1142-49-15   **Armin Schikorra*** (`armin@pitt.edu`), Pittsburgh, PA 15260. *O'Hara's knot energies and $W^{1/p,p}$-harmonic maps into spheres.*

I will report on advances in the regularity theory for minimizers and critical points of a class of knot energies defined by Jun O'Hara. When parametrized by arclength the tangent field of these knots are critical points of a $W^{1/p,p}$-type energy, and we employ arguments from the regularity theory of $W^{1/p,p}$-harmonic maps into the sphere. Joint work with S. Blatt, Ph. Reiter. (Received July 24, 2018)