



Conference News | What you need to know

Munich We are pleased to welcoming you to Part II of the CIRP GA starting today. In addition to the various CWG meetings, we welcome all CIRP members to the Cross STC meeting starting at 15:30 o'clock in the room 'DMG Mori'. You can also expect two stimulating Virtual Coffee Breaks on the topics of "Additive + x - Hybrid Additive Manufacturing and Post Processing" hosted by Christian Seidel, Fraunhofer IGCV and Michael Schmidt, FAU at 12:30 o'clock and 'AI in Production' hosted by Markus Bambach, inspire AG, ETH Zürich at 16:15 o'clock.

News of our supporters and corporate partners

Munich The **Fraunhofer-Gesellschaft**,  **Fraunhofer** headquartered in Munich, Germany, is the world's leading applied research organization. With its focus on developing key technologies that are vital for the future and enabling the commercial exploitation of this work by business and industry, Fraunhofer plays a central role in the innovation process. As a pioneer and catalyst for groundbreaking developments and scientific excellence, Fraunhofer helps shape society now and in the future. Founded in 1949, the Fraunhofer-Gesellschaft currently operates 75 institutes and research institutions throughout Germany. The majority of the organization's 29,000 employees are qualified scientists and engineers, who work with an annual research budget of 2.8 billion euros.

Our partner **EMAG Group** is one of the few suppliers of manufacturing systems that cover the whole process chain, from soft to hard machining. Access to a wide range of technologies (turning, drilling, milling, gear cutting, grinding, laser welding, ECM deburring, PECM machining, induction hardening and automations) allows EMAG to implement complete process chains not only for the manufacture of gearbox, engine and chassis components but also of components for the non-automotive sector. 

News from our partner **ModuleWorks**: Did you know that ModuleWorks has research projects from wood working to artificial intelligence and even medical applications? We are actively engaged in all the professional CAM industries and develop optimal solutions for your products.

Read more: www.moduleworks.com/cirp2021

Leisure | Munich and the Alps




The Bavarian Alps A fine network of hiking trails traverses the Bavarian Alps. A dream for any mountain hiker and mountain biker with breath-taking panoramas, picturesque huts and beautiful flora and fauna. Particularly spectacular: a mountain tour in the Berchtesgaden Alps. Like a deep green emerald, it lies in the bottom of the valley, bordered by steep mountain sides, rugged peaks and deep green mountain forests – Lake Königssee.

70 years of Munich | 1990–1999

1990: Around 20,000 Munich residents gather for joyous rallies on the route between Marienplatz and Münchener Freiheit to mark the reunification of Germany.

1992: Munich goes international with the opening of the new major airport (MUC) in Erdinger Moos, north of Munich.

Weather

-  Munich: 17 °C, rainy
-  New Orleans: 30 °C, rainy
-  Shanghai: 33 °C, rainy

Today's CWGs

- 13:00 | Biologicalisation in Manufacturing Room 'MTU'
- 13:00 | Industrial Symbiosis in Discrete Manufacturing Room 'Festo'
- 13:00 | Production Technologies and Systems for E-Mobility Room 'Fraunhofer'
- 13:00 | Artificial Intelligence in Manufacturing Room 'ModuleWorks'

Today's STCs and Committees

- 15:30 | Cross STC Meeting (for all CIRP Members only) Room 'DMG Mori'
- 16:15 | Terminology Committee Room 'DMG Mori'

Today's Virtual Coffee Breaks

- 12:30 | Additive + x – Hybrid Additive Manufacturing and Post Processing, C. Seidel (Fraunhofer IGCV) and M. Schmidt (FAU) Room 'Fraunhofer'
- 16:15 | AI in Production J. Cao, R. Gao, M. Merklein and M. Bambach Room 'Fraunhofer'



It is in the middle of Berchtesgaden National Park, the only German national park in the Alps. For many people the Berchtesgaden Alps are a living room, the Archenkanzel the balcony. You have to be in good shape to move effortlessly along the mountain paths around the Watzmann (2,713 m). It is an impressive mountain surrounded by myth and

legend with massive faces – a challenge for mountain climbers from throughout the world and a breath-taking backdrop for Alpine hikers.

When hiking, you see the two faces of the mountains – both the rugged one and the charming one.

The way up to the Archenkanzel is via the Rinnkendlsteig. The journey starts with an idyllic trip in a motorboat over Lake Königssee to St. Bartholomew's Church and then go up the Eastern flank of the Kleiner Watzmann with spectacular views. A rope that makes you feel like balancing directly over the lake secures some places.

However, there is also another aspect of mountain hiking – the idyllic side. Instead of through barren rocky landscapes, the hiking paths lead through beautiful forests and picturesque Alpine pastures. Sometimes, you hear a cow bell and a gentle mountain breeze rustles through the leaves. Huts and guesthouses invite you to linger a while. Perfect for a short break, of course.

Sightseeing | Zugspitze, the top of Germany

Garmisch-Partenkirchen At the mountain station perched boldly on the rock with its striking glass facade, visitors are first drawn to the terrace to admire the legendary panoramic view of 400 Alpine peaks in four countries. This is the top of Germany measuring 2,962 meters. In good conditions, their gaze even sweeps as far as the Bavarian capital of Munich. The golden summit cross near the viewing terrace is also a popular motif for souvenir photos. Guests from all over the world can easily get up close to the glacier by cable car from the Zugspitze summit or by cogwheel train from the Eibsee Zugspitze station.



Bavarian Language | Bavarian vs. English

kraxeln [kraglsln] | climbing
Radi [raadi] | radish

Beim Kraxeln setz i mi gern auf a Oimhütt'n und gnies de Aussicht bei am Radi salad und am Bier.

When climbing I like to sit down in an alpine cabin and enjoy the view eating a radish salad and drinking a beer.

Bavarian food | Radi salad

1 large white radish, 1 tsp. mustard, 1 tsp. salt, 1 pinch of sugar, 2 table-spoons sunflower oil, 1 tablespoon vinegar (white wine vinegar), 1 bunch of chives

1. Peel the radish and cut into garlands with the smooth blade of the spiral slicer.
2. Stir together the marinade from the remaining ingredients and drizzle over the radish garlands together with the chopped chives.



Enjoy your meal with a pretzel or bread and beer!

70 years of Munich | 1991–1999

1998: In the east of Munich, the New Munich Trade Fair Center opens. The gross exhibition area of the 18 halls of Messe München comprises a total of 200,000 m² of exhibition space, plus around 414,000 m² of outdoor exhibition space, by far the largest outdoor area of any trade fair company in Germany.