

# CRMSE Colloquium

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*Design research in the context of pre-service teacher education: Which design principles can be fruitful for relating Abstract Algebra and School Algebra and what do the learning processes look like?*

Friday December 2nd  
12:00 noon to 1:00 pm PDT  
6475 Alvarado Blvd, Suite 128

Pre-service teachers often see little to no relevance in their mathematical content courses for their future mathematics teaching. Looking at the situation in Germany, content courses often get poor evaluations and students drop out from mathematics teachers' programs especially for high school level.

In order to make mathematics teaching more meaningful for students, course designers currently put huge development efforts in their teaching designs and suggest "bridging courses" or "bridging tasks" for making more explicit how abstract university mathematics relates to the future mathematics teaching. So far, however, the thereby initiated learning processes are still highly under-researched.

This is why we draw on a topic-specific design research approach and apply a framework of "knowledge reshaping" for also taking into account the initiated learning processes. In the talk, I will show how we formulated our design principles and give insights into the teaching material which was tested in laboratory design experiments with future teachers in their master's program. First results of in-depth analyses of the learning processes will be presented and discussed.

## Zoom link:

<https://SDSU.zoom.us/j/88113677162>

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