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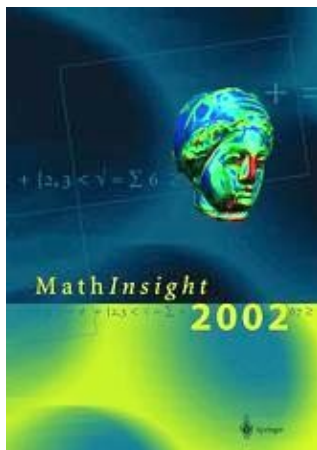
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Nov 2001

Reviews

'MathInsight 2002 Calendar'

reviewed by Robert Hunt



MathInsight 2002 – a calendar for 2002

Editors: H–C Hege, K Polthier, M Rumpf

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It's worth pointing out right at the start that this wouldn't be a particularly good choice of calendar if you actually want to keep track of the year. The calendar is large (A2 size) but the days of the month occupy only a 1cm-high section of each page – and the day names aren't even included, just their numbers. But the point of this calendar is really nothing to do with keeping time: instead, each page has a large, full-colour illustration which visualises some complex mathematical object. The illustrations are eye-catching and intriguing, and will draw young and old alike into wanting to take a close-up look and find out what's behind the picture.

'MathInsight 2002 Calendar'

Each page includes some of the mathematical equations used to generate the picture. For example, April's illustration, apparently of a number of red, green and yellow spheres packed together, is described by

$$E_{\text{tot}} = \sum_i f_i(\rho_{h,i}) + \frac{1}{2} \sum_i \sum_{j \neq i} \Phi_{ij}(R_{ij}),$$

which will mean little to even the best-educated reader! Fortunately, a page at the end of the calendar tells you what each image is about: it's here that we learn that April's represents a visualisation of a molecular dynamics simulation of crack propagation, showing how cracks enlarge and travel through materials. Some of the other pictures represent algebraic surfaces (January), DNA molecules (May), compact soap bubbles (August), simulations of chemical etching of silicon (October) and zeros of polynomials (December). So although it may not always be possible for everyone to understand the equations used (many require an understanding of University-level notation), it's good to be able to find out what they represent, and many of the illustrations relate to real-life problems in industry and physics. And the equations show us how important maths is towards understanding these problems. It's a shame perhaps that the page of explanations is so concise: I would have preferred two pages devoted to explanations!

I would certainly recommend this calendar to anyone who wants to liven up the wall of their office or classroom with something colourful that will make people want to ask what it's all about. And once they've taken a closer look, the equations and description should keep them intrigued for at least a whole year, with perhaps a new outlook on the ubiquity of mathematics!

Calendar details:

MathInsight 2002

H. Herge, K. Polthier, M. Rumpf

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