

Vilsbiburg, 04.04.2022

Bavarian state competition Jugend forscht: And the winners are ...

From March 28 to 30, the "Jugend forscht" youth science contest for the State of Bavaria took place as an online event. This year's winners have now been determined and are thus qualified for the federal competition in May. In an online award ceremony, Malte Arkona ("Germany's best class" TV show) and Julia Fleischer (apprentice at Flottweg) guided the participants through the digital event and presented awards to the 15 winners. This year, a total of 80 young talents took part in the state-level competition with 56 projects.

From an emergency braking assistant for bicycles (work environment) by Vincent Nack to an alarm clock bed (technology) with voice control by Ben Walter and Benedikt Wolf, the research projects of this year's winners once again demonstrated a great deal of innovation and creativity. In the fields of biology and mathematics/IT, the moderator duo even presented two first prizes: Louisa Zajitschek was honored in the field of biology with her examination of the fertility of cattle, as were Armin Höcherl and Nikolaus Weiland with their results regarding the analysis of plastic in the pellets regurgitated by birds. The jury in the fields of mathematics/IT was impressed by Tom Bauer's graphical solution approach for quadratic functions and Shizhe He's idea for the use of artificial intelligence to represent dynamic anatomical processes in ultra-high-field magnetic resonance imaging.

Hannah Amrhein, Lena Fries and Hanna Fries achieved first place in the chemistry area with the topic of phosphorus recycling through electroflotation. In the field of geo- and space sciences, Leonie Prillwitz impressed with her research on rainbow and trout spawn in climate change and the effects of increased fine sediment load. The state winners in physics were Rohan Walia and Miro Joensuu with their project on the coupled oscillation of candle flames.

The special prize of the Bavarian State Minister for Education and Cultural Affairs was awarded to Mark Oude Elberink for his implementation of a cost-effective and user-friendly hardware-implemented software system for diabetics.

All-round successful event

Flottweg SE acted as state sponsor of the young talent contest for the first time this year and will now assume the state sponsorship every two years. Eva-Maria Gedeck and Sven Bedö, who worked together as sponsor representatives for the state competition, are delighted with the successful online event. "Jugend forscht has once again managed to combine research, science and business in a very special way this year. I'm really impressed by the enthusiasm and creativity with which the young researchers have put their ideas into practice," explains Eva-Maria Gedeck, Head of Human Resources at Flottweg. Sven Bedö, Head of Marketing at Flottweg, is also enthusiastic about the state contest: "Youth research thrives on the unique passion and extraordinary dynamics between the participants and the jury. For Flottweg as a technological company, it is particularly gratifying to see how young people are excited about STEM topics."

Juror Matthias Scheidhammer, who works in process planning at Flottweg, is also delighted with the competition for budding scientists: "The state competition has shown very impressively the

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wealth of ideas young people use to tackle the sometimes very complex tasks in the field of natural sciences. This platform impressively promotes thought patterns for innovative approaches in the STEM field that can used to be overcome, for example, the upcoming challenges of industrial production."

17 years' commitment with heart and soul: Dr. Christl hands over competition management to Uli Herwanger

In addition to the honoring of this year's winners, a fond farewell was extended to Dr. Monika Christl as competition director. "These years will be a wonderful memory for me; it was a fantastic time. It's really satisfying to see how the participants go on to become entrepreneurs and scientists and what careers develop on the basis of Jugend forscht," explained Dr. Christl at the award ceremony. After 17 eventful years at Jugend forscht in Bavaria, she is now handing over the reins to Uli Herwanger. He was connected live to the award ceremony and is now preparing for his new assignment: "I very much look forward to developing the Bavarian state competition further and working with the participants in the future. For me, Jugend forscht remains the premier contest among scientific competitions."

Overview of all Bavarian state winners 2022:

Work environment: Development of a bike emergency braking system Vincent Nack Gymnasium Höhenkirchen-Siegertsbrunn – South Munich

Biology: two state winners

Does bovine fertility suffer from breeding to be genetically hornless? Louisa Zajitschek Albrecht-Ernst-Gymnasium Oettingen – Augsburg

Plastic in the sky – study of bird pellets Armin Höcherl & Saint Nicholas Weiland Schyren-Gymnasium Pfaffenhofen an der IIm – Ingolstadt

Chemistry:

Best practice in wastewater technology: Phosphorus recycling by electroflotation Hannah Amrhein, Lena Fries & Hanna Fries Julius-Echter-Gymnasium Elsenfeld, Lower Franconia

Geo- and space sciences:

Rainbow and brown trout spawning with climate change – effects of increased fine sediment load Leonie Prillwitz

Maria-Ward-Gymnasium Augsburg – Augsburg

Mathematics/IT: two state winners Graphical solution method for quadratic functions Tom Bauer

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Walther-Rathenau-Gymnasium Schweinfurt - Lower Franconia

Analysis of the correlation between conventional and dynamic UHF MRI reconstruction Shizhe He Otto-von-Taube-Gymnasium Gauting – Voralpenland

Physics:

Synchronized candles – modeling thermofluid-coupled oscillators Rohan Walia & Miro Joensuu Technical University of Munich & University of Heidelberg

Technology:

Alarm clock bed Ben Walter & Benedikt Wolf Johann-Andreas-Schmeller-Gymnasium Nabburg – Amberg-Weiden

Special prize of the Bavarian State Minister for Culture and Education: State award for the best interdisciplinary project

Focus on diabetes – hardware-implemented software system for glucose level management Mark Oude Elberink Ohm-Gymnasium Erlangen – Middle Franconia

Image: The moderator team Malte Arkona (right) and Julia Fleischer (middle) are talking with Dr. Monika Christl (left), the competition director, about her expericences regarding the Bavarian state competition of Jugend forscht. Photo by Daniel Müller

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