Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

Electromagnetic fluctuation-induced interactions with metallic gratings DIEGO DALVIT, Los Alamos National Laboratory — In this talk I will discuss electromagnetic equilibrium and non-equilibrium fluctuation-induced interactions involving metallic gratings. In particular, I will describe a modal approach [1] to compute Casimir forces between metallic gratings and discuss the description of a recent Casimir force experiment with nanostructures that shows a strong force reduction. I will also discuss the related non-equilibrium problem of nanoscale heat transfer in metallic gratings from a modal approach point of view [2].

[1] *Quasi-analytical modal approach for computing Casimir interactions in periodic nanostructures*, F. Intravaia, P.S. Davids, R.S. Decca, V.A Aksyuk, D. Lopez, and D.A.R. Dalvit, Phys. Rev. A 86, 042101 (2012).
[2] *Enhanced radiative heat transfer between nanostructured gold plates*, R. Guerout, J. Lussange, F.S.S. Rosa, J.-P. Hugonin, D.A.R. Dalvit, J.-J. Greffet, A. Lambrecht, and S. Reynaud, Phys. Rev. B85, 180301(R) (2012).

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Date submitted: 07 Nov 2012 Electronic form version 1.4