



## Lecture

# Scientific computing on the Internet, a little-trodden field



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**Tuesday, 15-November-2011 ♦ 11h00 – 12h00**

**Room: (lecture-theatre) Qa1.4 (South Tower, 1.<sup>st</sup> floor)**

Free lecture (repeatable). In English. Room has 72 seats.

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**Summary** In our technological era, scientific computing on the Internet is a little-trodden and relatively obscure field. (“Scientific computing on the Internet” here means that, just with an Internet browser, the user, on a web site: supplies data, executes a program, and gets results.)

The relative scarcity of scientific computing on the Internet is perplexing, so much so that, surprisingly, even *old* programs (in Fortran, C, etc.) generally *work* (without any change) — while *modern* ones generally *don’t*.

In the talk, some scientific illustrations will be used, permitting, *in the Internet environment*, to:

1. Show some of others’ and the speaker’s examples of scientific computing;
2. Review old programs and show how they perform;
3. Stress the inadequacy of typical modern software; and
4. Advocate the Internet route for scientific computing.

It will be verified that scientific computing on the Internet: dispenses with program installations (uninstallations); avoids platform incompatibilities; and circumvents limitations of the user’s computer. It is, thus, fit in many cases, namely: in the classroom; for team work; and to make programs known and usable anywhere, thus facilitating interactions, such as the university-industry linkages.

Subsequent proposals for solving academic or industrial problems, in collaboration, will be welcome, for display on the Internet.

Lecture in English due to the presence of foreign students of the lecturer’s Athens course.

Prof. Miguel Casquilho (Chemical Eng., PhD, Assist. Professor, retired; Dept. of Chemical Eng.<sup>ing</sup>, Instituto Superior Técnico, Technical University of Lisbon, Lisbon, Portugal)

*Research interests:* computing, simulation, optimization; Quality, Operational Research.

*Computing at:* IST central system; *IST cluster*, and *Milipeia* (Univ. of Coimbra) for parallel computing; Faculty of Sciences (Univ. of Lisbon) central system.

*Web page:* <http://web.ist.utl.pt/mcasquilho/>

*Teaching and research:* M. Casquilho, since four decades, has taught subjects related to his research, Optimization, statistical Quality control, Operational Research, and done research on computation in Chemical and other areas of Engineering, as well as Monte Carlo simulation, and linear or integer programming, in serial and parallel computing. His programs run on the Internet. He has collaborated with various colleagues in aspects of calculation.

