



Technical University
of Leoben

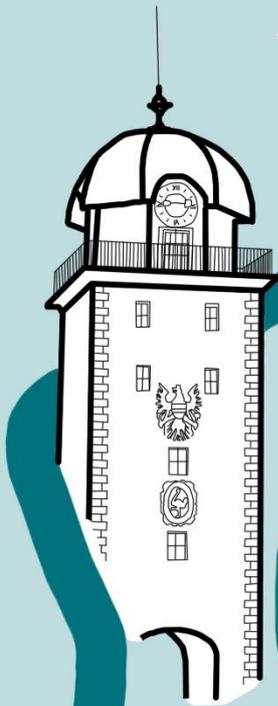
CIEC 19

11-13/02/2026

PROGRAM

Program
Committees
Venue

Leoben



Program

Wednesday, 11 th February 2026	
08:00 – 08:30	Registration
08:30 – 09:10	Opening
09:10 – 10:20	Scientific program I: STUTTGART
10:20 – 10:50	Coffee break
10:50 – 11:45	Scientific program II: SWANSEA
11:45 – 12:15	Scientific program III: PAVIA
12:15 – 14:00	Lunch break
14:00 – 15:30	Scientific program IV: MONS
15:30 – 17:00	Poster Session & Coffee break
17:00 – 18:15	Scientific program V: TORINO
18:30 – 21:00	Pizza Night

Thursday, 12 th February 2026	
08:00 – 08:30	Registration
08:30 – 10:00	Scientific program VI: LEOBEN
10:00 – 10:30	Coffee break
10:30 – 12:00	Scientific program VII: UPC
12:00 – 13:45	Lunch break
13:45 – 15:30	Scientific program VIII: LYON
15:30 – 16:00	Coffee break
16:00 – 16:25	Scientific program IX: EPFL
16:25 – 17:25	Scientific program X: EMPA
18:00 – 22:00	Gala Dinner

Friday, 13 th February 2026	
09:00 – 11:00	Lab tour ISFK
End of conference	

Legend:

- **Conference venue: HS Kupelwieser, Foyer 1st floor**
 Technical University of Leoben, Franz-Josef-Straße 18, 8700 Leoben

- **Pizza Night**
 Pizzeria San Marco,
 Franz Josef-Straße 2, 8700 Leoben

- **Galadinner**
 Landgasthof Erlsbacher, Kaltenbrunner
 Straße 41, 8700 Leoben
Bus transfer: Conference venue ↔ Galadinner

- **Lab tour at the Chair of Structural and Functional Ceramics,**
 Peter-Tunner-Straße 5, 8700 Leoben, top floor

Wednesday, February 11th, 2026

08:00 – 08:30 *Registration*

Opening

Chair: R. Bermejo

08:30 – 08:40 Opening Ceremony

Organising Committee

08:40 – 09:10 What properties are truly important for ceramic components used in hip arthroplasty in 2026? Clinical relevance against myths and misconceptions

A.A. Porporati, V. Guski,
N. Schneider, R. Krüger
CeramTec GmbH

Scientific program I: STUTTGART

Chair: F. Kern

09:10 – 09:20 *Intro*

F. Kern

09:20 – 09:35 Properties of ATZ made from Y-TZP with reduced stabilizer content

F. Kern, B. Osswald

09:35 – 09:50 Laser induced autocatalytic metallization of additively manufactured and injection molded zirconia toughened alumina substrates

P. Ninz, W. Yared, Y. Özer

09:50 – 10:05 Alumina toughened zirconia with Yb,Pr co-stabilized zirconia matrix

B. Osswald, S. Bienert, F. Kern

10:05 – 10:20 From Lab to Orbit: Lessons from developing the First 3D-Printed Ceramic Satellite Thruster for the ROMEO Mission

W. Yared, F. Kern,
W. Rheinheimer

10:20 – 10:50 **Coffee break**

Scientific program II: SWANSEA

Chair: S.P. Jeffs

10:50 – 11:00 *Intro*

S.P. Jeffs

11:00 – 11:15 Fatigue Damage Evolution in SiCf/SiC Ceramic Matrix Composites under Cyclic Constraint

S.P. Jeffs, Z. Quiney,
C.D. Newton, J.P. Jones,
M.R. Bache, L. Gale,
A. Chamberlain

11:15 – 11:30 Condition Assessment of SiCf/SiC CMC via Resonance Testing Techniques

Z. Quiney, J. Stephen,
G. Garcia Luna, S.P. Jeffs

11:30 – 11:45 Ceramic Matrix Composite and Metallic interactions and their influence on material integrity

T. McFarland, S.P. Jeffs,
G. García-Luna

Scientific program III: PAVIA**Chair: M. Coduri**

11:45 – 11:55	<i>Intro</i>	<u>M. Coduri</u>
11:55 – 12:10	Beyond entropy: understanding the temperature and compositional stability of the high entropy oxide (Mg,Co,Ni,Cu,Zn)O	<u>M. Coduri</u> , M. Fracchia, G. Maranini, P. Ghigna, U. Anselmi Tamburini

12:15 – 14:00 **Lunch break****Scientific program IV: MONS****Chair: A. Mégret**

14:00 – 14:10	<i>Intro</i>	<u>A. Mégret</u>
14:10 – 14:25	Processing of transparent borosilicate glass from powder: confrontation of modeling and experimentation	<u>A. Mégret</u> , C. Kermel, E. Juste, L. Sennoun, F.O. Méar, M. Gonon
14:25 – 14:40	Synthesis of cordierite – geopolymer composites: Influence of the composition for high-temperature applications	<u>F. Casarrubios</u> , C. Zoude, I. Mastroianni, H. Satha, A. Mégret, M. Gonon
14:40 – 14:55	Synthesis of doped biphasic calcium phosphate for bone substitutes	<u>V. Gillet</u> , M. Lasgorceix, F. Jean, S. Hocquet, A. Leriche
14:55 – 15:10	Optimization of Iron-manganese based binders composition for tungsten carbide	<u>A. Leclef</u> , A. Mégret, C. Nivot, A. Tricoteaux, V. Vitry
15:10 – 15:25	Thermomechanical characterization of polar STS glass-ceramics for the realization of functional SAW devices at high temperature	<u>O. Zwein</u> , M. Gonon, M. Duquennoy, S. Abdelouhab

15:30 – 17:00 **Poster Session & Coffee break***Please find the list of Poster contributions on page 9.*

Scientific program V: TORINO**Chair: P. Palmero**

17:00 – 17:10	<i>Intro</i>	<u>P. Palmero</u>
17:10 – 17:25	Aqueous carbonation of industrial by-products and their potential as Supplementary Cementitious Material in clinker production	F. Bonfante, G. Ferrara, P. Humbert, D. Garufi, J.M. Tulliani, <u>P. Palmero</u>
17:25 – 17:40	Sustainable Polymer–Ceramic Photocurable Composites for DLP 3D Printing in Regenerative Medicine	<u>A. Budaeva</u> , C. Portesi, L. Montanaro, P. Palmero, B. Coppola
17:40 – 17:55	Digital Light Processing of ceria-stabilized zirconia and Ce-ZrO ₂ /Al ₂ O ₃ /SrAl ₁₂ O ₁₉ composites: role of powder pre-treatment on printability and physico-mechanical properties	<u>B. Coppola</u> , E. Rossi, M. Sebastiani, F. Mussano, P. Palmero, L. Montanaro
17:55 – 18:10	Functionalized ZnO 3D-printed porous structures for NO ₂ detection	W. Majeed, B. Coppola, P. Palmero, <u>J.M. Tulliani</u>

18:30 – 21:00 Social program & Pizza Night at Pizzeria San Marco

Thursday, February 12th, 2026

08:00 – 08:30 *Registration*

Scientific program VI: LEOBEN

Chair: T. Lube

08:30 – 08:40 *Intro*

R. Bermejo

08:40 – 08:55 Rapid sintering of layered ceramic multi-materials

T. Prötsch, J. Schlacher, A. Jabr, A. Arthaud, I. Krалеva, R. Bermejo

08:55 – 09:10 Multi-functional zirconia-based electrolytes: Linking mechanical aspects and electrochemical performances *via* innovative processing

A. Jana, J. Schlacher, I. Krалеva, A. Egger, E. Bucher, R. Bermejo

09:10 – 09:25 Fracture toughness of silicon nitride measured on curved surfaces

M. Munz, C. Krug, P. Supancic, T. Lube

09:25 – 09:40 Design concepts for enhancing the damage tolerance of 3D-printed alumina-based ceramic components

J. Schlacher, S. Nohut, M. Schwentenwein, R. Bermejo

09:40 – 09:55 On the importance of suitable method selection for the strength assessment of brittle materials

M. Staudacher, T. Lube, K. Kleinhapl, S. Strobl, G. Deinhofer, P. Supancic

10:00 – 10:30 **Coffee break**

Scientific program VII: UPC

Chair: L. Llanes

10:30 – 10:40 *Intro*

E. Jiménez-Piqué

10:40 – 10:55 Direct Ink Writing of Ni–CeO₂ monoliths for CO₂ methanation

J.P.G. Queirós e Cunha, I. Serrano, G. Fargas, L. Llanes, J. Llorca, L. Soler, M. Morales

10:55 – 11:10 Surface-modified zirconia monoliths fabricated by Direct Ink Writing for enhanced catalytic performance

S.A. Razavi, M. Morales, I. Serrano, L. Llanes, J. Llorca, G. Fargas

11:10 – 11:25 Mechanical characterization of Ni-YSZ fuel electrode for Solid Oxide Cells

S. García, M. Morales, M. Torrell, D. Montinaro, A. Tarancon, E. Jiménez-Piqué

11:25 – 11:40	Nanoscale Mechanical Response and Phase Stability of WC–W ₂ C Composites for Extreme Environments	<u>H. Besharatloo</u> , L. Cabezas I Peñalva, J.M. Wheeler, E.M. Garcia-Ayala, B. Ferrari, L. Llanes, A.J. Sanchez-Herencia
11:40 – 11:55	Neutron diffraction of cemented carbide with Nickel binder under compression at high temperature: Evolution of the lattice parameter and simulation of residual stress	<u>D. Ruiz-Andrés</u> , D. Cruaños-González, P.V.S. Machado, I. Mundó, L. Degeneve, D. Mari, L. Llanes, F. Caner, E. Jiménez-Piqué
12:00 – 13:45 Lunch break		
Scientific program VIII: LYON		Chair: J. Chevalier
13:45 – 13:55	<i>Intro</i>	<u>J. Chevalier</u>
13:55 – 14:10	Few hints from the work @ MATEIS on dislocation and transformation-induced plasticity of ceramics	<u>J. Chevalier</u>
14:10 – 14:25	Process parameters – mechanical properties relationship in composites and foams based on geopolymers	<u>D. Habans</u> , P. Reynaud, É. Prud'homme, G. Fantozzi, T. Cutard, G. Dusserre
14:25 – 14:40	Dynamic sintering of an Al ₂ O ₃ -MgO refractory: an <i>in situ</i> multiscale microstructural approach	<u>A. Saviot</u> , H. Saad, P. Steyer, E. Maire, V. Trillaud, J. Adrien, A. King, J. Chevalier
14:40 – 14:55	Recycling of zirconia bioceramics from dental prostheses: link between the processes / microstructures / properties	<u>S. Cottrino</u> , C. Auriol, C. Meunier, L. Gremillard, J. Chevalier, S. Saunier, C. Petit
14:55 – 15:10	Investigating Zirconia phase transformation in Nacre-Like Alumina materials reinforced with Yttria-stabilized Zirconia: research trails, characterization and manufacturing processes	<u>B. Bert</u> , R. Henry, F. Bouville, E. Saiz Guttierrez, S. Meille, A. Doitrand
15:10 – 15:25	A crystallographic model for surface distortions in Y-TZP after mechanical surface treatment: interpreting the 'left shoulder' distortion of tetragonal XRD-peaks	<u>E. Roitero</u> , C. Langlois, L. Gremillard, J. Chevalier, P. Saby, G. Kermouche, N. Döbelin

15:30 – 16:00 **Coffee break**

Scientific program IX: SWITZERLAND – EPFL

Chair: F. Clemens

16:00 – 16:10 *Intro*

D. Mari

16:10 – 16:25 Partition of residual stresses in WC-Co by FEM: comparison of 3D artificial and natural morphologies

D. Ruiz Andres, L. Degeneve, L. Bellin, D. Mari, E. Jiménez Piqué

Scientific program X: SWITZERLAND – EMPA

Chair: D. Mari

16:25 – 16:35 *Intro*

F. Clemens

16:35 – 16:50 Thermoplastic Material Extrusion Additive Manufacturing with In-Situ Milling to Improve Mechanical Properties of ZrO₂ Printed Parts

P. Justen, E. Montakhab, N. Thomas, F. Clemens

16:50 – 17:05 Preparation of silicon carbide using silicon powder waste and bio-char

A. Ichangi, F. Clemens

17:05 – 17:20 Mechanical spectroscopy for probing microstructural and grain boundary evolution in alumina

A. Erlacher, D. Mari, A. Testino, M. Stuer

18:00 *Bus transfer* from conference venue to gala dinner

18:15 – 22:00 **Social program & Gala Dinner at Landgasthof Erlsbacher**

22:00 *Bus transfer* from gala dinner to conference venue

Friday, February 13th, 2026

09:00 – 11:00	Lab tour at the Chair of Structural and Functional Ceramics	for those who are interested: <i>please register at the registration desk</i>
11:00	End of the conference	

Poster contributions

The Poster Session takes place on Wednesday, February 11th, 2026, 15:30 – 17:00 h

P1	Lime carbonation in dolomitic refractory – influence of stabilizer on the reactivity of calcium oxide before and after use in steel industry	<u>E. Dutranoit</u> , R. Debuysschere, M. Gonon, F. Delaunois
P2	Length scale effects on the fatigue crack growth of WC-Co cemented carbides	<u>S. Fooladi Mahani</u> , C. Liu, M. Serra, X. Wen, J.X. Dong, C.Y. Fan, L. Llanes
P3	Fracture behavior of hard ceramic-metal composites: Fracture mechanics description and microstructural assemblage effects	<u>F. Marvaldi</u> , H. Besharatloo, S. Gordon, G.P. de Gaudenzi, S. Moseley, L. Llanes
P4	Surface integrity changes induced by thermal shock in cemented carbides: Assessment of microstructural effects by means of mechanical microscopy	<u>J.X. Dong</u> , C. Liu, S. Fooladi Mahani, X. Wen, C. Fan, L. Llanes, G. Ramírez
P5	Recycling of Cobalt-Zirconia monoliths fabricated by Direct Ink-Writing for catalytic applications	A. Razavi, G. Fargas, I. Serrano, L. Llanes, J. Llorca, <u>M. Morales</u>
P6	Substitution of rare earths used for zirconia stabilization: towards more resource-efficient stabilized zirconia	<u>A. Arthaud</u> , S. Cottrino, L. Gremillard, S. Meille, J. Chevalier

Committees

Organising Committee

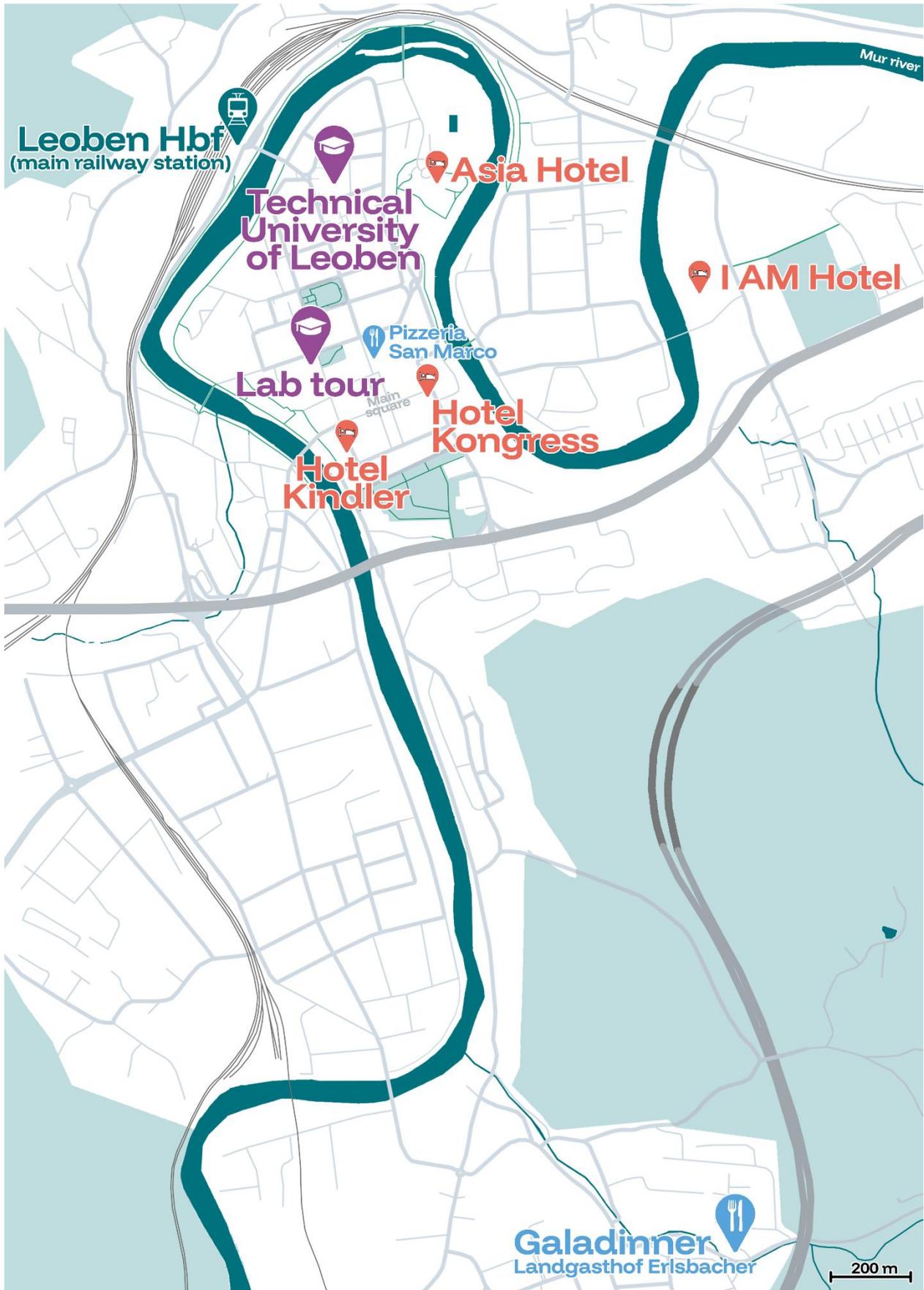
Tobias Prötsch, Maximilian Staudacher, Manuel Gruber, Josef Schlacher,
Raul Bermejo

Administration

Sarah Kohlbacher

Venue

Orientation - City map of Leoben



Conference Venue – Technical University of Leoben,
Erzherzog-Johann Trakt, Franz Josef-Strasse 18



Lab tour – ISFK (Chair of Structural and Functional
Ceramics), Peter Tunner-Strasse 5, top floor



Pizza Night on Wednesday – Pizzeria San Marco,
Franz Josef-Straße 2, 8700 Leoben



Image: <https://www.pexels.com/>

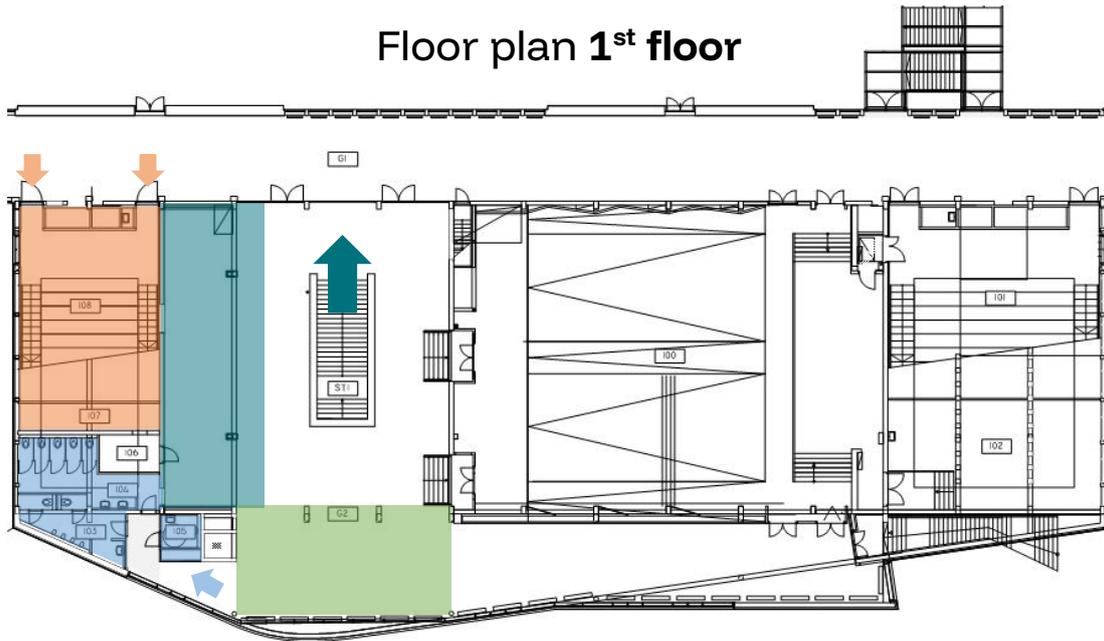
Gala Dinner on Thursday – Landgasthof Erlsbacher,
Kaltenbrunnerstraße 41, 8700 Leoben



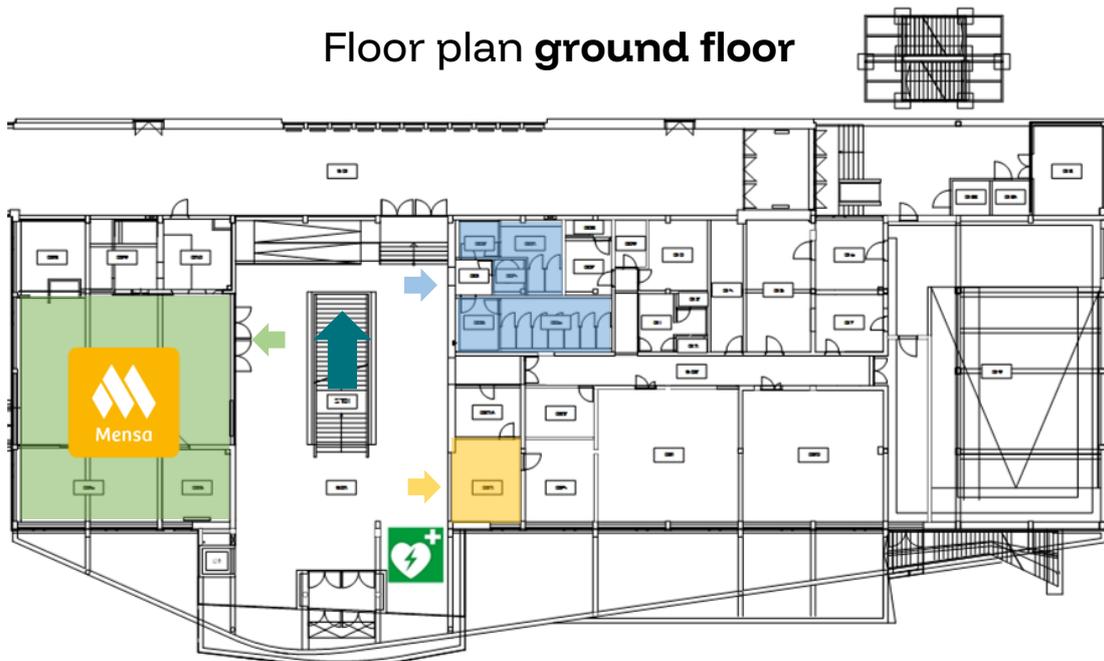
Image: <https://www.landgasthof-erlsbacher.at/>

Conference Venue – Technical University of Leoben

Floor plan 1st floor



Floor plan ground floor



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ENTRANCE

Legend

- Registration desk
- Lecture hall (HS Kupelwieser)
- Coffee breaks
- Lunch at Mensa
- Poster area
- Toilets



19th European Inter-Regional Conference on Ceramics (CIEC 19)
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