# Future Challenges in/for Applied Mathematics – A personal view from the GAMM president–

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The International Association of Applied Mathematics and Mechanics (Gesellschaft für Angewandte Mathematik und Mechanik (GAMM)) was founded in 1922 von Ludwig Prandtl and Richard von Mises. As legacy of the founding fathers the society cultivates international cooperation in Applied Mathematics as well in all areas of Mechanics and Physics relating to the foundations of the engineering sciences. Historically, the society has played an essential role in the advancement of hydro- and aerodynamics, solid state mechanics as well as numerical and industrial mathematics. Thus, historically, applied mathematics (not only in GAMM) consisted principally of applied analysis.
Today, applied mathematics (not only in GAMM) is much broader. It ranges from classical applied analysis to computational science, numerical analysis, optimization, uncertainty quantification, imaging science, high performance computing and data science. Applied mathematics needs connections with other disciplines that inspire interesting and useful mathematics, and where innovative mathematical reasoning lead to new insights and applications. It is a 'hard' topic as a strong strong mathematical and computational background as well intimate knowledge of the areas of application is needed.
I will describe some recent research trends in applied mathematics in Germany which traditionally has strong links to industry. Moreover, I will briefly comment on the education of students in the field.