

## Abstract of Contribution 119

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**MS1: Modern teaching and didactics in mathematics and mechanics**

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### **Proving as a main aspect and implementing as a secondary aspect? Results of an interview study on competencies in numerical analysis courses**

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Numerical analysis has (so far) played a minor role in math didactics. Although the importance of (numerical) algorithms in almost all areas of daily life is steadily growing, there are comparatively few international and national contributions dealing with the teaching, learning and examination of numerical analysis. Moreover, as pointed out in previous work, the focus of research is so far on teaching and learning numerical analysis in engineering courses and integrating numerical analysis topics in schools. Numerical analysis courses in the context of math degree programs have been studied only sporadically so far. Therefore, the identification and description of students' competencies in these courses is still pending but seems to be of particular importance especially with respect to the design of adequate and competency-based forms of teaching, learning and examination.

Building on previous work, this talk presents the results of an interview study on students' competencies in numerical analysis courses. For this purpose, a total of 17 numerical analysis teachers from different universities were interviewed one-on-one in 2021 and 2022. It can be seen that the requirements for students are very diverse. For example, in addition to implementing algorithms on the computer, they should also be able to visualize, analyze, evaluate, compare, apply and select algorithms.