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Nick Zhao* (yzhao@mail.ucf.edu), Department of Mathematics, University of Central Florida,
Orlando, FL 32816. *On Vizing's 2-Factor Conjecture.*

In 1965, Vizing proposed the following conjecture which claims that every edge chromatic critical graph has a 2-factor. If this conjecture is true, then Vizing's Independence Number Conjecture proposed in 1968 is true. For a long time, there had been no progress towards this 2-factor conjecture until 2004. In this talk, we will present a new result about this 2-factor conjecture and show that if G is an edge chromatic Δ -critical graph with n vertices satisfying $\Delta \geq \frac{6n}{7}$, then G is Hamiltonian and thus G has a 2-factor. (Received January 12, 2012)