1035-05-1097   **Joel Friedman*** (`jf@cs.ubc.ca`), Department of Computer Science, University of British Columbia, Vancouver, BC V6T 1Z4, Canada. *Nonbacktracking spectrum and surprises in non-regular graphs.* Preliminary report.

We show that the nonbacktracking spectrum of non-regular graphs can be two dimensional as a subset of the complex plane. This promises to make life difficult but interesting for formulating notions of Ramanujan graphs for non-regular graphs. (Received September 18, 2007)