salars.

**Andreas Rietbrock***Karlsruher Institut für Technologie*andreas.rietbrock@kit.edu

Head of the Geophysical Institute (GPI) at KIT, Germany. Research at GPI spans Earth and Planetary Sciences, with a focus on Computational Geophysics, Seismology, Seismogeodesy, Seismic Imaging, Artificial Intelligence, and Induced Seismicity.

Working Group Summary

The global energy transition is accelerating demand for copper and lithium, raising important questions about how to explore and develop these resources sustainably. This Working Group brings together researchers from geosciences, environmental sciences, engineering, sustainability, and the social sciences to examine these challenges from complementary perspectives. We aim to address fundamental questions: How can geophysical characterization, environmental monitoring, natural-hazard assessment, and societal perspectives be integrated across the resource cycle? What can Chilean and German experiences teach us about sustainable resource development? Where lie opportunities for new methods, research questions and collaboration? Using Chilean mining districts and Andean salars as case studies, the WG will compare approaches, share experiences, identify research gaps, and develop interdisciplinary collaborations. We invite researchers from Chile and Germany to contribute their expertise, exchange perspectives, and help shape future joint research and knowledge exchange.

Disciplines invited: Geophysics and seismology; Structural geology and tectonics; Economic geology and mineral systems; Hydrogeology and salar systems; Geochemistry and geochemical monitoring; Mining engineering and resource development; Environmental monitoring and assessment; Natural hazards and risk assessment; Sustainability and environmental governance; Social sciences and territorial development.

WORKING GROUP 13

Political Behavior, Economic Expectations, and Financial Markets



Erwin Hansen

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Associate Professor of Finance at the Universidad de Chile, where his research focuses on the intersection of political economy, finance, and applied econometrics, examining how uncertainty and political events influence electoral behavior and financial markets.



Wolfgang Drobetz

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Professor of Finance at the University of Hamburg and a leading scholar in empirical finance, asset pricing, and corporate finance, with recent contributions on machine learning applications in finance and stock return predictability.

Working Group Summary

This Working Group unites finance and political economy scholars from Chile and Germany to study how political behavior and economic expectations shape financial markets. The team spans corporate finance, asset pricing, and corporate governance, combining financial economics with research on how CEO political ideology shapes corporate payout and investment decisions, alongside work on governance and sustainability. Together, the group examines electoral accountability, expectation formation, financial markets and political risk, and computational methods such as machine learning and text analysis. Combining Chilean and German perspectives on political and economic uncertainty, the group aims to build a lasting Chile-Germany research network producing joint publications, doctoral exchanges, and collaborative funding applications.

Disciplines invited: Political economy and electoral behavior; Democratic governance and institutions; Behavioral economics and macroeconomics; Financial economics and financial stability; Computational social science, machine learning, and AI; Natural language processing; Applied econometrics.