## Maximum Entropy distributions on the circle with given cross-moment

## J.C.S. de Miranda $^{1}$

**Abstract:** We determine the maximum entropy distribution on a circular region that has zero mean and given cross-moment of order 2. This result can be used to generate bounded zero mean complex valued noise with given cross-moment of its real and imaginary parts for time series simulation studies.

Keywords: Complex time series; Maximum entropy; Variational calculus.

 $<sup>^1 \</sup>mathrm{Universidade}$ de São Paulo, IME. e-mail: simon@ime.usp.br