



## Extra CASA Colloquium

- Speaker:** Dr. Odile Marcotte (Université de Montréal)
- Date:** Wednesday September 18, 2013
- Time:** 16.00 – 16.45 hrs
- Location:** MF 5.086 (MII-room)
- Title:** A Vertex Cut Algorithm for Model Order Reduction of Electronic Circuits

### Abstract

In this presentation we address the model order reduction problem for resistor networks by using methods from graph theory. We formulate this problem through graph theory concepts, propose algorithms for solving it, and present the computational results we have obtained for real-world resistor networks. The results demonstrate that graph-theoretical methods produce networks that contain fewer edges and are sparser than networks produced by state-of-the-art methods. Finally we discuss future research avenues.

*The research described originates from a Studygroup Mathematics with Industry at the Fields Institute in Toronto, August 2009. Since then, Odile Marcotte, Suzanne Shontz and Wil Schilders have cooperated on a regular basis, with a first paper published in 2012. Odile Marcotte brings in the graph theoretical knowledge and point-of-view in the problem area that is otherwise mainly numerical. Odile and Suzanne are guests of the department from September 16-20.*

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