

Sabbatical Leave Report*

<u>Leslie Handy</u> Name	<u>Depart. of Art & Automation</u> Academic Unit
<u>January 1 to May 15, 1994</u> Sabbatical Dates	<u>June 15, 1994</u> Date of this report

1. Describe the location and nature of your sabbatical:

The major portion of my sabbatical (January 8 to May 10, 1994) was spent on the campus of Texas Polytechnic University (TPU). My host was Sandy Pike of TPU's Department of Art and Automation. Dr. Pike is one of the nation's leading experts on multi-objective mathematical programming—my academic specialty at OU. The TPU program is comparable to our program, and it is our closest direct competitor for students and research dollars in several academic specialty areas. While at TPU, I presented two open seminars, two classroom lectures, and participated in a seminar-type class offered by Drs. Pike and Kasso on multi-objective optimization. In addition, Dr. Pike and I used the Department's new laboratory facilities to collect data that will serve as the foundation for an NSF grant proposal we will submit this fall. I was also able to use the TPU library to collect materials for my book exploring the artistic dimensions of mathematical programming.

2. Describe and provide the rationale for any deviations from the proposed activities described in your application for a sabbatical:

For the most part, the activities that I proposed and what I did on my sabbatical are the same. The one exception is the nature of the collaborative data collection project with Dr. Pike. Because of equipment availability (TPU has just installed sophisticated computer hardware and software for studying multi-criteria optimization) and because of a shift in NSF funding emphasis, Dr. Pike and I changed the focus of our project from flow shop automation to multi-criteria optimization.

***Note:** You must complete all three sections of this report form on the form itself. Additional pages and supplemental materials may be appended.

3. Describe how your sabbatical has contributed to department/school, university, and personal/professional enhancement in terms of: (a) teaching, (b) research/creative activity, and (c) service (to your discipline, to the university, and to the public).

A. Contributions to Teaching:

In terms of teaching, my sabbatical was a good opportunity to compare the approaches and quality levels of the faculty and students in TPU's department with ours. My participation in seminars and lectures sharpened my teaching skills as did my work with TPU graduate students. The opportunity to observe Dr. Pike and Dr. Kasso's seminar-type class was especially valuable for what it taught me about teaching difficult concepts to motivated students. In addition to enhancing my teaching skills, the sabbatical allowed me to sharpen my understanding of multi-criteria optimization—the topic for a new class I will teach this spring semester.

B. Contributions to Research/Creative Activity:

While the sabbatical produced multiple research/creative activity dividends, two stand out. First, the collaborative work with Dr. Pike on multi-criteria optimization: (a) taught me new research skills that I will be able to use on other research projects, (b) provided data that will increase the likelihood of receiving significant NSF funding for my research, and (c) opened up a new area of programmatic research that has the potential to significantly enhance the competitiveness of American industry internationally. Second, I was able to collect the resources I need to complete my book on the artistic dimensions of mathematical programming—a book under contract to St. Martin's Press.

C. Contributions to Service:

In terms of service, my sabbatical: (a) allowed me to observe, and learn from, the operation of a comparable program that is one of our closest competitors for students and research dollars; (b) provided me an opportunity to interact with officers of my national professional association—the American Association of Art and Automation (e.g., Professor Best is editor of the AAAA Journal and Dr. Pike is AAAA's President-elect), and (c) taught me how departments can create and use research centers to contribute to the economic development of their community and state.

Faculty Signature & Date

Chair Signature & Date

Dean Signature & Date