1065-37-270 **William Raymond Ott*** (ott@math.uh.edu), 651 Philip G Hoffman Hall, Department of Mathematics, University of Houston, Houston, TX 77382, and **Mikko Stenlund**. *From limit cycles to strange attractors.*

We define a quantitative notion of shear for limit cycles of flows on finite-dimensional spaces. We prove that strange attractors and SRB measures emerge when systems exhibiting limit cycles with sufficient shear are subjected to periodic pulsatile drives. The strange attractors possess a number of precisely defined mathematical properties that collectively imply chaos that is both sustained in time and physically observable. (Received September 15, 2010)