



# 19th International Conference on QCD in Extreme Conditions (XQCD 2023)

Contribution ID: 38

Type: **Talk**

## Building a realistic neutron star from holography

*Wednesday 26 July 2023 11:00 (25 minutes)*

I will present latest results within the holographic Witten-Sakai-Sugimoto model for dense matter at nonzero baryon and isospin chemical potentials. In particular, I will discuss the phase structure including phases where baryonic matter and meson condensates coexist. As an application I will show that the results can be used to construct entire neutron stars, including the inhomogeneous crust. These ‘holographic stars’ obey the astrophysical constraints on mass, radius, and tidal deformability and can be used to make further predictions for these quantities.

**Primary author:** SCHMITT, Andreas (University of Southampton)

**Presenter:** SCHMITT, Andreas (University of Southampton)

**Session Classification:** Plenary session