

Teaching mathematics in the Engineering Education, teachers practices and connections to the workplace

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Abstract.

This conference develops the issue of teaching of mathematics in the context of engineering education. We examine how teachers use collectively designed resources in terms of their backgrounds. Based on two research works, we present theoretical and methodological developments around the theoretical concept of connectivity, which allows us to analyze the potential connectivity, characterized by the connections enabled by the resources for teaching mathematics in the engineering schools; and the effective connectivity that develops in teachers' practices and during the implementation of resources. We study the effective connectivity in terms of each teacher's personal relationship with the content at stake. We present case studies in which we consider teachers with different backgrounds (computer scientists, physicists, mathematicians) in a French Engineering Schools in France. The presentation will also be the opportunity to present a related French project (DeMETeRE), that has a main aim to develop teaching in terms of the workplace needs, particularly the engineering workplace.