



# Do you want to explore quantum many-body physics at the coldest temperature in the Universe?

photo credits: Eleonora Lippi

## MASTER THESES AND RESEARCH ASSISTANTSHIPS (Hiwi)

The Li-Cs experiment, under the supervision of Prof. Matthias Weidemüller and Prof. Lauriane Chomaz, **investigates fundamental paradigms of quantum few- and many-body physics**. We tune interactions and quantum statistics in ultracold gases and study a myriad of fascinating effects in strongly-interacting quantum matter under extreme control, including Bose-Einstein condensates, degenerate Fermi gases, and mixtures of both. Recently our interest is focused on physics of single atomic impurities dressed by the interactions with the surrounding many-body environment so called **polaron physics**.

**You will work in a team of physicists in order to**

- contribute to the state-of-the-art research on many-body physics in ultracold gases
- explore exotic quantum phenomena from both an experimental and theoretical point of view
- obtain scientific skills by working on atom and quantum optics, advanced laser technology, radio-frequency and laser spectroscopy
- have fun with basic electronics, high-frequency technology, feedback control systems, optics design, programming, process control, and data analysis
- develop tools and technical solutions for setting up a “smart lab”



Contact us for more information and for visiting our lab!

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