

GAM Juniors



Activity Report 2012 - 2018

GAMM Juniors Activity Report

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Impressum

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GAMM Juniors

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Dear Reader,

the GAMM Juniors were founded in 2012 to strengthen the voice of junior researchers and to support the rejuvenation of the *Gesellschaft für Angewandte Mathematik und Mechanik* (GAMM). Seven years later, I believe it is safe to say that we are well on the way to accomplish these goals. The GAMM Juniors are active members in many boards and committees of GAMM. We are organizing and hosting various events specifically addressing the interests of junior researchers throughout the academic year, in particular during the time of the GAMM Annual Meeting.

Most importantly, the GAMM Juniors have become a forum for young and aspiring researchers to discover overlapping interests and to come together over sharing experiences in academia.

This report provides an overview of the wide range of activities and initiatives conducted by the GAMM Juniors since 2012. It aims at giving you an impression of the impact we had on GAMM as an organization but first and foremost, we hope that it illustrates what being a GAMM Junior can mean for the individual academic biographies of our members.

During my own time as a member and speaker of the GAMM Juniors, I mostly enjoyed meeting inspiring young minds from different fields, with whom I could discuss the various ups and downs of life in academia. Being a member of the GAMM Juniors also gives you the unique opportunity of getting to know and even shaping parts of the academic world to which junior researchers typically do not have access to.

I would like to thank everyone who contributed to this report and hope that it succeeds in conveying the spirit of the GAMM Juniors!



Rafael Reisenhofer
Speaker of the GAMM Juniors in 2018

Who are the GAMM Juniors?

The GAMM Juniors are a group of 30 doctoral students and postdoctoral researchers within GAMM. Members of the GAMM Juniors participate as advocates for the interests of junior researchers in various boards and committees of GAMM, such as the annual meeting of the managing board, the future committee, or the committee for equality.

Arguably the most visible and significant contribution of our members is the organization of different events that facilitate both the scientific and the personal exchange between junior researchers. Many of these events, such as the *Young Academics Meet Mentors* (YAMM) lunch, or the GAMM Juniors poster session take place during the GAMM Annual Meeting (see p. 14). Since 2014, with generous support from the Dr.-Klaus-Körper foundation, members of the GAMM Juniors have also been active in the organization of summer schools that address currently hot topics in different fields in applied mathematics and mechanics (see p. 17).

In recent years, we gradually began to extend our outreach beyond the realm of GAMM. A small example for this is our official endorsement of an initiative for the implementation of a family sabbatical that would allow young parents to fully focus on their research after a period of parental leave. A project of a much bigger scope is the publication of a journal for student research. The recently founded *GAMM Archive for Students* (GAMMAS) (see p. 23) aims to provide a platform for outstanding works of students that make important contributions to the scientific discourse but have little chance for publication in traditional journals, such as negative results, or educational articles that provide a concise overview of the current state of research in a specific field.

Our history dates back to 2011, when the first cohort of GAMM Juniors was officially nominated following a resolution of the GAMM executive board at the annual meeting in Graz. Since then, a specifically appointed committee each year nominates ten new members from a pool of candidates proposed by the local GAMM representatives. Each GAMM Junior is nominated for a period of three years during which they are exempt from the GAMM membership fee.

The constitutional meeting of GAMM Juniors was held in February 2012 in Berlin (see p. 7). At this meeting, the GAMM Juniors first discussed their goals and organizational structure, which was finalized at the meeting in Braunschweig in 2014, and has basically remained unchanged until today.

The GAMM Juniors hold official meetings twice a year, once during the GAMM Annual Meeting in spring and once at a specially organized meeting in fall. Furthermore, for each year, the GAMM Juniors elect a speaker and two deputy speakers as their official representatives. While the second deputy speaker is typically responsible for organizing an extended fall meeting, the first deputy speaker automatically assumes the role of speaker of the GAMM Juniors in the succeeding year.

In particular, the GAMM Juniors strive to equally represent male and female junior researchers in both mechanics and applied mathematics.

Annual Workshops

The GAMM Juniors annually organize an internal two to three days workshop in autumn, which is traditionally hosted at the home institution of the second deputy speaker. A main purpose of this workshop is to review past, and to plan future activities.

Members of the GAMM Juniors often work in very different fields in applied mathematics and mechanics. To facilitate a better interdisciplinary understanding, and maybe even collaborations, the first day of the workshop is often devoted to the academic exchange between participants.

Maybe the most important aspect of our annual fall meetings is the possibility of getting to know fellow members of the GAMM Juniors on a personal level. Many of us are at a similar stage in their academic careers and face similar problems when it comes to finding a good work-life balance, or applying for the next position. Very often, talking to someone who is, or has been facing the same issues as oneself can already be of great help. Finally, our annual workshops are often a great opportunity for sightseeing.



Participants of the constitutional GAMM Juniors meeting in Berlin.

Spring 2012 / Berlin

The constitutional workshop of the GAMM Juniors took place on February 17, 2012 at the Institute of Mathematics at TU Berlin. During the first part of the meeting, each participant gave a short presentation about their respective area of research. This allowed the newly nominated GAMM Juniors to discover both common themes as well as different approaches amongst their respective fields. In view of this experience, the GAMM Juniors agreed to work towards the organization of a special event focusing on the interdisciplinary exchange between the fields of mathematics and mechanics.

At this meeting, the GAMM Juniors also elected their first team of speakers, namely Felix Fritzen (speaker), Benjamin Klusemann (deputy speaker), and Agnieszka Miedlar (second deputy speaker). In the last part of the meeting, the participants agreed on a first agenda of planned activities. As many GAMM Juniors events that would follow, this meeting was financially supported by the Dr.-Klaus-Körper foundation.

Fall 2012 / Karlsruhe

The GAMM Juniors met for their second meeting on September 24, 2012 in Karlsruhe. In the beginning of the workshop, all participants briefly reported on personal developments that had occurred since the first meeting, with a particular focus on developments in their academic career. Furthermore, the GAMM Juniors discussed their activities during the GAMM Annual Meeting 2012 in Darmstadt and the feedback they had received. The GAMM Juniors decided to make an addition to the program of the GAMM Annual Meeting by organizing a poster session featuring the works of junior researchers. The GAMM Juniors poster session was first organized at the annual meeting 2013 in Novi Sad and has since been part of the program of the GAMM Annual Meeting.

The participants also discussed scientific workshops that had been co-organized by members of the GAMM Juniors. A significant point raised in this discussion was the often lacking support of parents when it comes to providing childcare services at conferences.

Another important issue discussed at the meeting in Karlsruhe was the often limited access to important research articles published in expensive journals and the associated emergence of open access journals. In this matter, it

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was suggested to establish a database containing brief reports of experiences with the review processes of such journals.

Spring 2013 / Aachen

The GAMM Juniors workshop in the spring of 2013 was the first at which also GAMM Juniors that were nominated in 2012 participated. The workshop was organized at the RWTH Aachen and began on January 21 at noon. In the first session of the workshop, the participating GAMM Juniors had a chance to get to know each other and to briefly present aspects of their research in short five minute presentations. Though it was apparent that their academic interests strongly varied, the participants could also find some interesting connections between their fields of research.

Following the introductory session, the GAMM Juniors reviewed the results of the previous meeting in Karlsruhe and discussed topics such as their contributions to the GAMM Rundbrief, and the GAMM Juniors poster session. In the evening, the participants were joined by Marek Behr (RWTH Aachen) who gave feedback regarding the foundation of the GAMM Juniors and their current reception within GAMM.

The second day of the meeting began with a discussion regarding future activities of the GAMM Juniors during the GAMM Annual Meeting. In particular the possibility of establishing a poster session for junior researchers was explored in more detail.



Group photo of the third GAMM Juniors meeting Aachen.

In the following session, Doris Frank and Anne Eggeling, two experts from the local university, gave interesting talks about different career development and funding opportunities for junior researchers after obtaining a PhD. The final item of the agenda was the election of a new team of speakers for the year 2014. The workshop ended on February 22 at noon.

Fall 2013 / Berlin

The annual fall meeting of the GAMM Juniors in Berlin was organized by Martia Thomas and Jan Giesselmann. The meeting took place at WIAS Berlin from September 15 to September 16.

The main topics of discussion on the first day of the meeting were the significance of poster sessions for junior researchers, SIAM student chapters, and the difficulty of raising a family while pursuing a career in academia.

On the second day of the workshop, the GAMM Juniors compiled the discussion results from the previous day and prepared their inputs for the upcoming meeting of the GAMM future committee. Subsequently, the participants consulted with senior GAMM members from Berlin, namely Gitta Kutyniok, Alexander Mielke, Utz von Wagner, and Alexander Griewank, who provided valuable feedback.

In the final part of the meeting, the GAMM Juniors discussed topics such as third party funding, and research scholarships.

Spring 2014 / Erlangen-Nürnberg

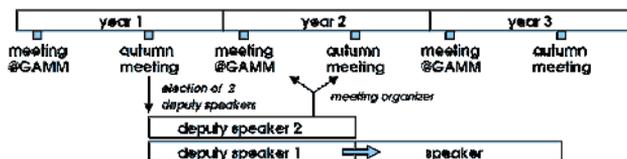
In 2014, the GAMM Juniors held an extended spring meeting directly following the GAMM Annual Meeting in Erlangen-Nürnberg. Since not all members of the GAMM Juniors were German natives anymore, the meeting was held in English for the first time.

A main topic of the meeting was the proposal of the GAMM Juniors to require future organizing committees of the GAMM Annual Meeting to also provide childcare services. The GAMM Juniors furthermore discussed the structure of their new summer school format *Summerschools in Applied Mathematics and Mechanics* (SAMM). In particular, the participants of the meeting already discussed the organizational details regarding the first SAMM, which would take place later that year in Elgersburg near Ilmenau on the topic of differential-algebraic equations.

Fall 2014 / Braunschweig

The GAMM Juniors fall workshop 2014 was organized by Bojana Rosić in Braunschweig from October 9 to October 10. During the meeting, the

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Organizational chart of the three years of a GAMM Juniors membership. The chart was made after discussing the organizational structure of the GAMM Juniors at the annual fall meeting 2014 in Braunschweig.

participants discussed the development of the recently introduced SAMMs and the founding of GAMM student chapters.

The members of the GAMM Juniors furthermore agreed on a basic organizational structure regarding the duration and contents of the spring and fall meetings, and the voting process for the speaker positions.

A highlight of the meeting was an extended discussion with Heike Faßbender, who would later become president of GAMM, and Thomas Vietor, about how GAMM could become more attractive for junior researchers. Several of the measures discussed in Braunschweig, such as reserving a special time slot for the *Young Researcher's Minsymposia* (YRMS) at the GAMM Annual Meeting, or granting members of the GAMM Juniors non-voting seats at important committee meetings have since then been successfully implemented.



Participants of the GAMM Juniors fall workshop 2015 in Dresden.

Fall 2015 / Dresden

The GAMM Juniors fall meeting in 2015 was organized by Sebastian Aland in Dresden from September 28 to September 29. The meeting started with the new concept of a scientific speed dating. Each participant talked to every other participant in a time slot of five minutes to identify common

scientific interests. Afterwards, matching partners could foster the exchange of ideas and extend discussions in a special coffee break session.

Further, the secretary of GAMM, Michael Kaliske, was invited to discuss future directions of the GAMM Juniors. Particular topics of interest were family friendly measures at GAMM Annual Meeting and the status of women in GAMM. Finally, the Juniors prepared articles for the ICIAM newsletter and the GAMM Rundbrief and the idea of YAMM came up for the first time.

Fall 2016 / Chemnitz

The annual GAMM Juniors fall meeting 2016 was held in Chemnitz on September 29 and 30. The meeting was mainly organized by Dominik Kern. A main topic was the preparation of the first YAMM lunch at the upcoming GAMM Annual Meeting 2017 in Weimar.



Participants of the annual GAMM Juniors workshop 2016 in Chemnitz.

Another topic was the founding of a student journal, this idea was born there. During the meeting, the representatives of prospective GAMM student chapters reported about their current status, plans and experiences.

In the beginning of the meeting, there was a speed-dating session, from which the idea came up to extend this get-to-know format into meet and greet presentations. These short self presentations should be *rather about methods than results* to find common ground for possible collaborations and were successfully implemented at the next meetings.

Fall 2017 / Wien

The autumn meeting of the GAMM Juniors took place from September 27 to 29 in the beautiful city of Vienna. For the first time, the meeting was held

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outside of Germany. The meeting was mainly organized by the second deputy speaker Melanie Todt, who works as an assistant professor at the Institute of Lightweight Design and Structural Biomechanics at the TU Wien.

A short collaborative workshop was held on the first day of the meeting. The main goal of this workshop was to promote academic exchange between GAMM Juniors working in different fields and disciplines. During this session, all participants had the chance to gain a basic understanding of the biggest questions, challenges, and tools from other academic fields. The GAMM Juniors intend to host a similar workshop again at the first day of the autumn meeting in the following.

The remaining two days of the meeting were devoted to the organization of various projects and events such as the YAMM 2018 “Family and Academic Career”, which will be organized at the annual GAMM Annual Meeting 2018 in Munich. The GAMM Juniors also made significant progress in preparing the publication of a student research journal and managed to make the first complete test runs from submission to publication with Open Journal Systems. Another major topic was the preparation of the input for the upcoming meeting of the GAMM future committee.

Besides hard work and academic exchange, the participants also found some time to enjoy Vienna and its surroundings. The host Melanie had organized a beautiful evening sightseeing tour through the city center as well as trip to the Kahlenberg, where the GAMM Juniors enjoyed some Sturm (young wine) directly at a vineyard.



Participants of the annual GAMM Juniors fall meeting 2017 in Vienna.

Fall 2018 / Essen

In 2018, the traditional fall meeting was organized by the second deputy speaker of the GAMM Juniors, Robert Martin, at the University of Duisburg-Essen from September 5 to 7.

As in the previous year, the first day of the meeting was dedicated to a small scientific workshop. Once again, rather than discussing a single result in greater detail, each participant presented a brief introduction into their general field of research, giving the other Juniors an opportunity to look for possible interconnections to their own work. Many GAMM Juniors particularly enjoyed the collaborative and informal atmosphere of the workshop, which will hopefully spark interdisciplinary cooperations and foster the academic exchange between mathematicians and engineers within GAMM.



Participants of the fall workshop in Essen are working on the design and contents of the online student research journal GAMMAS. From left to right: Petar Mlinarić, Philipp Schulze, Rafael Reisenhofer, and Robert Martin.

The two remaining days of the meeting were mostly devoted to reviewing past and organizing future events and activities. This included for instance the YAMM lunch, which aims to bring together young researchers and experienced members of the academic community in an informal atmosphere. The GAMM Juniors also made significant progress towards the final version of the website of their new student research journal GAMMAS, including the design of a new logo. At the time of the meeting, the first submission for the journal was already in revision. Another creative task carried out during the meeting was the design of a new logo for the GAMM Juniors. Based on a first draft made by Junior Philipp Morgenstern, the participants created a new version that is now the official logo of the GAMM Juniors and can also be found on the cover of this report.

Activities at the Annual Meeting

The GAMM Annual Meeting is the main conference of GAMM. It regularly attracts a crowd of more than a thousand international researchers from the fields of mechanics and applied mathematics.

Since their founding, the GAMM Juniors have been highly active in contributing to the program of the GAMM Annual Meeting with organizing events that specifically address the interests of junior researchers. Since 2018, the speaker of the GAMM Juniors also participates in the meeting of the program committee of the GAMM Annual Meeting.

GAMM Juniors Poster Session

This poster session is an exclusive opportunity for members of the GAMM Juniors to present themselves and their research to the scientific community. It mainly takes place in between sessions during two coffee breaks. However, at most meetings, the poster remain in place throughout the whole week which allows for extended in-depth discussions.



GAMM Juniors poster session at the GAMM Annual Meeting 2018 in Munich.

The first GAMM Juniors poster session was organized at the annual meeting in 2013 in Novi Sad. Since then, the poster session has been a regular part of the GAMM Annual Meeting with about 20 members of the GAMM Juniors presenting their work each year.

Young Academics Meet Mentors (YAMM)

The YAMM lunch provides an informal setting in which young researchers at the beginning of their academic careers can get into contact with senior professors to discuss aspects of life in academia. Typical topics are the famous two-body problem, how one could optimally prepare for the next steps on the academic career ladder, or whether it is possible to start a family before tenure.

The YAMM typically takes place during the lunchbreak on Wednesday and is limited to about 50 participants. For a small fee, meals and drinks are provided.

The first YAMM was organized in 2017 at the GAMM Annual Meeting in Weimar under the theme *Career Opportunities for Young Academics*. The group of experts included senior postdoctoral researchers, full professors, as well as the laureates of the Richard-von-Mises Prize 2017. Due to an overwhelmingly positive response of the participants, the GAMM Juniors decided to continue the organization of the YAMM lunch at the following annual meetings.

In 2018, the second YAMM was organized in Munich under the topic *Family and Academic Career*. The lunch took place at the Vorhoelzer Forum, which has a great view over the city and the alps. The discussions mainly centered around the question how



YAMM 2017 in Weimar.

one can combine a successful academic career with starting a family and a healthy work-life balance. The importance of this topic was highlighted by the fact that all available tickets for the YAMM lunch were quickly sold out.

Experts in 2017: Felix Fritzen, Roland Herzog, Ming Hu, Barbara Kaltenbacher, Emily King, Benjamin Klusemann, Sigrid Leyendecker, Volker Mehrmann, Pierre Suquet, Aretha Teckentrup, Peter Wriggers, and Stephan Wulfinghoff.

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Experts in 2018: Marek Behr, Heike Faßbender, Dominik Kern, Volker Mehrmann, Daniel Peterseim, Stefanie Reese, Claudia Schillings, Franz Rammerstorfer, Peter Wriggers, and Wolfgang A. Wall.

Spring Meetings

The GAMM Juniors traditionally hold a short spring meeting right after the closing ceremony of the GAMM Annual Meeting. The spring meeting usually only takes about three hours. It is mainly an opportunity for the speakers to inform all members of the GAMM Juniors about recent developments in GAMM, to briefly review the annual meeting itself, and to discuss important decisions regarding the future of the GAMM Juniors.



GAMM president Heike Faßbender together with GAMM Juniors alumni Robert Altmann and Kathrin Flaßkamp at the YAMM 2018 in Munich.

Since 2014, the Dr.-Klaus-Körper foundation offers financial support for the organization of summer schools. Members of the GAMM Juniors have since then made full use of this opportunity and organized at least one summer school per year.

The aim of a so-called *Summer School in Applied Mathematics and Mechanics* (SAMM) is to provide doctoral students and advanced undergraduates with an introduction to recent developments and currently hot topics in an area of applied mathematics or mechanics.

2014 / Ilmenau

The first SAMM was organized in Elgersburg near Ilmenau from September 14 to September 20, 2014 on the topic of differential-algebraic equations (DAEs). The investigation of such equations is an established field of research in mathematics and mechanics. They are a powerful tool for the modeling and analysis of problems in, for example, multibody dynamics, economics, and electrical circuits.

The summer school was attended by a total of international 22 participants, who came from Austria, Canada, Egypt, Germany, Italy, and Sweden. The program mainly consisted of two lecture series given by Thomas Berger, and Stephan Trenn. The lectures covered the foundations of DAEs and gave some insight into the research focus of the lecturers in the field of control theory. A highlight of the summer school were the two guest lectures



Participants of the SAMM 2014 in Elgersburg near Ilmenau.

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given by Volker Mehrmann and Bernd Simeon, which covered more advanced topics in optimal control and multibody system dynamics.

The morning sections consisted of two consecutive lectures, while in the afternoon, the participants had the opportunity to work on exercises and discuss their approaches and results.

Another highlight of the week was a trip to the Kickelhahn mountain where Johann Wolfgang von Goethe wrote the famous poem *Wanderer's Night*.

The summer school was organized by the GAMM Juniors Sebastian Schöps, and Karl Worthmann. The organizers are grateful to the Ernst-Abbe foundation, and the Dr.-Klaus-Körper foundation for financial support, which also allowed for a limited number of scholarships.

2015 / Stuttgart

The SAMM 2015 was organized from September 7 to September 11 by Marita Thomas and Jan Giesselmann at the University of Stuttgart. The main topics were modeling, analysis, and simulation of materials with discontinuities caused by dissipative processes such as phase transition or separation processes, plastification, damage, and fracture. The school gave an overview on thermodynamical modeling, mathematical solution concepts and numerical schemes for dissipative processes, involving minimization problems for functions of bounded variation, and phase field models.

Short courses consisting of four 90-minute lectures each were given by Prof. Helmut Abels, Prof. Sören Bartels, Prof. Dorothee Knees, and Prof. Christian Miehe. The program also included a poster session and three short talks on Tuesday, which gave the participants also a chance of presenting their own research. In total, the SAMM 2015 was attended by 32 participants from Germany, Italy, Czech Republic, Switzerland, UK, and Belarus.



Poster of the SAMM 2015 in Stuttgart.

2016 / Wilhelm Ostwald Park

The SAMM 2016 focused on geometric methods in multi-body and structural dynamics modeling, simulation, and control. It was organized by the GAMM Juniors Dominik Kern and Karl Worthmann from September 5 to 9, 2016 at Wilhelm Ostwald Park in Saxony.

The participants had a chance to learn about the basics of variational, and Lie-group integrators from the basics, with an emphasis on their geometrical properties. Furthermore, it was discussed how optimal control can be combined with these structure preserving integrators in order to exploit the natural coupling between mathematical modeling, numerical integration and control. These approaches were then exemplary applied to mechanical multi-body systems. Finally, it was outlined how the methods could be extended to structural dynamics, non-smooth systems (e.g., elastic collisions), and electrical systems.

The schedule consisted of two lectures in the morning and programming exercises in the afternoon. Dominik Kern (TU Chemnitz) started on Monday with variational integrators for mechanical systems, which were extended on the next day to optimal control by Kathrin Flaßkamp (U Bremen). On Wednesday, Martin Arnold (U Halle-Wittenberg) explained Lie-group time



Group photo of the SAMM 2016 at Wilhelm Ostwald Park.



The participants of the SAMM 2016 on energy-based modeling in Berlin.

der Schaf and Peter Breedveld, and Carsten Hartmann (FU Berlin) and Hector Ramires (University of Franche-Comté).

The summer school was (co-)organized by the GAMM Juniors Agnieszka Międlar, Philipp Schulze, and Benjamin Unger. The organizers are grateful to the Collaborative Research Center 1029 and the Dr.-Klaus-Körper foundation for the financial support, which also allowed for a limited number of scholarships.

2017 / Braunschweig

The fourth GAMM Juniors summer school on *Bayesian Inference: probabilistic learning from data* took place from July 10 to July 14 at the Technische Universität Braunschweig and attracted 50 participants from Germany, Austria, France, UK, Czech Republic, and other countries. The summer school's key topics, Bayesian inference and uncertainty quantification, are very active fields of research in mathematics, statistics and engineering. Additionally, the lectures and exercises covered introductory topics in probability theory and related fields, such as machine learning. The SAMM was organized by the GAMM juniors Bojana Rosić, Claudia Schillings, and Ulrich Römer. Exciting invited lectures were given by Hermann Matthies (TU Braunschweig), Youssef Marzouk (MIT), Joachim Denzler (University of Jena) and Martin

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Eigel (WIAS). On the last day, several participants presented results from their own research to stimulate discussions.

The scientific program was accompanied by a guided city tour and a barbecue at the beach club Okercabana, which was well received among the participants. The support of GAMM and GRK2075 was crucial for the success of the summer school and is greatly acknowledged.

Scientific Workshops

Members of the GAMM Juniors are also active as co-organizers of scientific workshops with topics in applied mathematics and mechanics. Often, these workshops are associated with one of the many GAMM activity groups, in which members of certain specialization are organized to contribute to the continued development of potentially significant areas in applied mathematics and mechanics. often associated with gamm activity groups.

2013 / Schloss Eringerfeld

From March 4 to March 7, 2013 the eighth Workshop on Coupled Descriptor Systems took place in the castle of Eringerfeld, near Paderborn. The participants of this workshop focused on the theoretical and numerical treatment of coupled and multiphysical descriptor systems of differential-algebraic equations.

The workshop was co-organized by GAMM Junior Sebastian Schöps and financially supported by the Dr.-Klaus-Körper foundation.

2013 / Bad Herrenalb

The first international Workshop on Order-Reduction Methods for Application to Mechanics of Materials (WORM2013) took place from August 25 to 28, 2013 in Bad Herrenalb. The workshop was organized by GAMM Junior Felix Fritzen in cooperation with David Ryckelynck from Centre des Matériaux (Mines ParisTech). Today, the workshop series is well-established. It is held on a bi-annual basis at the same venue (next edition in 2020).



Poster of the eighth Workshop on Coupled Descriptor Systems.

2017 / Aachen

The GAMM Workshop on Numerical Analysis was organized at RWTH Aachen from November 1 to 2, 2017 and served as the inaugural workshop of the GAMM Activity Group on Numerical Analysis.

The focus of the workshop lied on bringing together the young researchers from the field of numerical analysis. Additional to the conference talks, a short course on adaptive mesh refinement methods was organized by the GAMM Juniors Philipp Morgenstern and Fleurianne Bertrand.

2017 / Bremen

The annual workshop of the GAMM activity group mathematical signal and image processing (MSIP) was held in Bremen from September 18 to 20, 2017. The goal of this workshop, which was co-organized by GAMM Junior Rafael Reisenhofer, was to bring together researchers of different aspects of mathematical signal processing and data analysis. The workshop addressed theoretical, applied, and numerical aspects of data analysis. To encourage younger researchers, a poster session was also part of the workshop's program.

GAMM Juniors Alumni

From the YAMM lunch to summer schools, this report has mostly been about activities and initiatives of the GAMM Juniors that aim to improve the general environment for young researchers in academia. However, being a GAMM Junior can also be of great importance to the individual development of a member.

Our workshops and meetings always bring together a group of young researchers with diverse backgrounds but often similar questions and issues: How can I get funding for my next position? How can I organize a summer school, or a small workshop that addresses emerging research topics I really care about? Is it possible to start a family and continue my career?

Being a GAMM Junior does not straight up solve these issues, but discussing them with like-minded people who are, or have been, in similar situations can often lead to new perspectives. To get a better picture of how former GAMM Juniors continued their careers in academia, we conducted a brief survey. As it turns out, the results are quite encouraging.

Since the first GAMM Juniors were nominated, 47 young researchers have completed a full three-year membership. About 80 % of these GAMM Juniors alumni have since remained active in academia as postdoctoral researchers, lecturers, or even full professors. In fact, at least twelve GAMM Juniors alumni now already hold (junior) professorships and, in some cases, even work with members of the most recent generation of GAMM Juniors as doctoral advisors. These impressive numbers speak primarily for the dedication and ambition of our members. However, they also give some indication that being a GAMM Junior can indeed be one of the many elements leading to a successful academic career.



Claudia Schillings, speaker of the GAMM Juniors in 2016, now professor of mathematical optimization at U Mannheim.

Three of many examples for successful careers of GAMM Juniors alumni are Claudia Schillings, Sebastian Schöps, and Benjamin Klusemann. Claudia Schillings was speaker of the GAMM Juniors in 2016 and is now professor of mathematical optimization at the University of Mannheim. Sebastian Schöps, deputy speaker in 2014, now holds a professorship of computational engineering at TU Darmstadt. Benjamin Klusemann, deputy speaker in 2013, is now professor for local engineering at the Leuphana University of Lüneburg and recipient of the prestigious Richard-von-Mises Prize 2017.

Statements of Former Members

"I still remember the time as one of the first GAMM Juniors as an exciting period. There were no clear rules, no clear objectives, no alumnis to ask. We met, brain-stormed, discussed, small-talked and built long-lasting friendships bridging different disciplines. The freedom and chance to create something new out of the blue is something that I appreciate a lot."

Felix Fritzen

First speaker of the GAMM Juniors in 2012

"The GAMM Juniors are a great network which has promoted important issues within GAMM and also supported me personally. Many of the people I met through the GAMM Juniors have become friends and collaborators whom I still meet on a regular basis at conferences and workshops."

Sebastian Schöps

Deputy speaker in 2014

"My time as a GAMM Junior was a great chance to turn ideas into reality."

Dominik Kern

Speaker in 2017

"Being a GAMM Junior for me meant the exchange of ideas with people from different disciplines, and participating in various activities in a dynamic environment, and a very nice atmosphere."

Ulrich Römer

GAMM Junior 2016 – 2018

I believe that this activity report is an excellent proof of the success story of the GAMM Juniors. Not only are the GAMM Juniors formed by great and passionate minds that excel in academia and personal life, the Juniors also started to shape the academic world, for instance with the YAMM luncheon at the GAMM annual meeting and the new student research journal GAMMAS, which just published its first article.

One of the main goals for the upcoming years is the continuation and consolidation of these successful activities. In particular, we strive in establishing GAMMAS as a recognized journal for young academics.

In 2019, the fall meeting will be hosted by Philipp Morgenstern in Hannover, and we are currently discussing the option of making this a joint meeting with the ECCOMAS Young Investigators. Another big project that we are now working on is the introduction of thematic short-courses at the annual meeting, which offer young researchers the chance to get to know different research areas within the GAMM. We hope to implement the first edition of the short courses at the annual meeting 2020 in Kassel.

I want to thank all GAMM Juniors who paved the way for the current generation of Juniors and hope that we can follow in their footsteps but also leave our own marks.



Benjamin Unger
Speaker of the GAMM Juniors in 2019

Past and Present Members

2019 – 2021

Gangl, Peter	TU Graz
Gräßle, Carme	U Hamburg
Hansen-Dörr, Arne C.	TU Dresden
Jantos, Dustin R.	U Bochum
Lambers, Lena	U Stuttgart
Lange, Stephan	U Kassel
Lux, Kerstin	U Mannheim
Metzger, Stefan	FAU Erlangen-Nürnberg
Scheunemann, Lisa	U Duisburg-Essen
Stötzner, Ailyn	TU Chemnitz

2016 – 2018

Bertrand, Fleurianne	U Duisburg-Essen
Braun, Philipp	U Bayreuth
Heidlauf, Thomas	U Stuttgart
Keiper, Sandra	TU Berlin
Kochmann, Julian	RWTH Aachen
Nagler, Johannes	U Passau
Reisenhofer, Rafael	U Bremen
Römer, Ulrich	U Darmstadt
Schneider, Konrad	TU Hamburg-Harburg
Siebenborn, Martin	U Trier

2018 – 2020

Kaiser, Tobias	TU Dortmund
Braun, Julian	U Augsburg
De Paoli, Marco	TU Wien
Eisenräger Johanna	OVGU Magdeburg
Mittnenzweig, Markus	WIAS Berlin
Mlinaric, Petar	OVGU Magdeburg
Otto, Svenja	TU Hamburg-Harburg
Pagliantini, Cecilia	ETH Zürich
Schulze, Philipp	TU Berlin
Welker, Kathrin	U Trier

2015 – 2017

Beck, Andrea	U Stuttgart
Flaßkamp, Kathrin	Northwestern University
Hatz, Kathrin	U Heidelberg
Kern, Dominik	TU Chemnitz
Lentz, Lukas	TU Berlin
Leuschner, Matthias	KIT
Müller, Matthias	U Stuttgart
Petersen, Philipp	TU Berlin
Todt, Melanie	TU Wien
Zieleniewicz, Andreas	TU Darmstadt

2017 – 2019

Augner, Björn	TU Darmstadt
Franke, Marlon	KIT
Gatti, Davide	KIT
Genzel, Martin	TU Berlin
Lukassen, Laura	MPI Göttingen
Martin, Robert	U Duisburg-Essen
Meier, Christoph	MIT
Morgenstern, Philipp	U Bonn
Pauli, Lutz	RWTH Aachen
Unger, Benjamin	TU Berlin

2014 – 2016

Aland, Sebastian	TU Dresden
Altmann, Robert	TU Berlin
Kummer, Florian	U Stanford
Rosić, Bojana	TU Braunschweig
Schillings, Claudia	ETH Zürich
Schwenninger, Felix	U Twente
Siegl, Petr	U Bern
Steeger, Karl	U Duisburg-Essen
Storath, Martin	EPFL Lausanne

GAMM Juniors Activity Report

2013 – 2015

Elgeti, Stefanie	RWTH Aachen
Giesselmann, Jan	U Stuttgart
Holler, Martin	U Graz
Serafinska, Aleksandra	TU Dresden
Thomas, Marita	WIAS Berlin
Wachsmuth, Gerd	TU Chemnitz
Worthmann, Karl	U Bayreuth
Tobler, Christine	ETH Zürich

2012 – 2014

Behnke, Ronny	TU Dresden
Berger, Thomas	TU Ilmenau
Keller, Florian	KIT
Schöps, Sebastian	TU Darmstadt
Fritzen, Felix	KIT
Kahl, Karsten	U Wuppertal
Klusemann, Benjamin	TU Hamburg-Harburg
Miedlar, Agnieszka	TU Berlin
Radermacher, Annika	RWTH Aachen
Rund, Armin	U Graz

Speakers of the GAMM Juniors

2019

Unger, Benjamin	TU Berlin	Speaker
Welker, Kathrin	Uni Trier	Deputy
Morgenstern, Philipp	Uni Hannover	2nd Deputy

2018

Reisenhofer, Rafael	Uni Bremen	Speaker
Unger, Benjamin	TU Berlin	Deputy
Martin, Robert	Uni Duisburg/Essen	2nd Deputy

2017

Kern, Dominik	TU Chemnitz	Speaker
Reisenhofer, Rafael	Uni Bremen	Deputy
Todt, Melanie	TU Wien	2nd Deputy

2016

Schillings, Claudia	Warwick/Berlin	Speaker
Kern, Dominik	TU Chemnitz	Deputy
Beck, Andrea	Stuttgart	2nd Deputy

2015

Thomas, Marita	WIAS Berlin	Speaker
Schillings, Claudia	ETH Zürich	Deputy
Aland, Sebastian	TU Dresden	2nd Deputy

2014

Worthmann, Karl	TU Ilmenau	Speaker
Schöps, Sebastian	TU Darmstadt	Deputy
Elgeti, Stefanie	RWTH Aachen	2nd Deputy

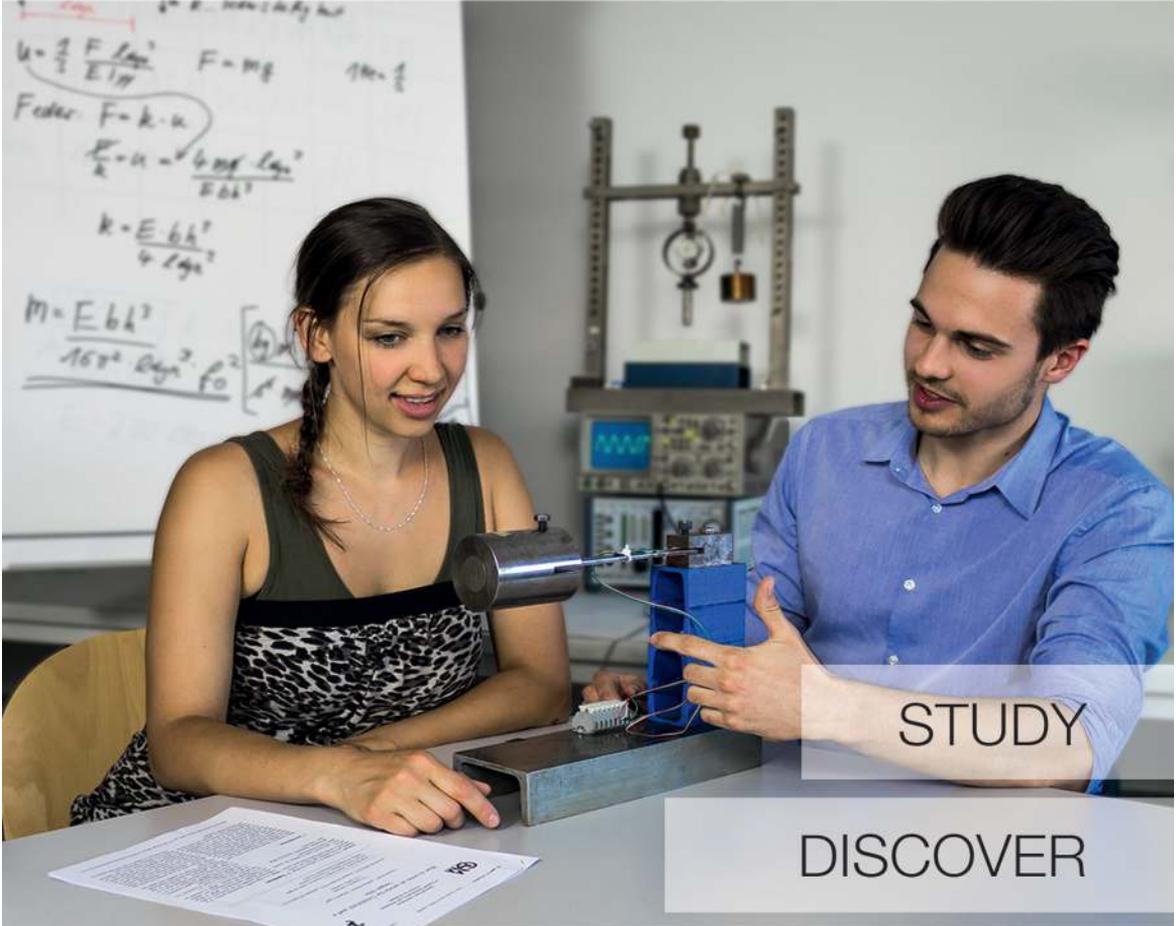
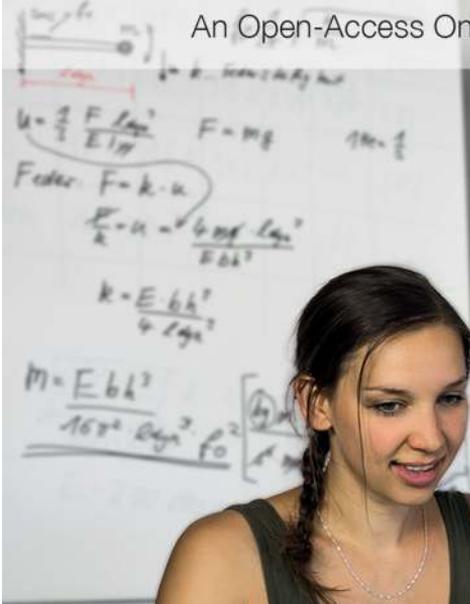
2013

Fritzen, Felix	KIT	Speaker
Klusemann, Benjamin	TU Hamburg-Harburg	Deputy
Miedlar, Agnieszka	TU Berlin	2nd Deputy



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