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Junping Shi* (shij@math.wm.edu), Department of Mathematics, College of William and Mary, Williamsburg, VA 23187. *Existence and Uniqueness of Positive Solution for Sublinear Elliptic Systems.*

It is well-known that appropriately defined scalar sublinear elliptic equation has a unique positive solution. We extend the definition of sublinearity to systems of semilinear elliptic systems, and we prove the existence and uniqueness of positive solutions under several different assumptions. This is a joint work with Renhao Cui, Ping Li, Yuwen Wang and Boying Wu. (Received July 27, 2011)