

Coordinating expertise

At the Institute of Automotive Engineering at the University of Stuttgart, **Viktoria Kelich** is responsible for coordinating the research projects – a role that combines her love of engineering with business knowledge and a talent for organisation.

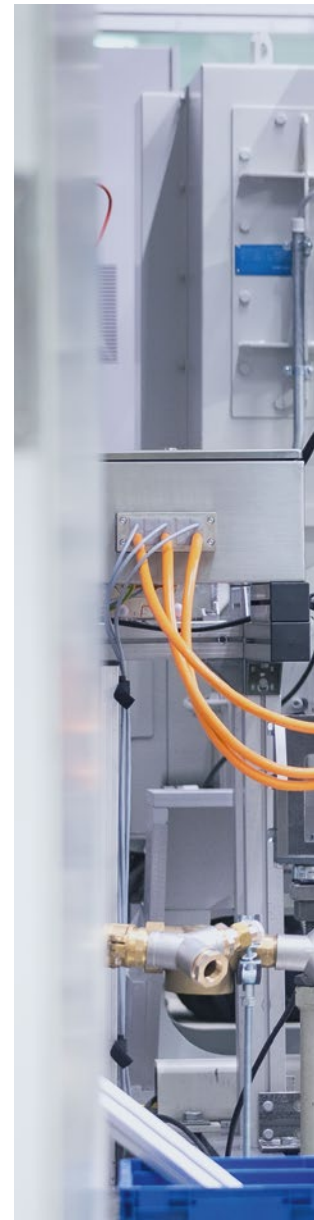


Partners are essential // Good research doesn't achieve anything all by itself – it needs to be shared among experts with complementary expertise. Viktoria Kelich has made it her mission to link the right people together to develop state-of-the-art vehicle powertrains. The passion for engineering that she gets to live out in her job was inspired in her as a child. Her father, an electrical engineer, used to repair friends' and acquaintances' television sets and video recorders during the evenings from his kitchen table. His six-year-old daughter sat next to him, watching with interest. As a teenager, the pair of them built a stereo system together, and she still uses it regularly to this day.

This affinity for engineering and science stayed with her, and while her fellow students at her specialist business college chose to drop subjects like physics and chemistry, she decided to only study science subjects. »After taking my final leaving exams, I knew I wanted to study business administration, but I also wanted to do something with engineering. That's why the technically oriented business administration programme at Stuttgart was perfect for me,« says Kelich. This combines the basic technical study programme of an engineer with classic business administration. Materials science, manufacturing and strength of materials form part of the curriculum alongside marketing, macro-economics or mathematics for eco-

nomists. Kelich chose to study two engineering-focused electives – automotive and production engineering – even though she only needed to pick one. »I was interested in both subjects and they enabled me to broaden my technical profile.« To inspire more girls and young women to study engineering, she is a dedicated VDI ambassador and visits schools and careers events.

Kelich was in charge of organising the University of Stuttgart's Formula Student race team from 2016 to 2018. She decided who did what, where and when they did it, coordinated processes during the race season and organised sponsorship and PR. Everything had to go to plan and the preparations were complex and took weeks to complete. The roll-out of the 2017 race car in front of 1000 guests at the Carl Benz Arena in Stuttgart, which she was responsible for organising, remains a very special memory. And the teams in the years that followed regularly asked her for advice. During this time, Kelich acquired skills that still help her on a daily basis: she learnt how to maintain an overview of the big picture, not to get bogged down in the tiny details and to delegate tasks to the right people. She says: »Each person needs to be deployed where their strengths lie, and my strengths lie in juggling lots of things at the same time.«



»Each person needs to be deployed where their strengths lie, and my strengths lie in juggling lots of things at the same time.«



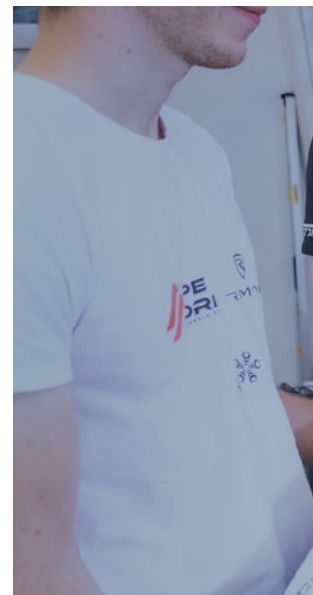
Her coordination skills had to be put to the test right at the beginning when she started her role as a research assistant at the Institute of Automotive Engineering (IFS) at the University of Stuttgart. Her boss, Prof. Dr. Michael Bargende, had a particular job for her straight away: a week after joining the team, the FVV autumn conference was taking place and Kelich was required not only to take part but also to co-organise the IFS's reporting of the event. Over the months and years that followed, she has learnt the ropes, familiarised herself with the structures and established good relationships with FVV. This wouldn't have been possible without her technical knowledge. Kelich has that in spades, and she is able to explain complex matters in layperson's terms – a skill that served her well during her master's degree when she tutored student practicals. Kelich has decided not to pursue an envisaged doctorate in marketing, as she would prefer to remain involved with engineering.

As research manager at the IFS, Viktoria Kelich is responsible for coordinating around 30 publicly funded research projects and takes on tasks in each individual phase – from project acquisition to completion. After drafting presentations and application documents, she searches for new funding opportunities and project managers, looks after doctoral candidates, organises events and takes care of external communications. Her work also involves coordinating international FVV research projects, such as the CORNET programme which

was established by the German Federation of Industrial Research Associations (AiF) with the aim of bolstering international collaboration.

Kelich is currently working on the application for a joint research project on hydrogen combustion processes involving water injection between the IFS, RWTH Aachen University and Politecnico di Torino. »The project aims to use direct injection to improve knock behaviour and to reduce the NO emissions formed with hydrogen engines. To do this, both experimental and simulative studies need to be conducted, and water evaporation, carburation, spray geometry and combustion processes need to be investigated in order to derive injection strategies,« says Kelich, explaining the complex research approach. This can only succeed with teamwork: the test engine is set to be based in Aachen, the 3D simulation is likely to be processed in Stuttgart, while the OD/1D simulation will take place in Turin. Kelich is coordinating the expertise.

And the young woman has no complaints in terms of the variety of her job – the wide range of tasks that her role entails is something she enjoys. But does the call of industry sometimes tempt her? »Research and development is really exciting, but motor sport too has never loosened its grip on me. Working as a team and putting all your effort and energy into achieving something that seemed almost impossible – and then winning – is a great feeling!«





enthusies Kelich. But perhaps she would miss the conferences, organisation, communication, contacts and everything else that goes into research management. To clear her head, the 34-year-old jumps in her bright yellow Mercedes and drives to her ballet class for a 90-minute workout three times a week after work. How does she find the time? »It's all a question of self-management.« //



VIKTORIA KELICH,
MSc, born in 1987, studied technically oriented business administration at the University of Stuttgart. After her master's degree, she enrolled on the electrical engineering programme and attended various lectures for three semesters. She was in charge of organising the University of Stuttgart's race team for two years. Since 2018, Kelich has been coordinating the research projects at the Institute of Automotive Engineering at the University of Stuttgart (IFS); as part of FVV's CORNET programme, she champions international collaboration between various universities.