WELCOME TO THE NINETY-FIFTH EDITION OF OUR ONLINE NEWSLETTER BRINGING YOU THE HIGHLIGHTS FROM THE KAISERSLAUTERN GRADUATE SCHOOL „MATHEMATICS AS A KEY TECHNOLOGY“.

1. FROM THE DEPARTMENT

Einladung zum 15. Tag der Mathematik

Samstag, den 6. Juni 2020, 9:30 - 16:00 Uhr.

Wieder bieten wir unseren Gästen ein buntes Programm rund um das Thema Mathematik bestehend aus Vorträgen, Workshops, Ausstellungen und Wettbewerben.

Mathematik ist heute viel mehr als nur Rechnen und die bekannte Schulmathematik. Sie ist Schlüsseltechnologie und bietet hervorragende Berufsaussichten mit kreativen Aufgabenbereichen. Vor allem aber macht Mathematik eine Menge Spaß!

Erleben Sie mit uns die Faszination der Mathematik!

Alle Informationen rund um den Tag der Mathematik 2020 finden sich unter

https://www.mathematik.uni-kl.de/schule/tag-der-mathematik/tag-der-mathematik-2020/

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Modeling with KOMMS in Mexico

From October 17-26, 2019, Martin Bracke (TU Kaiserslautern), Maren Hattebuhr (KIT), Sarah Schönbrodt (KIT), Janna Tinnes (RWTH Aachen), and Kirsten Wohak (KIT) were guests at the Universidad Autónoma de Baja California (UABC) in Tijuana as representatives of the projects CAMMP (Computational And Mathematical Modeling Program) and KOMMS (Competence Center for Mathematical Modeling in MINT Projects in Schools). The aim of this visit was to implement different formats of CAMMP and KOMMS with Mexican learners and at the same time to give teachers an insight into the conception and implementation of such events.

For this reason, the visit began with an introduction in which ideas and goals of CAMMP and KOMMS were presented. Subsequently, UABC colleagues were introduced to the concepts for the implementation and supervision of the one-day workshops (CAMMP Days) as well as a modelling week, and the fine-tuning was done in the translation of the necessary tasks and accompanying materials into Spanish.

This was followed by several one-day CAMMP Days over the course of a week, covering a variety of topics such as the optimization of a solar thermal power plant or insights into the mathematical background of computer tomography, which were attended by a total of around 140 participants.

At the same time there was a modelling week for 20 pupils aged 16-18 years, in which the topics "Building optimal paper helicopters", "Can a computer lie like a human being in the game Mäxchen", "What is the effect of a compulsory vaccination against measles" and "Optimal strategies for the game Shut-The-Box" were dealt with. At the end of this week - as usual during the modelling week of KOMMS - the result presentations of all groups were on the agenda. Unfortunately, these had to be postponed, because an unusually strong desert storm led to school closures in the
entire region and even to the evacuation of the UABC campus "Valle Las Palmas" during the morning of 25.10. An unexpected end, which at least in this form is not imaginable in our latitudes! With a little delay, the final presentations were made up for during another visit of the students to the UABC, as we planned to participate in the final presentation via Skype. But unfortunately, even this second attempt failed due to a campus-wide power failure! Fortunately, the final presentations could take place as planned – even without electricity – and we have been sent some videos and results of the final evaluation afterwards.

All 160 participants were very motivated and enthusiastic about the unusual way of working, so that they were very interested in the projects. Of course, they were able to expand their modelling skills and also gain new experience, for example in the area of teamwork.

The team of CAMMP and KOMMS could also gain many new experiences: Working together with learners and teachers from other cultures is always a very exciting and enriching opportunity to further develop oneself and one’s own activities!

Our thanks go to the organizer Luis Ramon Siero Gonzales (UABC), and together with Professor Martin Frank, the scientific director of the CAMMP project at the Steinbuch Centre for Computing of KIT, KOMMS is already thinking about possibilities to continue the cooperation started with this project.

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**IMMC Deutschland**


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**PhD theses successfully defended in December and January 2019/2020**

Michael Hauck (3.12.2019)
„Asymptotic Analysis and Design Optimization for Periodic Perforated Shells“
Supervisor: Prof. Dr. Axel Klar

Markus Rein (11.12.2019)
„Order reduction for nonlinear dynamic models of district heating networks“
Supervisor: Prof. Dr. Axel Klar

„Solving semi-infinite optimization problems with quadratic rate of convergence“
Supervisor: Prof. Dr. Karl-Heinz Küfer

Pascal Wortel (18.12.2019)
"Efficient algorithms for production scheduling"
Supervisor: Prof. Dr. Sven Krumke

Anna-Katharina Thös (10.01.2020)
„Naive Diversification with Fewer Assets - A Risk Reduction Approach Using Clustering Methods“
Supervisor: Prof. Dr. Jörn Sass
Jean-Marie Lantau (08.01.2020)
„Die Regelung eines Segways - Ein MINT-Modellierungsprojekt an Schulen“
Supervisor: Prof. Dr. Tobias Damm

Friederike Laus (10.01.2020)
„Statistical Analysis and Optimal Transport for Euclidean and Manifold-Valued Data“
Supervisor: Prof. Dr. Gabriele Steidl

Lisa Koch (24.01.2020)
„Rational Interpolation in the Loewner Framework, Optimal PMOR and Aspects of IRKA“
Supervisor: Prof. Dr. Tobias Damm

Guests at the Department

Prof. Dr. Robert Boltje from the University of California, Santa Cruz, USA was guest of Prof. Dr. G. Malle from 13-18 December 2019.

Tyler Perini from the Georgia Institute of Technology, Atlanta, USA was guest of Prof. Dr. S. Ruzika from 07-17 January 2020.

2. FROM THE UNIVERSITY

Professor Dr. Arnd Poetzsch-Heffter elected new president

On 18 December 2019 the Senate of the Technische Universität Kaiserslautern (TUK) elected Professor Dr. Arnd Poetzsch-Heffter as new president. He succeeds Professor Dr. Helmut J. Schmidt, who is president of the university since 2002. Prof. Dr. Poetzsch-Heffter will take over in July 2020.

Since 2014 Prof. Dr. Poetzsch-Heffter has been Vice President for Research and Technology at TU Kaiserslautern. Prof. Dr. Poetzsch-Heffter studied computer science and mathematics at the Technische Universität München (TUM). In 1991 he completed his doctorate and worked as research assistant and assistant until 1996. A research stay also brought him to Cornell University in the USA for one year.

From 1996 to 2002 he held a professorship in programming languages and software construction at FernUniversität Hagen. In July 1997, Poetzsch-Heffter habilitated at TUM and accepted the call for the professorship for software engineering at the TU Kaiserslautern in 2002. He also spent a number of research stays at Microsoft Research in Redmond, USA, the Compaq Systems Research Center in California, the Swiss Federal Institute of Technology in Zurich, the University of Turin and the Royal University of Technology in Stockholm. From 2011 to 2014 he was Dean of the Department of Computer Science at TU Kaiserslautern and a member of the Senate. Prof. Dr. Poetzsch-Heffter is also a member of various supervisory boards, such as the German Research Center for Artificial Intelligence.

Studien-Informationstag der TU Kaiserslautern
26. Mai 2020

Ihr wollt studieren, klar. Aber was und wozu? Um Karriere zu machen, braucht ihr Fachwissen. Um die Karriere zu machen, die zu euch passt, braucht ihr aber auch Menschen, die euch helfen, eure wahren Ziele zu erkennen. Die findet ihr bei uns an der TU Kaiserslautern. Denn hier geht’s um euch!

Am Studien-Informationstag könnt ihr euch zwischen 9:00 und 16:00 Uhr über unser gesamtes Studienangebot informieren, unsere Veranstaltun-
gen und uns kennenlernen oder einfach nur ein bisschen "Campus-Luft" schnuppern.

Ihr seid herzlich eingeladen, gemeinsam mit Freunden, Mitschülern, Eltern oder auch ganz für euch die TUK kennenzulernen, in der Mensa zu essen, mit unseren Studierenden zu reden und erste Einblicke in das Studentenleben zu bekommen. Nebenbei ist bestens für Kulinarisches, Interkulturelles und Musikalisches gesorgt.

Nähere Informationen findet Ihr unter: https://www.uni-kl.de/infotag/

50 years Technische Universität Kaiserslautern

Dear friends of TU Kaiserslautern,

we would like to look back on half a century of university history - a history with many ups and downs, which could certainly fill several volumes in great detail. In the coming newsletter we will give you an introduction to the history of TU Kaiserslautern. If you would like more information, please visit the website of TU Kaiserslautern https://www.uni-kl.de/50-jahre-tuk/

How it all began

With the state law on the establishment of a University of Trier-Kaiserslautern the foundation stone was laid (Photo 1).

In the first years, the campus Kaiserslautern was characterized by major construction works. In October 1970, teaching was taken up at the so-called Building 1. The university expanded quickly and very soon it was necessary to construct more buildings.

The construction work was completed in record time. By the end of 1971 half of the buildings could already be moved into, while the other half was ready by summer 1972 (Photo 2).

A look back

50 years Technische Universität Kaiserslautern

1970 to 1979: Pioneers wanted - a university foundation as a motor for regional development

Visit of the State Government on 20.10.1970. University President Professor Dr. Helmut Ehrhardt (1972-1981) (Li.) discusses the model of the University of Kaiserslautern with the Prime Minister Dr. Helmut Kohl and the Minister of Culture Dr. Bernhard Vogel. Photo: TUK Archive

What was the main motivation to found a new university at two locations at the same time? In the 1960s and 1970s, the demographic development brought Rhineland-Palatinate a massive increase in high school graduates and it was expected that by 1978, some 30,000 to 35,000 students take up their study.

So far the state could not cover the demand and many high school graduates went to study in other federal states and did not return home afterwards.

The new dual university focused on the fields of study in which there was particularly high demand,
and both locations set different foci in research and teaching activities.

The politicians wanted to:
- strengthen the structurally weak regions around Kaiserslautern and Trier
- improve higher education
- create new employment opportunities
- restructure the law for universities

A university goes its own way

1 January 1975: The "Separation Act" comes into force

The strategic concept, on which the dual university of Trier-Kaiserslautern was based, worked very well. The focus on specific subjects as well as the separation of technical and natural science departments in Kaiserslautern and social sciences in Trier ensured rapid growth.

Both locations had developed so positively in the first five years of their existence that nothing stood in the way of a separation into two independent universities. On 1 January 1975, Kaiserslautern became the only university with an engineering and technical orientation in Rhineland-Palatinate.

The pioneers of the first hours had done a great job. Professors, students and administrative staff were motivated to set up adequate structures, examination regulations and curricula in order to make Kaiserslautern a competitive and research orientated university.

During an official "separation ceremony" on 4 February 1975, the University President Prof. Dr. Ehrhardt honored the independence of the university. In his speech, he emphasized that this event was of the utmost importance far beyond the Kaiserslautern region. For the region, he promised that the university would have considerable positive effects.