Behzad Nouri

Recent Publications

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Publications

[1] **B. Nouri** and M. Nakhla, "Model-order reduction of nonlinear transmission lines using interpolatory proper orthogonal decomposition," *IEEE Trans. Microw. Theory Tech.*, pp. 1–10, 2018, to be published.

[2] L. Lombardi, Y. Tao, M. Nakhla, F. Ferranti, G. Antonini, and **B. Nouri**, "parameterized model order reduction of delayed PEEC circuits," *IEEE Trans. Electromagn. Compat.*, pp. 1–9, 2018, submitted for publication.

[3] Y. Tao, **B. Nouri**, F. Ferranti, M. Nakhla, and K. Guo, "Stability-preserving parameterized model-order reduction of active circuits," *Advances in Computational Mathematics (ACOM)*, vol. Special issue (MoRePaS), pp. 1–15, Oct. 2018, submitted for publication.

[4] L. Lombardi, Y. Tao, M. Nakhla, F. Ferranti, G. Antonini, and **B. Nouri**, "Parametric simulation of PEEC circuits in the frequency-domain," in *Proc. IEEE MTT-S Int. Conf. Num. Electromagn. Multiphys Modeling Optim. (NEMO 2018)*, Reykjavik, Iceland, Aug. 2018, pp. 1–3.

[5] **B. Nouri** and M. Nakhla, "Reduced-order model for time-domain sensitivity analysis of active circuits," in *Proc. 22nd IEEE Workshop on Signal and Power Integrity (SPI 2018)*, Brest, Brittany, France, May 2018, pp. 1–4. ***(Best Paper Award)***

[6] **B. Nouri** and M. Nakhla, "Efficient simulation of nonlinear transmission lines using empirical interpolation and projection-based model order reduction," in *Proc. IEEE MTT-S Int. Microwave Symp. (IMS 2018)*, Philadelphia, PS, USA, Jun. 2018, pp. 1–3.

[7] Y. Tao, **B. Nouri**, E. Gad, M. Nakhla, Q. Sun, and R. Achar, "MIP: moment-based interpolation projection for parameterized reduced models of the DC operating point in nonlinear circuits," in *Proc. 26th IEEE Conf. Elect. Perform. Electron. Packag. Syst. (EPEPS 2017)*, San Jose, CA, USA, Oct. 2017, pp. 1–3.

[8] M. R. Mohammadi, S. A. Sadrossadat, M. G. Mortazavi, and **B. Nouri**, "A brief review over neural network modeling techniques," in *Proc. IEEE Int. Conf. Power, Control, Signals and Instrum. Eng. (ICPCSI 2017)*, Chennai, India, 2017, pp. 54–57.

[9] Y. Tao, K. Guo, F. Ferranti, **B. Nouri**, M. S. Nakhla, and R. Achar, "Time-domain variability analysis of large circuits with stochastic linear terminations," in *Proc. 21st IEEE Workshop on Signal and Power Integrity (SPI 2017)*, Lake Maggiore, Baveno, Italy, May 2017, pp. 1–4.

[10] **B. Nouri**, M. S. Nakhla, and X. Deng, "Stable model-order reduction of active circuits," *IEEE Trans. Compon., Packag., Manuf. Technol.*, vol. 7, no. 5, pp. 710–719, May 2017.

[11] **B. Nouri**, M. S. Nakhla, and R. Achar, "Efficient simulation of nonlinear transmission lines via model-order reduction," *IEEE Trans. Microw. Theory Tech.*, vol. 65, no. 3, pp. 673–683, Mar. 2017.

[12] Y. Tao, **B. Nouri**, M. S. Nakhla, M. Farhan, and R. Achar, "Variability analysis via parametrized model order reduction and Numerical Inversion of Laplace Transform," *IEEE Trans. Compon., Packag., Manuf. Technol.*, vol. 7, no. 5, pp. 678–686, jan 2017.

[13] K. Guo, F. A. Sheikh, **B. Nouri**, F. Ferranti, and M. Nakhla, "Efficient time-domain variability analysis of active circuits," in *Proc. IEEE Elect. Des. Adv. Packag. and Syst. Symp. (EDAPS 2016)*, Honolulu, HI, USA, Dec. 2016, pp. 1–4.

[14] K. Guo, F. Ferranti, **B. Nouri**, and M. Nakhla, "A stochastic collocation technique for time-domain variability analysis of active circuits," in *Proc. 25th IEEE Conf. Elect. Perform. Electron. Packag. Syst. (EPEPS 2016)*, San Diego, CA, USA, Oct. 2016, pp. 47–50.

[15] Y. Tao, **B. Nouri**, M. S. Nakhla, and R. Achar, "Efficient time-domain variability analysis using parameterized model-order reduction," in *Proc. 20th IEEE Workshop on Signal and Power Integrity (SPI 2016)*, Turin, Italy, May 2016, pp. 1–4.

[16] Y. Tao, M. Farhan, **B. Nouri**, M. S. Nakhla, and R. Achar, "Efficient variability analysis using parameterized model-order reduction," in *Proc. IEEE MTT-S Int. Microwave Symp. (IMS 2016)*, San Francisco, CA, USA, May 2016, pp. 1–3.

[17] X. Deng, **B. Nouri**, and M. S. Nakhla, "Stability preserving algorithm for model order reduction of active networks," in *Proc. 24th IEEE Conf. Elect. Perform. Electron. Packag. Syst. (EPEPS 2015)*, San Jose, CA, USA, Oct. 2015, pp. 181–184.

[18] **B. Nouri**, M. S. Nakhla, and R. Achar, "A novel algorithm for efficient simulation of nonlinear transmission lines for RF applications via model order reduction," in *Proc. IEEE MTT-S Int. Conf. Num. Electromagn. Multiphys Modeling Optim. (NEMO 2015)*, Ottawa, Ontario, Canada, Aug. 2015, pp. 1–3.

[19] **B. Nouri**, M. S. Nakhla, and R. Achar, "Efficient reduced-order macromodels of massively coupled interconnect structures via clustering," *IEEE Trans. Compon., Packag., Manuf. Technol.*, vol. 3, no. 5, pp. 826–840, May 2013.

[20] **B. Nouri**, M. S. Nakhla, and R. Achar, "Optimum order estimation of reduced macromodels based on a geometric approach for projection-based MOR methods," *IEEE Trans. Compon., Packag., Manuf. Technol.*, vol. 3, no. 7, pp. 1218–1227, Jul. 2013. ***(Best Transaction Paper Award)***

[21] **B. Nouri**, M. S. Nakhla, and R. Achar, "A novel algorithm for optimum order estimation of nonlinear reduced macromodels," in *Proc. 22nd IEEE Conf. Elect. Perform. Electron. Packag. Syst. (EPEPS 2013)*, San Jose, CA, USA, Oct. 2013, pp. 137–140.

[22] **B. Nouri**, M. S. Nakhla, and R. Achar, "A novel algorithm for optimum order estimation of reduced order macromodels," in *Proc. 15th IEEE Workshop on Signal and Power Integrity (SPI 2011)*, Naples, Italy, May 2011, pp. 33–36. ***(Best Paper Award)***

[23] **B. Nouri**, R. Achar, and M. S. Nakhla, "z-Domain orthonormal basis functions for physical system identifications," *IEEE Trans. Adv. Packag.*, vol. 33, no. 1, pp. 293–307, Feb. 2010.

[24] **B. Nouri**, M. S. Nakhla, and R. Achar, "A novel clustering scheme for reduced-order macromodeling of massively coupled interconnect structures," in *Proc. 19th IEEE Conf. Elect. Perform. Electron. Packag. Syst. (EPEPS 2010)*, Austin, TX, USA, Oct. 2010, pp. 77–80.

[25] **B. Nouri**, R. Achar, M. S. Nakhla, and D. Saraswat, "z-Domain orthonormal vector fitting for macromodeling high-speed modules characterized by tabulated data," in *Proc. 12th IEEE Workshop Signal Propag. Interconnects (SPI 2008)*, Avignon, France, May 2008, pp. 1–4.

Thesis:

[26] S.-B. Nouri, "Advanced model-order reduction techniques for large-scale dynamical systems," Ph.D. dissertation, Dept. Elect., Carleton Univ., Ottawa, Canada, Sep. 2014.

(University Gold Medal)

[27] S.-B. Nouri, "Advanced macromodeling algorithm for sampled time/frequency domain measured/tabulated data," Master's thesis, Dept. Elect., Carleton Univ., Ottawa, Canada, Feb. 2008.