

<<代数曲线几何初步>>

图书基本信息

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前言

For some time I have felt there is a good case for raising the profile of undergraduate geometry. The case can be argued on academic grounds alone. Geometry represents a way of thinking within mathematics, quite distinct from algebra and analysis, and so offers a fresh perspective on the subject. It can also be argued on purely practical grounds. My experience is that there is a measure of concern in various practical disciplines where geometry plays a substantial role (engineering science for instance) that their students no longer receive a basic geometric training. And thirdly, it can be argued on psychological grounds. Few would deny that substantial areas of mathematics fail to excite student interest: yet there are many students attracted to geometry by its sheer visual content. The decline in undergraduate geometry is a bit of a mystery. It probably has something to do with the fashion for formalism which seemed to permeate mathematics some decades ago. But things are changing. The enormous progress made in studying nonlinear phenomena by geometrical methods has certainly revived interest in geometry. And for material reasons, tertiary institutions are ever more conscious of the need to offer their students more attractive courses.

0.1 General Background I first became involved in the teaching of geometry about twenty years ago, when my department introduced an optional second year course on the geometry of plane curves, partly to redress the imbalance in the teaching of the subject.

It was mildly revolutionary, since it went back to an earlier set of precepts where the differential and algebraic geometry of curves were pursued simultaneously, to their mutual

advantage. In the final year of study students could pursue this kind of geometry

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内容概要

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