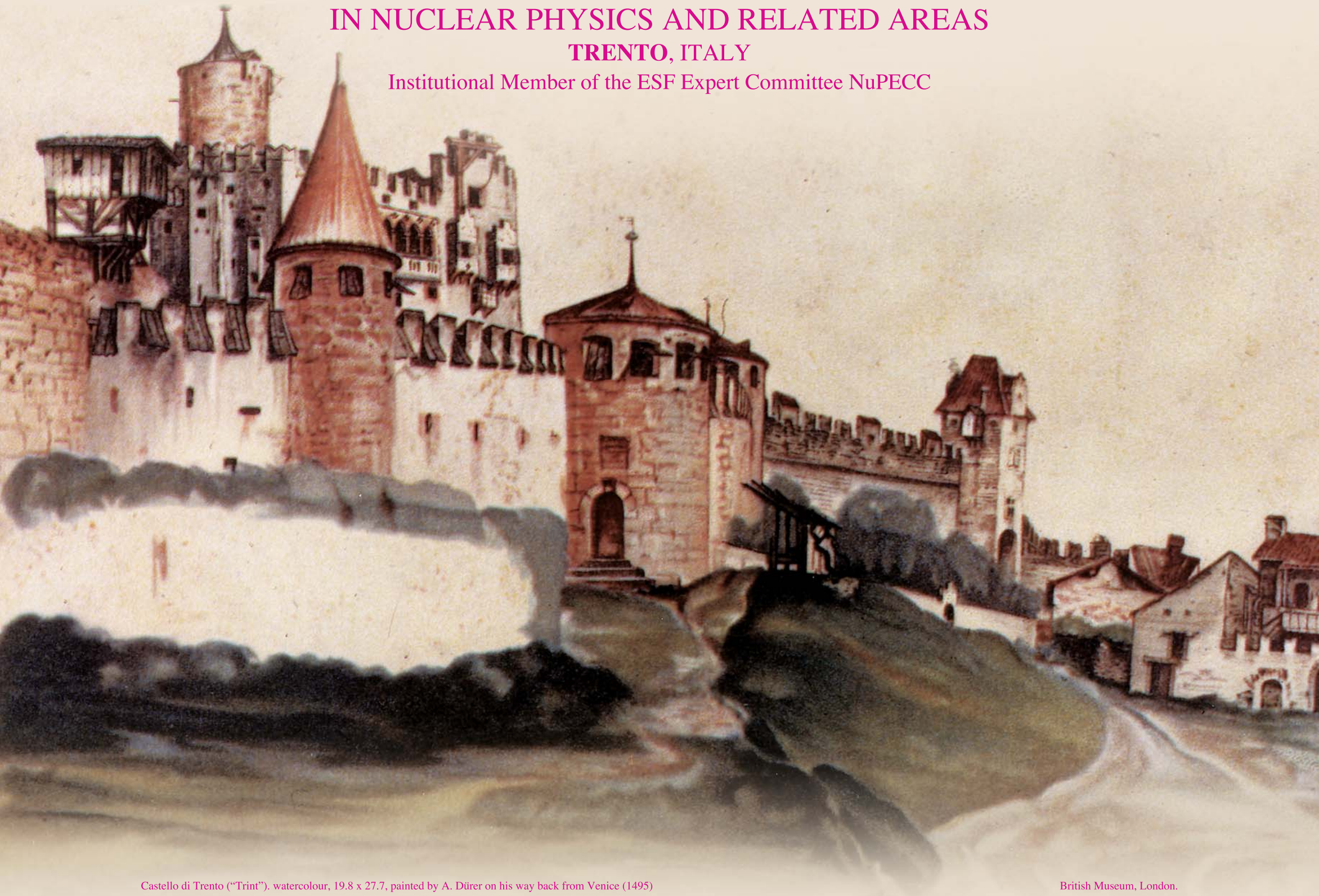
ECT*

EUROPEAN CENTRE FOR THEORETICAL STUDIES
IN NUCLEAR PHYSICS AND RELATED AREAS

TRENTO, ITALY

Institutional Member of the ESF Expert Committee NuPECC



Castello di Trento ("Trint"). watercolour, 19.8 x 27.7, painted by A. Dürer on his way back from Venice (1495)

British Museum, London.

International Workshop on
Decoherence in Quantum Dynamical Systems
Trento, IT, April 26 - 30, 2010

Registrations will be possible from February 22 to April 9

website address: http://www.nucleartheory.net/Decoherence

Main questions

What are the relative merits of alternative formulations of the quantum dynamical evolution in the presence of environmental couplings, in particular with reference to nuclear dynamical systems?

How does the effective decoherence time and the entropy production depend on the collision energy, and how does this affect the issues above?

How does the environment affect the reaction dynamics and which observables are needed to quantify the effects of environment-induced quantum decoherence?

What specific or classes of measurements on e.g. nuclear dynamical systems might provide additional insights?

Aims

To both review and assess methods, recent investigations and implications of quantum decoherence in atomic, molecular and other areas, and to relate these to the nuclear physics context, providing both theoretical and experimental perspectives.

To create essential links between the nuclear physics community and practitioners in other areas of science aimed at understanding fundamental aspects of quantum physics, such as the role of decoherence and the quantum-to-classical transition.

To initiate inter-disciplinary exchanges and the transfer of expertise, to foster collaborations, and facilitate the formation of younger- researcher networks.

HadronPhysics2
Study of Strongly Interacting Matter

Organizers

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