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Continuous Solutions of Nonlinear Cauchy-Riemann Equations and Pseudoholomorphic Curves in Normal Coordinates

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Adam Coffman* (coffmana@ipfw.edu), Dept of Mathematical Sciences, IPFW, 2101 E. Coliseum Blvd., Fort Wayne, IN 46805-1499, and **Yifei Pan** and **Yuan Zhang**. *Continuous solutions of nonlinear Cauchy-Riemann equations and pseudoholomorphic curves in normal coordinates.*

Elliptic regularity holds for the single-variable nonlinear Cauchy-Riemann equation $\partial u/\partial \bar{z} = E(z, u)$, under some weak assumptions. In some cases where the inhomogeneous term has a separable factorization, $E = g(z)f(u)$, the set of continuous solutions can be explicitly calculated. As an application, we find local parametric formulas for pseudoholomorphic curves with respect to some continuous almost complex structures. (Received January 18, 2015)