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Nicholas M Ercolani* (ercolani@math.arizona.edu). *Yang-Mills-Higgs Equations on Riemann Surfaces of Higher Genus.*

We study the Yang-Mills-Higgs equations for vector bundles of rank 2 on a Riemann surface of genus 2 making use of the explicit knowledge of the moduli space of rank 2 holomorphic bundles on such a surface that is provided by the classical work of Narasimhan and Ramanan. We expect to be able to construct explicit solutions in the neighborhood of a constant curvature branch of solutions along the same lines as our earlier work for the Ginzburg-Landau equations on Riemann surfaces of higher genus. This talk will be a progress report on that effort. This is joint work with I.M. Sigal. (Received September 21, 2017)