

# Non-microstate bi-free entropy

Paul Skoufranis \*

[pskoufra@yorku.ca](mailto:pskoufra@yorku.ca)

---

The notions of free entropy developed by Voiculescu have had a profound impact on free probability and operator algebras. In this talk, joint work with Ian Charlesworth will be discussed that generalizes the notion of non-microstate free entropy to the bi-free setting. In particular, the notions of free derivations, conjugate variables, Fisher information, and entropy are extended to handle pairs of algebras from which many interesting results, complications, and questions arise.