ZACHARY SELK, Queen's University
Rough Paths above Weierstrass Functions

Although rough paths theory is typically applied to differential equations driven by stochastic processes, it is not inherently a random theory. Weierstrass functions are examples of Hölder continuous yet nowhere differentiable functions. Surprisingly, even though Weierstrass functions are the most classical example of the type of function rough paths theory was invented to handle, until recently no one has constructed a rough path above it. In this talk, we discuss the construction of a rough path above vector valued Weierstrass functions. Joint work with Francesco Cellarosi (arXiv:2304.11646, to appear in C. R. Math. Acad. Sci. Paris).