



Peer reviewed journal articles

2020 Classifying module categories for generalized Temperley-Lieb-Jones $*$ -2-Categories (with Hernández-Palomares), *Internat. J. Math.* **31** (2020), no. 04, 2050027, [MR4098904](#), [arXiv:1905.00471](#)

2020 Harmonic gradients on higher dimensional Sierpinski gaskets (with Brown, Mograby, Rogers, and Sangam), *Fractals* **28** (2020), no. 06, 2050108, [arXiv:1908.10539](#)

2022 Gray-categories model algebraic tricategories, *Theor. Appl. Categ.* **38** (2022), no. 29, pp 1136-1155, [arXiv:2203.03748](#)

2023 3D Koch-type crystals (with Vélez-Santiago), *J. Fractal Geometry* **10** (2023), no. 1/2, pp. 109–149, [arXiv:2302.10628](#)

ArXiv preprints (under review)

2024 Dagger n -categories (with Hungar, Johnson-Freyd, Kruewski, Müller, Nivedita, Penneys, Reutter, Scheimbauer, Stehouwer, Vuppulury), [arXiv:2403.01651](#)

2024 Foundations for operator algebraic tricategories, [arXiv:2404.05193](#)

2024 Manifestly unitary higher Hilbert spaces (with Chen, Hungar, Penneys, Sanford), [arXiv:2410.05120](#)

Manuscripts (in preparation)

2025 Unitary Quantum Symmetries Lite (UQSL) textbook (with Kawagoe and Penneys), [available online](#)

2025 Bases for 3-Hilbert spaces and higher unitary duality (with Hungar, Penneys, Wesley)

2025 The homotopy 3-type of abelian C*-algebras (with Faurot)

2025 Models for higher Hilbert spaces as homotopy fixed points (with Müller, Penneys, Stehouwer)

2025 Knot theoretic model for $\text{Rep}(\mathcal{U}_q(\mathfrak{sl}_4))$ -webs arising from HOMFLY-PT (with Lu and Poudel)

2025 A duality theory in the spirit of functional analysis (with Circele)