**Dipartimento di Scienze Matematiche
"G. L. Lagrange"
Politecnico di Torino**

Colloquium

Il giorno mercoledì 24 febbraio, alle ore 14:30 in Sala Consiglio di Facoltà, il Professor

Maurice de Gosson

dell'Università di Vienna, terrà la conferenza dal titolo

On Born–Jordan Quantization

Abstract. There are several possible mathematical formulations of quantum mechanics, one of the most effective being operator theory because it allows the calculation of spectral values corresponding to the energy levels of atoms. This however raises a basic question: given a classical "observable" what should the associated quantum operator be? This question has led to vast developments in operator theory. In this talk we explain the questions at issue, and compare the Weyl quantization with the less well-known Born–Jordan quantization. The differences between both quantization schemes are in fact of a rather subtle nature; for instance, observables will not correspond in a one-to-one fashion to operators. We begin by giving some physical motivations, we thereafter give a user-friendly definition of pseudodifferential operators accessible to a large audience; finally we discuss the issue of invertibility of this quantization scheme.

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