Applied

Mathematics

McGill
Applied Mathematics Seminar Series
Nov. 9 , 2001

Dr. Kevin Kerns, Avanti Corp.

Title: Spiral Inductors

Friday Nov. 9, 2001

Time: 2:30 pm

Room: Burnside 1205

Coffee and refreshments will be served after the seminar

Abstract: The focus of this seminar will be on spiral inductors.

1. What are they, and are they used?
2. How are they modeled?
3. Why do they need RLC reduction?
4. How do you get an efficient reduction?
5. How do you know when you have achieved sufficient accuracy?
6. How do ensure numerical stability via non-orthogonal transformations?

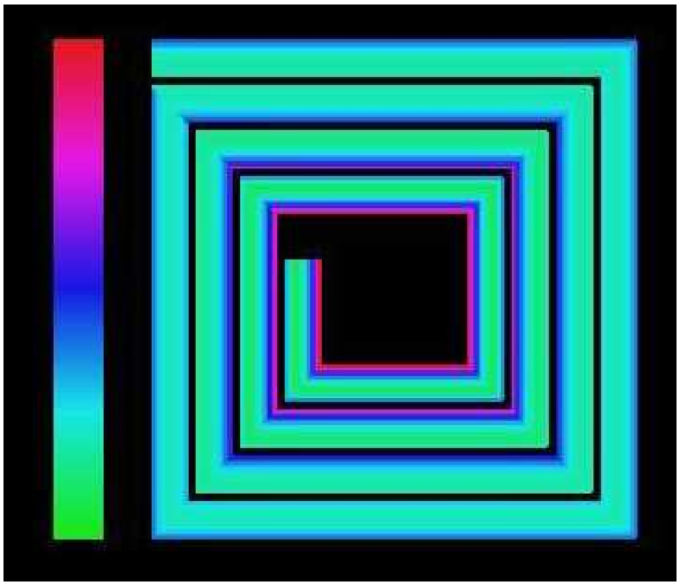

Figure 1: A sample ASITIC current density plot shows current constriction in the inner turns of a spiral inductor at 5 GHz. *http://formosa.eecs.berkeley.edu/ niknejad/asitic.html*