

EDUCATION SERVICES EDUCATIFS



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ACADEMIC TRAINING LECTURE SERIES

2, 3, 4 June

from 11.00 to 12.00 hrs – Auditorium, bldg 500

Mathematica

by J. McLOON / Wolfram Research Europe Ltd, UK &
B. AUTIN / PS Division

Scientific Computing : The Mathematica 4.0 Approach (J. McLoon - 2 June)

The first lecture will give participants an insight into the background, purpose, design and future direction of the Mathematica technical computing system.

Intended for those with little or no hands-on-experience of Mathematica, the talk will include a diverse collection of examples from simulation and high-level computation to data analysis and technical publishing. These will illustrate the application and benefits of using the system from the start to the end of scientific projects.

Advanced Topics in Mathematica 4.0 (J. McLoon - 3 June)

The second lecture will look in detail at advanced issues involved in the design and more sophisticated usage of the Mathematica technical computing system. Intended for both the Mathematica user and non-user, the following topics will be discussed :

- Use of the Mathematica programming language on a diverse collection of objects including algebra, typesetting and documents.
- Subtle problems with numeric computation and their potentially disastrous consequences including an examination of the tools available in Mathematica to overcome them.
- Problems associated with technical publishing and solutions offered by Mathematica and the new web standard MathML.

Mathematica for physics (B. Autin - 4 June)

By studying the specific example of a telescope, it will be shown how the various features of Mathematica can be combined in a friendly and efficient way. Existence conditions and analytical expressions can be derived for a thin lens model using symbolic techniques. Optical diagrams are drawn using the graphics facilities. Functions of X^2 type can be numerically minimised to obtain the real thick lens telescope. The results are then encapsulated in a function whose arguments are the parameters of the telescope and the function is added to a package (*BeamCircs*) that can be called in a standard way by any user. This technique will be repeated for other applications such as special relativity or the post processing of numerical files generated by codes such as *Fluka* or *MAD*.

INFORMATIONS GENERALES GENERAL INFORMATION

CENTRALE D'ACHATS

Suite à l'article paru dans le bulletin no 18/99 du 3 mai 1999, nous vous informons que les personnes suivantes de la société LOGITRADE peuvent être contractées par téléphone au 72280 ou 74006, par fax au 767 9490 (bâtiment 73, 3e étage):

- Mme Alexandra BARTHOULOT
- Mr Joël TREPIER
- Mr Jean CAZAL

D'autre part, nous souhaitons souligner que l'activité de la Centrale d'Achats est uniquement basée sur les achats de fournitures et non pas de services.

I. Mardirossian
SPL, Service des Achats

BUYING AGENT

Further to the article published in the Wkly Bulletin no 18/99 on May 3, 1999, please be informed that the following persons from the Company LOGITRADE can be contacted at the phone numbers 72280 or 74006, at their number 767 9490 (Building 73, floor 3):

- Mrs Alexandra BARTHOULOT
- Mr Joël TREPIER
- Mr Jean CAZAL

We would furthermore like to stress that the work of the Buying Agent is concerned solely with the purchase of supplies, not of services.

I. Mardirossian
SPL, Purchasing Service