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Policy and Global Affairs
Fellowship Programs

August 29, 2001

U.S. Department of Energy
Office of Scientific & Technical Information
P.O. Box 62
Oak Ridge, TN 37831

Dear Sirs:

Enclosed are three copies of the annual report on the work performed under U.S. Department of Energy Award No. DE-FG02-93ER14371 and Award No. DE-FG02-94ER14474 in connection with the department's Integrated Manufacturing and Processing Predoctoral Fellowship Program. These awards, made to fellows in 1994, 1995, 1997, 1998, and 1999, supported cohorts of twelve fellows each, for a maximum period of three years. This support included stipend and tuition payments and attendance at a Symposium in Washington, D. C. to present research performed while on the fellowship. If you have any questions, please contact me.

Sincerely,



Thomas C. Rozzell, Sc.D.
Director
Fellowship Programs

Enclosures

cc: Rebecca LaPlante, OCG
Dr. Robert Price, DOE

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**INTEGRATED MANUFACTURING & PROCESSING
PREDOCTORAL FELLOWSHIPS**

2000-2001 ANNUAL PROGRESS REPORT

July 1, 2000 – June 30, 2001

**Thomas C. Rozzell
Director of Fellowships
Policy and Global Affairs Division**

**The National Academies
National Academy of Sciences – National Academy of Engineering
National Research Council**

**2101 Constitution Avenue, NW
Washington, DC 20418**

August 28, 2001

Prepared for

**THE U. S. DEPARTMENT OF ENERGY
AWARD NO. DE-FG02-93ER14371
AND
AWARD NO. DE-FG02-94ER14474**

UNITED STATES DEPARTMENT OF ENERGY

INTEGRATED MANUFACTURING & PROCESSING PREDOCTORAL FELLOWSHIPS

2000-2001 ANNUAL PROGRESS REPORT

Recognizing the increasing loss of competitiveness of the United States in manufacturing, the U.S. Department of Energy (DOE), Office of Basic Energy Sciences-Engineering Research Program, initiated in July 1992 a predoctoral fellowship program in integrated manufacturing and processing. The program, which awarded twelve fellowships annually, is administered by the Fellowship Office, Policy and Global Affairs Division, of the National Research Council with guidance from the National Academy of Engineering.

The objective of the program was threefold: to create a pool of PhD's trained in the integrated approach to manufacturing and processing, to promote academic interest in the field, and to attract talented professionals to this challenging area of engineering. It was anticipated that the program would result in the creation of new manufacturing methods that would contribute to improved energy efficiency, to better utilization of scarce resources, and to less degradation of the environment. Emphasis in the competition was on integrated systems of manufacturing and the integration of product design with manufacturing processes.

PROGRAM ACTIVITIES

No new fellowships were awarded during the current reporting period as the fellowship program was discontinued after the 1999 fellowships were awarded. The remaining funds in each of the U.S. Department of Energy grants were used to pay the stipends (\$20,000 per year) and cost of education allowances (up to \$15,000 per year per fellow) for the 1998 and 1999 cohorts of fellows. In addition, the funds were used for the Fifth Annual Symposium of Integrated Manufacturing and Processing Predoctoral Fellows held in Washington, D.C. These expenses will continue until the 1999 fellows complete their tenure in 2002 and the last Symposium is held in the fall of that year.

It is the opinion of the Fellowship Office that the fellowship program met the objectives stated above during the seven years of its existence. The eighty-four fellows supported for their PhD research and study have been outstanding scholars and have gone on to responsible positions in academia and industry.

FELLOWS SUPPORTED UNDER AWARD NO. DE-FG02-93ER14371

| <u>Year</u> | <u>Fellow</u> | <u>Fellowship Institution</u> |
|-------------|----------------------------|--|
| 1994 | Richard Brian Dessenberger | University of Illinois at Urbana-Champaign |
| | Joseph Patrick Donoghue | University of California-San Diego |
| | John Elliot Hogan | Georgia Institute of Technology |
| | Evan Akiba Kempner | University of California-Los Angeles |
| | Mark Alan Lawley | University of Illinois at Urbana-Champaign |
| | Craig Michael Lawrence | Stanford University |
| | Mark V. Martin | Stanford University |
| | Andrew Paul McAfee | Harvard University |
| | Michael Christian Nechyba | Carnegie Mellon University |
| | James E. Neely, III | Massachusetts Institute of Technology |
| | Cynthia Lee Regan | Virginia Polytechnic & State University |
| | Crid Yu | University of California-Berkeley |
| 1997 | Robert Reid Bailey | Georgia Institute of Technology |
| | Jonathan Peter Briggs | University of Pennsylvania |
| | Ryan James Durante | Rensselaer Polytechnic Institute |
| | John William Kietzman | Stanford University |
| | Steven Kmenta | Stanford University |
| | Debra Ann Krulewich | University of California-Berkeley |
| | Elaine Kay Linde | Purdue University |
| | Robert David Monahan | Purdue University |
| | Eva Dorothy Regnier | Georgia Institute of Technology |
| | Stephen Jeffrey Rock | Rensselaer Polytechnic Institute |
| | Michael Joseph Schabel | University of Arizona |
| | Aimee Louise Smith | Massachusetts Institute of Technology |
| 1999 | Matthew Joseph Bono | University of Michigan |
| | Anh Xuan-Hung Dang | Georgia Institute of Technology |
| | Ty Grant Dawson | Georgia Institute of Technology |
| | Vincent DiFilippo | Tufts University |
| | Krista Marie Donaldson | Stanford University |
| | Chad Edward Duty | Georgia Institute of Technology |
| | Russell Keith Edwards | University of Utah |
| | Dathan Shane Erdahl | Georgia Institute of Technology |
| | Carol J. Romanowski | State University of New York-Buffalo |
| | Shadrach Joseph Roundy | University of California-Berkeley |
| | Andrew Joseph Scholand | Georgia Institute of Technology |
| | Brooke Suzanne Stutzman | University of Michigan |

FELLOWS SUPPORTED UNDER AWARD NO. DE-FG02-94ER14474

1995

| | |
|---------------------------|--|
| James R. Bradley | Stanford University |
| Christopher E. Couch | Massachusetts Institute of Technology |
| Stewart Lee Coulter | Georgia Institute of Technology |
| Ely Dahan | Stanford University |
| Jay Paul Daniel | University of California-Berkeley |
| Richard Joseph Jerz | University of Iowa |
| James Daniel Morrow | Carnegie Mellon University |
| Edward Phillip Morse | Cornell University |
| Richard Joseph Russell II | University of Southern California |
| Glen M. Schmidt | Stanford University |
| Hooman Tajbakhsh | University of Illinois at Urbana-Champaign |
| Richard Meredith Voyles | Carnegie Mellon University |

1998

| | |
|-------------------------|--------------------------------------|
| Antonio Alcazar | Stanford University |
| Alexander George Cooper | Stanford University |
| Brad Lee Kinsey | Northwestern University |
| Sabine Vivian Kunig | University of Washington |
| Mary Elizabeth Kurz | University of Arizona |
| Burton H. Lee | Stanford University |
| Mary Albertine Mahler | University of California-Los Angeles |
| Joseph Thomas Napoli | Washington University-Saint Louis |
| John Francis O'Brien | Rensselaer Polytechnic Institute |
| Barry L. Reed | Cornell University |
| Pete Retondo | University of California-Berkeley |
| Tony LaVaun Schmitz | University of Florida |