UNIVERSITÀ DEGLI STUDI DI TRENTO
Dipartimento di Matematica

Martedì 3 novembre ore 15:00

Aula Seminari – Dipartimento di Matematica

Stefano Zambelli

(Dipartimento di Economia Università di Trento)

"PRECISE NUMERICAL METHODS FOR THE COMPUTATION OF THE NEOCLASSICAL PROPERTIES OF THE AGGREGATE PRODUCTION FUNCTION"

ABSTRACT:
In this seminar I will discuss the importance of precise numerical computations for economics. I will explain why standard mathematics and standard computer programs are sometimes inadequate for a robust analysis of some very important theoretical as well as applied economic problems. As an example I will discuss the relevance of the need for a precise numerical computation of the aggregate production function and its marginal productivities - and the associated demand for labor and capital - which are often carelessly postulated to be negatively related to factor prices, namely the wage rate and the profit rate.
Precise numerical computations are fundamental in order to asses the properties of the aggregate production function. The knowledge of these properties is relevant for the determination of adequate economic policies. For example it is important to know with theoretical precision whether a reduction of the wage rate may lead to an increase of the aggregate demand for labour. Approximate solutions may be not sufficient and if they turn out to be wrong may lead in some cases to dramatic social effects or costs.
A robust solution to this problem requires an interdisciplinary effort with contributions from computable analysis, numerical mathematics and computer science. Keywords: Aggregate Neoclassical Production Function, Cobb-Douglas, CES, Technological Change, Macroeconomics, Growth.

Referente: Fabio Bagagiolo

STAFF DIPARTIMENTO DI MATEMATICA
Università degli Studi Trento
Via Sommarive, 14- 38123 Povo (TN)
Tel +39 0461/281508-1625-1701 Fax+ 39 0461/281624
dept.math@unitn.it