

Conference News | What you need to know

Munich Look forward to three keynote speeches from STC P, STC A and STC C today. In addition, Ruediger Daub invites you to an exchange on the topic of "Battery Production - Anticipating the Next 10 Years" at 17:00 (CEST). Rüdiger Daub is the holder of the newly established Chair of Production Engineering and Energy Storage Systems at the Technical University of Munich since June 2021, after having held several positions at BMW Group Munich from 2012 to 2021, most recently as Head of Technology Development and Prototype Construction of Lithium-Ion Cells.

News of our Supporters and Corporate Partners

Munich Our partner **BMW Group** is with its four brands BMW, MINI, Rolls-Royce and BMW Motorrad the world's leading premium manufacturer of automobiles and motorcycles and also provides premium financial and mobility services. The BMW Group production network comprises 31 production and assembly facilities in 15 countries – the company has a global sales network in more than 140 countries. In 2020, the BMW Group sold over 2.3 million passenger vehicles and more than 169,000 motorcycles worldwide. The profit before tax in the financial year 2020 was € 5.222 billion on revenues amounting to € 98.990 billion. As of 31 December 2020, the BMW Group had a workforce of 120,726 employees.




Rosswag is an industrial R&D partner for holistic metal additive manufacturing projects. They provide individual, high-efficient and TÜV SÜD certified metal powder production, multi-laser LPBF systems for serial and R&D applications and more than 40 materials are qualified in-house for Laser Powder Bed Fusion. In addition, all necessary steps of the AM process chain are available and they have more than 7 years of experience with over 16 funded R&D projects as SME. Visit their homepage at <https://www.rosswag-engineering.de/>





News of our partner **ModuleWorks**: Did you know that you can use all ModuleWorks libraries for free when you are an active researcher? Contact us for more information: www.moduleworks.com/cirp2021



Weather

 Munich: 21 °C, rainy

 Paris: 24 °C, rainy

 Dallas: 36 °C, sunny

Today's paper sessions

STC A | Life Cycle Engineering and Assembly

STC C | Cutting

STC E | Electro-Physical and Chemical Processes

STC F | Forming

STP P | Precision Engineering and Metrology

Highlights of today's programme

13:10 | Keynote P
Room 'ModuleWorks'

14:40 | Keynote A
Room 'Festo'

16:10 | Keynote C
Room 'MTU'

Today's Virtual Coffee Breaks

17:00 | Battery Production – Anticipating the Next 10 Years, TUM (*iwb*)
Room 'ModuleWorks'

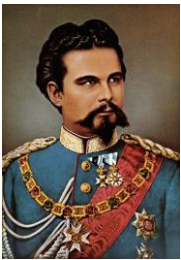
70 years of Munich | 1961–1970

1961: Approximately 380,000 postcards with greetings from the Oktoberfest have been sent all over the world since this year's Wiesn is opened. The most popular are joke cards showing 'typical Bavarians in a more or less tipsy state'. Occasionally, the postal workers also find written and addressed beer mats in the mailboxes.

1964: King Mahendra Bir Kikram Shah Deva and Queen Ratna Rajva Lakshmi Devi Shah arrive in Riem. The royal couple from the himalayan state of Nepal will stay in Bavaria for three days and stay at the Hotel Vier Jahreszeiten.

Culture | King Ludwig II, the ‘Fairy Tale King’

Bavaria Ludwig II was King of Bavaria from 1864 until his death in 1886. He was aged 18 when he succeeded to the throne. Two years later, Bavaria and Austria fought a war against Prussia lasting only a matter of weeks, which they lost. However, in the Franco-Prussian War of 1870, Bavaria sided with Prussia against France, and after the Prussian victory, it became part of the new German Empire, whose king became the Deutscher Kaiser (‘German Emperor’), Ludwig’s cousin Wilhelm. In the new Imperial Constitution, Bavaria was able to secure for itself extensive rights, in particular regarding military sovereignty. Nevertheless, Ludwig increasingly withdrew from day-to-day affairs of state in favour of extravagant artistic and architectural projects. He commissioned the construction of two lavish palaces and Neuschwanstein Castle, and he was a devoted patron of the composer Richard Wagner. For that, Ludwig is sometimes called the Swan King or der Märchenkönig (‘the Fairy Tale King’) until today. To realize his projects he spent all his royal revenues on these projects, borrowed extensively, and defied all attempts by his ministers to restrain him. This extravagance was used against him to declare him insane, an accusation that has since come under scrutiny. Today, his architectural and artistic legacy includes many of Bavaria’s most important tourist attractions.



Seightseeing | Neuschwanstein Castle

Hohenschwangau Ludwig II, who became king in 1864, created his own alternative world, in which as the reigning King of Bavaria he could live like a king of the Middle Ages or the baroque age of absolutism. This is the idea behind his castles. On a ridge in a magnificent setting high above the Pollät Gorge with the mountains as a backdrop he built his ‘New Castle’ over the remains of two small medieval castles familiar to him since his childhood (‘Vorder’ and ‘Hinter’-Hohenschwangau). Ludwig II visited the Wartburg in 1867 and had his architect make drawings of the ornamentation. The ideal designs were produced by a scene painter from the Munich court opera house and incorporated motifs not only from the Wartburg, in particular the Palas and building ornamentation, but also from stage sets for ‘Lohengrin’ and ‘Tannhäuser’. Ludwig II had written in a letter to Richard Wagner in 1868 that his ‘New Castle’ would contain ‘reminders’ of these works. Construction commenced in September 1869, and the Gateway Building was completed in 1873. This was where Ludwig II first lived, who was destined never to see his ‘New Castle’ without scaffolding. In 1884, his rooms in the Palas were ready for occupation. A simplified version of the southern part of the building, the ‘Bower’ was only completed in 1891, and the keep with the chapel was never built.



70 years of Munich | 1961–1970

1967: After 29 months, the first Munich subway train rolled through the 2 km tunnel under Ungererstraße.

1970: Munich experienced the "biggest topping-out ceremony" in its history. 3,300 invited guests attended the lifting ceremony for the Olympic sports facilities.

Bavarian Language | Bavarian vs. English

Semmelknoedel [semmegnedl] |
bread dumplings
Schwammerl [schwammerl] |
mushrooms

Am liabsdn mog i Schwammerlsoss
zua meina Semmegnedln.

*My favorite is mushroom sauce with
my bread dumplings.*

Bavarian food | Semmelknoedel

11 ounces of white hardened bread,
1 cup hot milk, 1 tbsp. butter, 3/4 cup
very finely diced yellow onion,
2 large eggs, 3 tbsp. chopped fresh
parsley, 1 tsp. salt, 1/4 tsp. black
pepper, 1/8 tsp. freshly ground
nutmeg, breadcrumbs (as needed)

1. Chop the hardened bread into small cubes and place them in a bowl. Pour the hot milk over the bread, cover until softened.
2. Cook the onions in heated butter just until transparent. Add the onions to the bread mixture along with the eggs, parsley, and all the spices. Knead the mixture with your hands until very thoroughly combined and it is of chunky-smooth consistency. If the dough is too wet, add breadcrumbs.
3. Form Knoedel about the size of a tennis ball. Press the Knoedel between your palms to make sure they're compact. Carefully drop the Knoedel in lightly salted and very lightly simmering (not boiling!) water and let them "steep" 15-20 minutes. After that, carefully lift them out with a slotted spoon. Enjoy!

