

Academia Raetica
SWITZERLAND

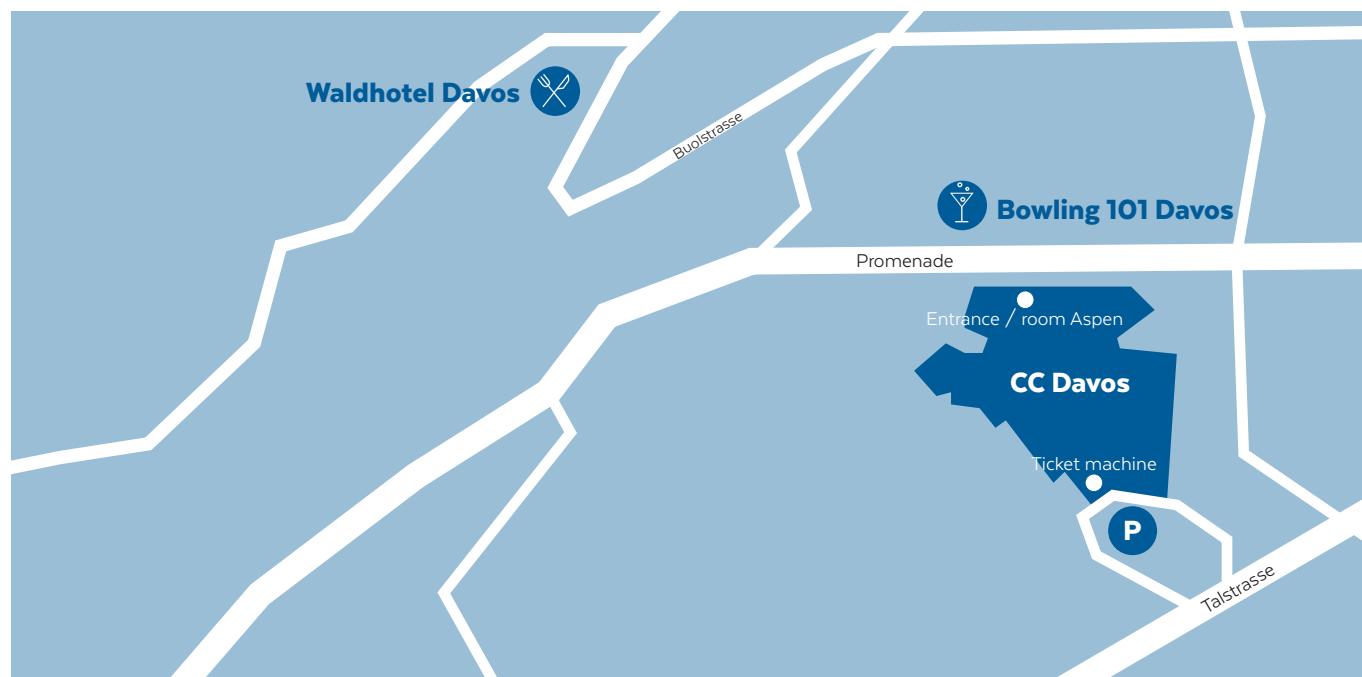


8th conference
Graubünden forscht
CC Davos, room Aspen
September 21-22, 2022
Program

Information around the conference

Location

“Graubünden forscht” takes place at the **Congress Center Davos, room Aspen, Promenade 92, Davos Platz.** Use Main Entrance at Promenade. Conference parking is accessed from Talstrasse. As a congress participant you buy the parking ticket at the parking ticket machine in the foyer of building A. 1 day: CHF 8.00, 2-3 days: CHF 10.00



Registration & Welcome Desk

Wednesday, September 21, 2022, 08:00-17:00
Thursday, September 22, 2022, 09:30-16:00

Apéro,

Wednesday, September 21, 5:15 pm

Bowling 101 Davos, Promenade 101, Davos Platz
(opposite CC Davos)

Conference Dinner,

Wednesday, September 21, 7:00 pm

Waldhotel Davos, Buolstrasse 3, Davos Platz. The hotel is a ten-minute walk away from the CC Davos. Limited parking is available at the hotel.

Congress Coordinator

Daniela Heinen,
daniela.heinen@academiaractica.ch
phone +41 81 410 60 84

Conference Website

www.gr-forscht.ch

Hospital

Spital Davos, Promenade 4, Davos Platz,
phone +41 81 414 88 88

Pharmacy

Amavita Apotheke Flüela
Bahnhofstrasse 1, Davos Dorf,
phone +41 58 878 11 20
Opening hours: 08:00-18:30
Amavita Apotheke Kongress
Promenade 50, Davos Platz, phone +41 58 878 10 50
Opening Hours: 08:00-12:30, 13:30-18:30

Public Transport

Busses 301, 303, and 304 stop at the CC Davos
(bus stop: Davos Platz, Kongresszentrum).
For timetables, see www.sbb.ch.

Taxi

Expresstaxi, phone +41 81 410 11 11
Gotschna Taxi, phone +41 81 420 20 20
Luigi Taxi, phone +41 79 218 30 70

Wednesday, September 21, 2022

08:00-09:30 Registration & "Znüni"

09:30-10:00 Opening

Allgöwer, Britta	President Academia Raetica
Favre Accola, Valérie	Head of Regional Development, Region Prättigau / Davos
Haller Rupf, Barbara	Director Academia Raetica

10:00-10:30 TRANSDISCIPLINARY PROJECT "Medicine & Life Sciences"

Chair: Ruedi Haller, Swiss National Park, President Club da Hockey Engiadina

Immune-inflammatory proteome of elite ice hockey players before and after SARS-CoV-2 infection

Barletta, Elena	Swiss Institute of Allergy and Asthma Research (SIAF)
Maurer, Debbie	Spital Davos
Kistler, Walter	Spital Davos



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10:30-10:45 Break

10:45-12:00 SESSION 1 Medicine & Life Sciences

Chairs: Tiziano Serra, AO Research Institute Davos;

Michael Villiger, Swiss Research Institute for Sports Medicine (SRISM), Spital Davos

Combination of the collagen membranes within the LEGO® inspired interlocking system, a new therapeutic alternative for bone regeneration in maxillary defects

Pirera, Maria Eugenia AO Research Institute Davos

Building a data analysis pipeline for long-read, amplicon-based, raw DNA-sequence data generated by Oxford Nanopore Technology

Mink, Sylvia Private Universität im Fürstentum Liechtenstein (UFL), ÖRK Blutspendedienst Vorarlberg

Characterization of single allergen-specific IgE+ B cell from cow's milk allergic children during the oral immunotherapy

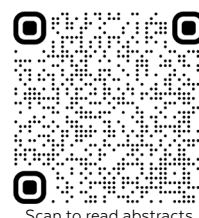
Satitsuksanoa, Pattaporn Swiss Institute of Allergy and Asthma Research (SIAF)

Natural bone inspired 3D printed composite biomaterial-ink composed of hyaluronan, collagen and calcium phosphate particles to promote bone regeneration

van der Heide, Daphne AO Research Institute Davos

Gut epithelial barrier damage by commonly used emulsifiers polysorbate-20 and polysorbate-80

Ogülür, Ismail Swiss Institute of Allergy and Asthma Research (SIAF)



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10:45-12:00 SESSION 2 Natural Sciences

Chairs: Ana Petrus, University of Applied Sciences of the Grisons;

Nadine Salzmann, WSL Institute for Snow and Avalanche Research SLF

Differences in vegetation composition, bacterial community and soil properties after restoration of construction sites on alpine grasslands

Blank-Pachlatko, Jonathan ZHAW Zürcher Hochschule für Angewandte Wissenschaften,
Institut für Umwelt und Natürliche Ressourcen (IUNR)

Analysing the migration patterns of red deer

Fellmann, Ursula University of Zurich, Department of Geography

The historical ozone trends simulated with the SOCOLv4 chemistry-climate model

Doyennel, Arseniy Physikalisch-Meteorologisches Observatorium Davos / World Radiation Center

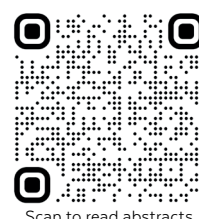
How large-scale bark beetle infestations influence the protective effects of forest stands against avalanches:

A case study in the Swiss alps

Caduff, Marion WSL Institute for Snow and Avalanche Research SLF

Non-native species in the Swiss National Park: current state and future challenges

von Büren, Raphael Swiss National Park



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12:00-13:00 Lunch

13:00-13:30 Speed dating

13:30-14:45 SESSION 3 Natural Sciences

Chairs: Peter Bebi, WSL Institute for Snow and Avalanche Research SLF;
Lucas Lombriser, University of Geneva

Energy dissipation of anticrack propagation in a weak snowpack layer

Bergfeld, Bastian WSL Institute for Snow and Avalanche Research SLF

Aerosol Optical Depth observations: Evaluation of the SKYNET Network Improved

Langley Plot method through calibration transfer from the GAW-PFR network

Karanikolas, Angelos Physikalisch-Meteorologisches Observatorium Davos / World Radiation Center

Slope stability research in alpine environment based in soil characterisation and monitoring

Lucas, Daisy University of Applied Sciences of the Grisons

The solar active regions, flares, coronal mass ejections and their space weather consequences

Barczynski, Krzysztof Physikalisch-Meteorologisches Observatorium Davos /
World Radiation Center & ETH Zurich

The environmental impact of a higher education institution in the context of SARS-CoV-2

The case of the University of Applied Sciences of the Grisons in Switzerland

Somerville, Livia University of Applied Sciences of the Grisons



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13:30-14:45 SESSION 4 Medicine & Life Sciences

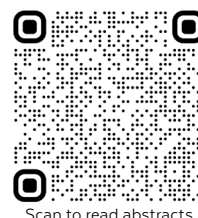
Chairs: Mübecce Akdis, Swiss Institute of Allergy and Asthma Research (SIAF);
Marie-Charlotte Brüggemann, Christine Kühne – Center for Allergy Research and Education (CK-CARE)

A new strategy for the treatment of Staphylococcus aureus fracture-related infections using bacteriophage-derived enzymes and antibiotics

Chitto, Marco AO Research Institute Davos

Characterization of enzymatic electrochemical glucose and lactate sensors for liver cell monitoring in a “Plug & Play” microfluidics system

Petkus, Bradley Centre Suisse d'Electronique et de Microtechnique SA (CSEM)



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Davos BioSciences AG (DBS) is a non-profit biotech company and a spin-off of CK-CARE. We closely collaborate with the CK-CARE registry (with regulatory grade quality) and operate the ProRaD and CARE biorepositories on behalf of CK-CARE. We have established core competencies and a cutting edge technological platform for in silico, genetics, and proteomics analysis in the fields of atopic dermatitis (neurodermatitis). Our goal is to extend our skills to other indications and fields in life sciences with a focus on precision medicine.

We have received the “OPTIMA-Label” from the Swiss Biobanking Platform certifying compliance with established standards and best-practice guidelines to administer our biobank and to perform high-quality research for our partners.

Through expertise in *in-silico* analysing of big data sets, biobanking, and competence in laboratory services, DBS is supporting the pharmaceutical industry and other external partners in their effort to develop and approve innovative medicinal products. We provide services for optimized drug development and biomarker discovery programs within all phases of clinical development and life cycle including drug repurposing programs.

www.davosbiosciences.ch



Christine Kühne – Center for Allergy Research and Education



CK-CARE is a Kühne Foundation initiative. A core pillar of CK-CARE is our Allergy Research Network, which consists of five leading clinical and basic research centers from across Switzerland and Germany. The researchers connect, exchange, and leverage their scientific knowledge and expertise to pioneer advances in atopic dermatitis and other allergic diseases with a focus on precision medicine for diagnostic and therapeutic approaches. The core of our research is a medical (allergy) registry and biobanking system with the main mission to create a unique and a well characterized pool of patient clinical data and biomaterial to achieve this goal.

The network represents a unique alliance of international experts that directly support CK-CARE's goal to address deficits in the areas of diagnosis and treatment of people suffering from atopic dermatitis and allergic diseases.

Combining our advanced research with our targeted and tailored education as well as with prevention strategies we are playing an active role in advancing allergy care and achieving the long-term well-being of individuals affected by allergic disorders.

www.ck-care.ch

Driving the science behind allergy care

Mass spectrometry-based identification of allergen proteins involved in seafood related allergic reactions

Barletta, Elena

Swiss Institute of Allergy and Asthma Research (SIAF)

Developing materials for cartilage regeneration under mechanical load

Mecchi, Laura

AO Research Institute Davos

The effectiveness of Alpine Altitude Climate Treatment on tapering oral corticosteroids in patients with severe asthma

van der Kuy, Fabien

Swiss Institute of Allergy and Asthma Research (SIAF),
Dutch Asthma Centre Davos, Utrecht University

14:45-15:00 Break

15:00-15:30 TRANSDISCIPLINARY PROJECT "Natural Sciences"**Chair:** Britta Allgöwer, Academia Raetica**Risk management and self-responsibility when practising mountain sports in the Alps**

Carnelli, Fabio

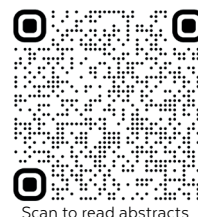
Eurac Research

Schwitzer, Stefan

Universität Innsbruck, Institut für Italienisches Recht

Rosani, Domenico

Universität Innsbruck, Institut für Italienisches Recht



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15:30-15:45 Break

15:45-17:00 SESSION 5 Medicine & Life Sciences**Chairs:** Silvia Generelli, Centre Suisse d'Electronique et de Microtechnique SA (CSEM);

Ron Clijsen University of Applied Sciences and Arts of Southern Switzerland

Development of bioprinted osteochondral tissue: an in-vitro model for drug discovery

Jahangir, Sharbanoo

AO Research Institute Davos

In depth analyses of non-lesional and lesional atopic dermatitis skin by spatial and single cell sequencing technologies

Mitamura, Yasutaka

Swiss Institute of Allergy and Asthma Research (SIAF)

A portable and modular readout solution for electrochemical measurements

Fejzo, Aldo

Centre Suisse d'Electronique et de Microtechnique SA (CSEM)

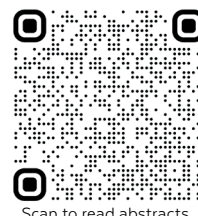
Development of electrochemical nitric oxide microsensors for the real time monitoring of inflammation in chondrocytes

Belcastro, Laura

AO Research Institute Davos

Association between atopic dermatitis and cardiovascular diseases

Fehr, Danielle

Christine Kühne – Center for Allergy Research and Education (CK-CARE),
Universitätsspital Zürich, Universität Zürich

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15:45-17:00 SESSION 6 Medicine & Life Sciences**Chairs:** Sibylle Grad, AO Research Institute Davos;

Milena Sokolowska, Swiss Institute of Allergy and Asthma Research (SIAF)

Hyaluronan-collagen bioink for the printing of intervertebral disc models

Miklosic, Gregor

AO Research Institute Davos

Determining the presence of food-antigen specific total IgG and IgG4 antibodies in the plasma of eosinophilic esophagitis patients.

Bel imam, Manal

Swiss Institute of Allergy and Asthma Research (SIAF)

Post-exercise systemic heat therapy decreases the inflammation process during recovery: a systematic review and meta-analysis.

Freitag, Livia

University of Applied Sciences and Arts of Southern Switzerland

Investigation of allergen specific B-cells in allergy concordant and discordant twins

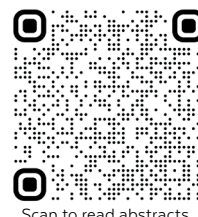
Schneider, Stephan

Swiss Institute of Allergy and Asthma Research (SIAF)

Physico-chemical characterization of polyelectrolyte coatings composed of a bacterial exopolysaccharide and chitosan

Bagnol, Romain

AO Research Institute Davos



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17:15-19:00 Apéro with bowling, darts and table soccer at 101 Bowling Davos

19:00 Conference dinner and doctorate award ceremony at Waldhotel Davos

Thursday, September 22, 2022

10:00-10:30 Coffee, tea and "Gipfeli"

10:30-12:00 SESSION 7 Humanities & Social Sciences

Chairs: Patric Arn, University of Applied Sciences of the Grisons;
Barbara Haller Rupf, Academia Raetica

Police communication in the digital era – The police use of social media in the area of tension ranging between information obligation and independent information

Yilmaz, Gizem University of Applied Sciences of the Grisons

Same same but different? Swiss schools' challenges and strategies after two years of COVID-19 pandemic

Suter, Francesca Pädagogische Hochschule Graubünden

Social networks as the basis to strengthen agri+touristic value creation in Alpine regions

Ospelt, Tanja University of Applied Sciences of the Grisons

Educational aspirations in school transitions from lower secondary to tertiary education

Haymoz, Rahel University of Zurich

Coordination – conflict – compromise: the project "Lehrplan 21" from the perspective of "Sociology of Convention"

Gehrig, Martin Pädagogische Hochschule Graubünden

The regulation of Airbnb and its impact on hotel performance

Steiner, Selina University of Applied Sciences of the Grisons



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10:30-11:45 SESSION 8 Medicine & Life Sciences

Chairs: Pierre-Yves Mantel, Christine Kühne – Center for Allergy Research and Education (CK-CARE);
Michael Pfaff, Clinica Holistica Engiadina

Anti-inflammatory and regenerative effects of liraglutide on inflammatory human osteoarthritic chondrocytes in vitro

Ciftci Dede, Eda AO Research Institute Davos

Study protocol: Association between Heart Rate Variability and Physical Activity in the Treatment of Exhaustion as a Component of Stress-Related Disorders

Turner, Wiebke Clinica Holistica Engiadina

Novel biomarkers of disrupted gut permeability in severe COVID-19 patients

Ogülür, Ismail Swiss Institute of Allergy and Asthma Research (SIAF)

A new one-step functionalization based on a UV crosslinking polymer for the electrochemical detection of C-reactive protein

Del Giovane, Stefano Centre Suisse d'Electronique et de Microtechnique SA (CSEM)

Rhinovirus-induced epithelial RIG-I inflammasome activation suppresses antiviral immunity and promotes inflammatory responses in virus-induced asthma exacerbations and COVID-19

Radzikowska, Urszula Swiss Institute of Allergy and Asthma Research (SIAF)



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12:00-13:30 Lunch

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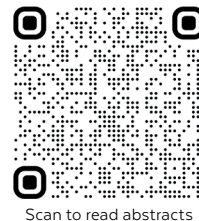
13:30-14:00 TRANSDISCIPLINARY PROJECT "Communication Science"

Chair: Urs Dahinden, University of Applied Sciences of the Grisons

Innovations in local communication in Switzerland and the case of the Grisons

Burger, Johanna

University of Applied Sciences of the Grisons



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14:00-14:15 Break

14:15-15:30 SESSION 9 Gemischte Themen (Deutsch)

Chairs: Urs Dahinden, University of Applied Sciences of the Grisons;

Cordula Seger, Institut für Kulturforschung Graubünden

Neue Extremereignisse durch kombinierte Klimarisiken: Fallstudie zur veränderten Schutzfunktion des Bündner Waldes in der Zukunft

Kronenberg, Marlene

Department for Geosciences, University of Fribourg;
WSL Institute for Snow and Avalanche Research SLF;
Climate Change, Extremes and Natural Hazards in
Alpine Regions Research Center CERC

Die Mehrsprachigkeitsdidaktik: eine junge Disziplin auf der Suche nach Forschungsansätzen und Forschenden

Crameri, Stefania

Pädagogische Hochschule Graubünden

Paganini, Barbara

Pädagogische Hochschule Graubünden

Plasmaströme in der ruhigen Sonne - Ein hochaktiver Ort

Schwanitz, Conrad

Physikalisch-Meteorologisches Observatorium Davos / World Radiation Center

Wie wir das LEGO®-Prinzip in die Herstellung eines Knochen-Ersatzes eingefügt haben

Hatt, Phelipe

AO Research Institute Davos

Wie wir in der Wissenschaft neue Ideen entwickeln - und ob Künstliche Intelligenz das Gleiche tun kann

Pfister, Rolf

Lab42



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14:15-15:30 SESSION 10 Mixed topics (English)

Chairs: Britta Allgöwer, Academia Raetica;

Louise Harra, Physikalisch-Meteorologisches Observatorium / World Radiation Center

Augmented Swiss Heritage - The participatory visualisation of cultural heritage

Rageth, Onna

University of Applied Sciences of the Grisons

Influence of snow cover duration on the abundance and distribution of alpine marmots

Buchmann, Sven

University of Zurich, Swiss National Park

A German vocabulary intervention in heterogeneous Romansh primary school classes

Caglia, Dominique

Pädagogische Hochschule Graubünden / University of Fribourg

A pilot study on the (physiological and psychological) effects of therapeutic body wraps („kalter Ganzkörperwickel“) in psychiatric inpatients

Flammersfeld, Anne-Marie

Psychiatrische Dienste Graubünden

Regulation of ACE2 mRNA and protein isoforms in viral and allergic inflammation

Stocker, Nino

Swiss Institute of Allergy and Asthma Research (SIAF)



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15:30-15:40 Break

15:40-16:00 Grussbotschaft von Gion Lechmann (Deutsch)

Leiter Amt für Höhere Bildung, Kanton Graubünden

16:00 Conference awards for the best presentations and apéro



Für die
beste Zukunft
aller Zeiten.

Für Lisa.

zukunft.gkb.ch



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