

In this talk, we present some of the recent development of heavy-baryons and exotics in the framework of the Sakai-Sugimoto's D4-D8 construction. We first review the inclusion of the heavy-mesons in the D4-D8 construction that manifestly preserves chiral symmetry and heavy quark symmetry. The heavy-baryons and pentaquarks can be treated as bound-states between the instanton core and the heavy-meson. To leading order in $1/m_H$ and λ , the profiles of the heavy-meson are simply fermionic zero modes. The mass of the heavy baryons and pentaquarks can be obtained from the collective quantization of the instanton and fermionic moduli and systematically expanded in $1/m_H$. We present the $1/m_H^2$ order results of the mass formula. They agree well with the recently reported experiment data from LHCb and predict three distinct charm (bottom) pentaquarks. The D4-D8 construction also allows us to study the open and hidden channel decays of these pentaquarks and obtain the partial widths, which will be compared to the total widths reported by LHCb for charm pentaquarks.