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Danrun Huang* (dhuang@stcloudstate.edu), Department of Mathematics, St. Cloud State University, St. Cloud, MN 56301. *Many Faces of the Doubling Function*. Preliminary report.

One of the simplest chaotic dynamical systems with rich dynamical information is the doubling function (or its "cousin" like the tent function). The doubling function and the tent function appear in almost every dynamical systems textbook. This talk will browse some of the connections of the doubling function and its variations to many subjects of undergraduate mathematics such as symbolic dynamics, fractals, discrete mathematics, number theory, geometry, linear algebra, abstract algebra, recreational mathematics, etc. The talk also will show some examples from the related student research projects. (Received September 11, 2000)