



Monday, September 17<sup>th</sup> 2018 - 14:30  
CFEL Seminar Room IV, Bldg. 99

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## Strain tuning of quantum materials

In this talk I will discuss the development of novel methods of applying uniaxial pressure to single crystals of quantum materials. Much of our work so far has been on ruthenates, but I will also mention projects on other materials. I will show that it is now possible to strain single crystals, reversibly, to change lattice parameters by at least 1%, and that this provides a 'tuning energy scale' equivalent to the Zeeman energy of magnetic fields of well over 1000 T. Uniaxial techniques are particularly suited to controlled tuning through Lifshitz transitions, and are also a useful complement to epitaxial strain in thin films, which is usually biaxial.

Host: Andrea Cavalleri

