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May 2001

Reviews

## 'Raising Public Awareness of Mathematics' – CD ROM

reviewed by Helen Joyce



### Raising Public Awareness of Mathematics

by the Centre for the Popularisation of Mathematics

This CD ROM, produced by the Centre for the Popularisation of Mathematics at the University of Wales in Bangor, is a most unusual mixture of mathematical exposition and modern art. A central part of the content is a gallery of sculptures by John Robinson, much of whose work takes inspiration from mathematical objects, such as fractals and knots. This work, described by the artist as symbolic sculpture, uses forms such as the logarithmic spiral, and makes connections with the forces that shape our universe.

Each sculpture is beautifully photographed and accompanied by the artist's explanation of his inspiration and the meaning the sculpture has to him. You can view the sculptures via a gallery, or else follow the copious links embedded in the mathematical exposition. Each is accompanied by an animation showing the sculpture from different angles, beautiful in itself and useful as an aid to three-dimensional visualisation.

On the mathematical side, the CD covers a range of topics, all chosen for their visual appeal and accessibility without heavy number work. Topological structures such as the Möbius Band are discussed, and fractals are described as the result of infinitely many iterations. The Pentagram and Nautilus Shell are studied, and the user is shown how the Golden Mean arises in the study of both shapes.

## 'Raising Public Awareness of Mathematics' – CD ROM

The CD includes a "Mathematics and Knots" exhibition which takes the user through the methods used in the mathematical study of knots – for example, what it means to say that two knots are the same, what is known about how to decide when two knots are the same, an "arithmetic" of knots and what it means for a knot to be prime.

Each mini-section is accompanied by an explanation of current applications – for example, DNA structure and virus action are used to illustrate the importance of knot theory.

Each time you use this CD you will find something new to inspire you. The producers have chosen their mathematical material to fit around the two themes of artistic appeal and practical usefulness, which, as they say, "have...guided the development of Mathematics down the ages". They hope to produce more CD ROMs in the future.

The CD can be used both on Macs (System 7.7.7 or higher) and PCs running Windows 95 or later. You will need to download Quicktime 4.1.2, an installer for which is supplied on the CD. To order, visit the [Centre's website](#).

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*CD details:*

*Raising Public Awareness of Mathematics*

Centre for the Popularisation of Mathematics: Ronnie Brown

Mac/Windows, includes Quicktime 4.1.2

Cost: £5

<http://www.bangor.ac.uk/~mas010/CDadvert.html>

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*Plus* is part of the family of activities in the Millennium Mathematics Project, which also includes the [NRICH](#) and [MOTIVATE](#) sites.