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Annalisa Calini* (calinia@cofc.edu), Department of Mathematics, Robert Scott Small Bldg, Room 339, College of Charleston, Charleston, SC 29424, and **Thomas Ivey**, **Scott Keith** and **Stephane Lafortune**. *Linear stability of small-amplitude torus knot solutions of the Vortex Filament Equation*. Preliminary report.

I will discuss a framework for studying the linear stability of solutions of the Vortex Filament Equation, based on the connection between its linearization and the linearized Nonlinear Schrödinger equation. In particular, I will describe the linear stability of torus knot solutions “close” to circular filaments, and show that, contrary to what has been suggested by various authors, their stability is not related to their knot type. This talk is a preliminary report on related joint projects with Tom Ivey, Stephane Lafortune, and our former student Scott Keith. (Received February 15, 2010)