

SAMTAL@SU

Science and Mathematics Teaching and Learning Seminars

UNIVERSITY STUDENTS' ABILITY TO VISUALISE CHEMISTRY IN 2D & 3D THROUGH DIGITAL TOOLS

Karolina Broman

Date and time: 6 May 12:00-12:50

Zoom link: <https://stockholmuniversity.zoom.us/j/3966653915>

*Lunch seminar 12-12:50, followed by informal discussion (samtal) for those who can
Register at: https://doodle.com/poll/x9xyzhnf7rzak75u?utm_source=poll&utm_medium=link*

Abstract

Visualisation of chemical representations, for example, orbitals, molecular structures and reaction mechanisms, is important for students to fully understand chemistry. Spatial ability, that is, the move between two- and three-dimensional thinking, is complex, and students need to practice it. In different undergraduate projects, digital tools such as Virtual and Augmented Reality (VR and AR) have been applied to visualise chemical representations. Digital tools and techniques are becoming an integrated part of university chemistry teaching. The tools are often perceived as exciting and fun, but from the teacher's perspective, they need to enable learning to be relevant and meaningful. Results from projects that apply VR and AR to practice university chemistry students' spatial ability will be presented.

Karolina Broman is senior lecturer in chemistry education at Umeå University where she also has a position as chair of the educational committee for the Faculty of Science and Technology. She is appointed excellent teacher and has received pedagogical awards. Karolina's research interests range from context-based chemistry and students' educational choices, to digital tools and techniques such as flipped teaching and the application of Virtual and Augmented Reality within university organic chemistry.



SAMTAL@SU seminars are arranged in collaboration with:

The Department of Mathematics and Science Education
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