

CASE STUDIES

Some Mathematicians with Nonacademic Employment

Following are three more in the series of case studies of mathematicians with nonacademic or nontraditional employment (see these *Notices*, November 1974). Case studies have been selected and edited to minimize duplication (for example, almost all case studies emphasize communication skills), and thus the series is best considered as a unit.

The Committee on Employment and Educational Policy seeks more case studies, particularly those involving less traditional areas of employment for mathematicians. Members who wish to submit case studies for consideration, or who have suggestions to make, are encouraged to communicate with Professor Martha K. Smith, Department of Mathematics, University of Texas, Austin, Texas 78712.

EDWARD T. ORDMAN
Office of Business Development and Government
Services
University of Kentucky

I received a Ph.D. from Princeton University in 1969. My thesis concerned subgroups of amalgamated free products of groups. I accepted an appointment as Assistant Professor of Mathematics at the University of Kentucky; during the following five years I wrote about a dozen papers (mainly about infinite groups and topologies on infinite groups) plus some shorter notes, book reviews, and so on. In 1973 I held a research grant (Fulbright) to the University of New South Wales, Sydney, Australia. During this time graduate enrollment in the Mathematics Department at Kentucky declined sharply, and I was one of a number of Assistant Professors who did not get tenure.

As a student I had worked for several summers as a computer programmer; while on the mathematics faculty at Kentucky I did some computer programming, e.g. writing economics-oriented "games" to play at a computer terminal, games designed principally to generate problems which students could then attempt to solve using (for instance) linear programming.

While I was job-hunting, the chairman of Kentucky's Computer Science Department told me that he had been approached by the Office of Business Development and Government Services, an extension (e.g. business consulting) and research (primarily contract research for government agencies) unit of the College of Business and Economics. I spoke to a representative of this office and found that their problems were in fact sufficiently complex and interesting to

**From: Notices of the
American Mathematical Society,
Vol 22(Feb 1975), pp 100-102**

require more than the computer programmer they had been looking for. Accordingly, I was hired in July 1974 with the title "Research Associate and Computer Programmer".

The office has several quite large projects: econometric modelling, income estimates, an unusually elaborate developing cost-of-living study. While at present none appear to me to be near current areas of active mathematical research, they are certainly close enough to the fringes of econometric research and have definite mathematical possibilities not previously explored here.

While I spend a large amount of time actually discussing mathematical questions with economists, both in the Office of Business Development and Government Services and the Department of Economics, it will be obvious to the reader that few of these relate to my previous published mathematical research. Part of my value to the Office lies in the fact that I spent five years in the Mathematics Department here and am able to interact as necessary with this university's applied mathematicians, computer

scientists, and statisticians. Part of the attractiveness of the position is that I remain on the same campus, interacting with many of the same people (both in connection with my new duties, and in continuing on my own my former line of research).

Being "the" mathematician in an organization with a very large range of activities leads to quite a few demands on my time, but there is adequate opportunity to pick and choose which aspects I want to get deeply involved in or pursue as research opportunities. Four months on the job, of course, is too short a time to make permanent judgements: I do not yet know whether I will find this a satisfactory situation to carry on mathematical work over the long term, or whether I will eventually return to a more traditional position with the added experience of having held an essentially nonacademic position that was, however, located on campus. My teaching experience, incidentally, has in my view been essential to this position; a great deal of my time is spent explaining a large variety of mathematical phenomena to nonmathematicians.