### APPENDIX 1

#### A CORE PROGRAM IN JIAFS

**NCC1-47**

**FUNDING**

<table>
<thead>
<tr>
<th>Period</th>
<th>Award</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/04/80 - 11/03/81</td>
<td>249,705</td>
<td>New</td>
</tr>
<tr>
<td>11/04/81 - 11/03/82</td>
<td>112,067</td>
<td>Supp # 1</td>
</tr>
<tr>
<td>11/04/82 - 11/03/83</td>
<td>304,720</td>
<td>Supp # 2</td>
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<tr>
<td>11/04/83 - 11/03/84</td>
<td>249,081</td>
<td>Supp # 3</td>
</tr>
<tr>
<td>11/04/84 - 11/03/85</td>
<td>250,000</td>
<td>Supp # 4</td>
</tr>
<tr>
<td>04/01/85 - 11/03/85</td>
<td>9,998</td>
<td>Supp # 5 - 7 months</td>
</tr>
<tr>
<td>11/01/85 - 10/31/86</td>
<td>274,000</td>
<td>Supp # 6</td>
</tr>
<tr>
<td>11/01/86 - 01/31/87</td>
<td>0</td>
<td>Supp # 7 - 3 months/No Cost extension</td>
</tr>
<tr>
<td>11/01/86 - 10/31/87</td>
<td>295,000</td>
<td>Supp # 8</td>
</tr>
<tr>
<td>11/01/87 - 10/31/88</td>
<td>326,000</td>
<td>Supp # 9</td>
</tr>
<tr>
<td>11/01/88 - 10/31/89</td>
<td>357,000</td>
<td>Supp # 10</td>
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<tr>
<td>11/01/89 - 10/31/90</td>
<td>332,000</td>
<td>Supp # 11</td>
</tr>
<tr>
<td>11/01/90 - 10/31/91</td>
<td>392,524</td>
<td>Supp # 12</td>
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<tr>
<td>11/01/91 - 10/31/92</td>
<td>330,000</td>
<td>Supp # 13</td>
</tr>
<tr>
<td>11/01/92 - 10/31/93</td>
<td>438,096</td>
<td>Supp # 14</td>
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<td>11/01/93 - 10/31/94</td>
<td>350,920</td>
<td>Supp # 15</td>
</tr>
<tr>
<td>11/01/94 - 10/31/95</td>
<td>300,000</td>
<td>Supp # 16 - Continuation of Cooperative Agreement</td>
</tr>
<tr>
<td>11/01/94 - 10/31/95</td>
<td>17,900</td>
<td>Supp # 17 - Supplemental funding, same time frame</td>
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<tr>
<td>11/01/95 - 10/31/96</td>
<td>250,000</td>
<td>Supp # 18 - Renewal/Award: 300,000</td>
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<tr>
<td>11/01/96 - 10/31/97</td>
<td>250,000</td>
<td>Supp # 19 - Renewal</td>
</tr>
<tr>
<td>11/01/96 - 10/31/97</td>
<td>0</td>
<td>Supp # 20 - Deleting incremental funding clause, and reducing award history (see Supp # 18)</td>
</tr>
<tr>
<td>11/01/97 - 10/31/98</td>
<td>120,000</td>
<td>Supp # 21 - Continuation of Cooperative Agreement</td>
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<tr>
<td>11/01/98 - 10/31/99</td>
<td>120,000</td>
<td>Supp # 22 - Renewal</td>
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<tr>
<td>11/01/99 - 11/30/99</td>
<td>0</td>
<td>Supp # 23 - No Cost time extension</td>
</tr>
<tr>
<td>11/30/99</td>
<td></td>
<td>NCC1-47 Close-out</td>
</tr>
</tbody>
</table>

Since its inception in November 1980, the program has provided support for a total of 104 Graduate Research Scholar Assistants. Of these, 92 have completed their MS/DSc degree program. Degrees awarded: GRSA - 276, full-time GW - 13 and NASA employees or local contractors - 446. The program has generated 343 theses and dissertations and 583 publications/presentations. The total funding through the grant is $5,329,011.
<table>
<thead>
<tr>
<th>Renewal Date</th>
<th>People Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>(New) November 1, 1980</td>
<td>Prof. H. Liebowitz  &lt;br&gt;Prof. J. L. Whitesides</td>
</tr>
<tr>
<td>November 1, 1981</td>
<td>Prof. H. Liebowitz  &lt;br&gt;Prof. S. W. Yuan  &lt;br&gt;Prof. J. L. Whitesides  &lt;br&gt;Mrs. S. L. Jones  &lt;br&gt;Ms. S. Wang</td>
</tr>
<tr>
<td>November 1, 1982</td>
<td>Prof. H. Liebowitz  &lt;br&gt;Prof. S. W. Yuan  &lt;br&gt;Prof. J. L. Whitesides  &lt;br&gt;Mrs. S. L. Jones  &lt;br&gt;Ms. S. Wang  &lt;br&gt;Graduate Research Scholar Assistants:  &lt;br&gt;W. Russell  &lt;br&gt;N. D. McLeod  &lt;br&gt;L. Huebner  &lt;br&gt;J. Jackson  &lt;br&gt;M. Johnson  &lt;br&gt;M. Cimini  &lt;br&gt;J. Adelman  &lt;br&gt;R. Hess  &lt;br&gt;G. Diskin  &lt;br&gt;C. Morgan</td>
</tr>
<tr>
<td>November 1, 1983</td>
<td>Prof. H. Liebowitz  &lt;br&gt;Prof. S. W. Yuan  &lt;br&gt;Prof. J. L. Whitesides  &lt;br&gt;Prof. V. Klein  &lt;br&gt;Prof. R. J. Kurzeja  &lt;br&gt;Prof. M. K. Myers  &lt;br&gt;Prof. A. K. Noor  &lt;br&gt;Dr. A. A. M. Halim  &lt;br&gt;Dr. W-F. Ng  &lt;br&gt;Mrs. S. L. Jones  &lt;br&gt;Graduate Research Scholar Assistants:  &lt;br&gt;W. Russell  &lt;br&gt;L. Huebner</td>
</tr>
</tbody>
</table>
November 1, 1986

Prof. H. Liebowitz
Prof. J. L. Whitesides
Prof. V. Klein
Prof. M. K. Myers
Prof. A. K. Noor
Mrs. S. L. Jones
Mr. R. L. Yang
Graduate Research Scholar Assistants:
P. King
R. Foley
R. A. Bell
L.-S. Vinh
T. O'Mara
L. Glaab
J. Visintainer
R. Caldwell
P. S. Fulton
R. Wydeven
P. D. Kent
D. W. Jaquish
G. T. Szczepkowski
J. S. Cundiff
P. L. Cheatham
D. Y. Kamemoto
C. P. Tilmann
A. W. Schirmer
C. M. Kuhne
November 1, 1987

Prof. H. Liebowitz
Prof. J. L. Whitesides
Prof. V. Klein
Prof. M. K. Myers
Prof. A. K. Noor
Mrs. S. L. Jones
Ms. L. L. Crisler
Graduate Research Scholar Assistants:
P. D. Kent
G. T. Szczepkowski
J. S. Cundiff
P. L. Cheatham
D. Y. Kamemoto
C. P. Tilmann
A. W. Schirmer
C. M. Kuhne
D. G. Baize
D. T. Fahrenkrug
J. S. Hausmann
N. T. Lagen
R. T. Ross
A. L. Tahemia
D. G. Thayer
A. E. Washburn
D. J. Wing
J. S. Wood
T. A. Woods

November 1, 1988

Prof. H. Liebowitz
Prof. J. L. Whitesides
Prof. V. Klein
Prof. M. K. Myers
Prof. A. K. Noor
Mrs. S. L. Jones
Mrs. B. B. Willis
Graduate Research Scholar Assistants:
D. G. Baize
D. T. Fahrenkrug
J. S. Hausmann
N. T. Lagen
R. T. Ross
A. L. Tahemia
D. G. Thayer
A. E. Washburn
D. J. Wing
J. S. Wood
November 1, 1989

Prof. H. Liebowitz
Prof. J. L. Whitesides
Prof. A. D. Cutler
Prof. V. Klein
Prof. M. K. Myers
Prof. A. K. Noor
Prof. G. D. Walberg
Mrs. S. L. Jones
Graduate Research Scholar Assistants:
P. N. Desai
M. S. Chaffin
J. A. Duricy
H. R. Knight
B. S. Levey
W. L. Poston
M. S. Warner
S. M. Swartz
C. M. Fremaux
T. Holden
B. J. Snelling
D. S. Ormsby
M. L. Hanson

November 1, 1990

Prof. H. Liebowitz
Prof. J. L. Whitesides
Prof. A. D. Cutler
Prof. V. Klein
Prof. M. K. Myers
Prof. R. H. Tolson
Mrs. S. L. Jones
Graduate Research Scholar Assistants:
B. S. Levey
W. L. Poston
M. S. Warner
B. J. Snelling
D. S. Ormsby
November 1, 1991

Prof. H. Liebowitz
Prof. J. L. Whitesides
Mrs. S. L. Jones
Graduate Research Scholar Assistants:
K. R. Laflin
B. J. Snelling
D. S. Ormsby
A. E. Barnes
P. G. Ferlemann
L. Papadopoulos
E. N. Johnson
D. K. Kraus
P. Lopez-Fernandez
R. W. Snider
S. A. Baune
D. L. Brown
S. L. Garrahan
J. W. Gloystein
H. S. Kanner
M. T. Martuccio
M. R. Pickenheim

November 1, 1992

Prof. J. L. Whitesides
Mrs. S. L. Jones
Graduate Research Scholar Assistants:
S. A. Baune
D. L. Brown
J. K. Buhler
S. L. Garrahan
J. W. Gloystein
H. S. Kanner
M. T. Martuccio
M. R. Pickenheim
P. A. Cavallo
G. R. Holmes
C. H. Johnson
November 1, 1993
Prof. J. L. Whitesides
Mrs. S. L. Jones
Graduate Research Scholar Assistants:
S. A. Baune
J. W. Gloystein
P. A. Cavallo
G. R. Holmes
C. H. Johnson
J. K. Lussier
M. L. Osborne
M. E. Rice
J. M. Smith
R. E. Weber
G. M. Cook
J. N. Daniels
T. L. Johnson
K. L. Karr
R. R. Springer
M. G. Yagle

November 1, 1994
Prof. J. L. Whitesides
Mrs. S. L. Jones
Graduate Research Scholar Assistants:
S. A. Baune
J. W. Gloystein
P. A. Cavallo
G. R. Holmes
C. H. Johnson
J. K. Lussier
M. L. Osborne
M. E. Rice
J. M. Smith
R. E. Weber
G. M. Cook
J. N. Daniels
T. L. Johnson
K. L. Karr
R. R. Springer
M. G. Yagle
November 1, 1995  
Prof. J. L. Whitesides  
Mrs. S. L. Jones  
Graduate Research Scholar Assistants:  
S. A. Smith  
M. W. Chen  
B. A. Lakota  
R. R. Springer  

November 1, 1996  
Prof. J. L. Whitesides  
Prof. V. Klein  
Prof. R. R. Sandusky  
Ms. J. Coates  
Graduate Research Scholar Assistants:  
J. S. Agte  
S. W. Lee  
J. E. McCullough  
S. A. Smith  
B. L. Wilkerson  

November 1, 1997  
Prof. J. L. Whitesides  
Ms. J. Coates  
Graduate Research Scholar Assistants:  
B. L. Wilkerson  

November 1, 1998  
Prof. J. L. Whitesides  
Ms. J. Coates
APPENDIX 3

DEGREES AWARDED

Academic Year 1980-81

Doctor of Science
Leonard M. Weinstein, NASA
Gerry L. McAninch, GWU

Professional Degree
Ruben L. Jones, NASA

Master of Science
Bill L. Lee, NASA
Timothy D. Evans, USA
Charles D. Smith, GWU
James L. Pittman, NASA
Kathy H. Samms, Sperry

Master of Engineering Administration
Dewey L. Clemmons, NASA
Wayne M. Wheatley, USA
Edwin G. Snyder, Jr., Rockwell
P. Edward Heath, Jr., USN
Franklin P. Keesee, Jr., NASA
Wendell H. Lee, NASA

Academic Year 1981-82

Doctor of Science
James A. Martin, NASA

Professional Degree
James L. Williams, NASA

Master of Science
James J. Buglia, NASA
Dennis L. Dicus, NASA
Lloyd R. Harrison, USAF
Michael G. Jones, GWU
John W. Paulson, Jr., NASA
Leif R. Dunn, USAF
Salvador P. Jimenez, USAF
James C. Watkins, USAF
Robert L. Calloway, NASA
James E. Ferl, GWU
Peter F. Jacobs, NASA
Howard S. Landis, GWU
Wai-Wah Wong, GWU
Roger D. Nordmeyer, USAF
William G. Sewall, NASA
Larry S. Weisstein, GWU

Master of Engineering Administration
Stephen D. Balch, USN
Thomas L. Blankenship, Jr., USN
William W. Fernald, NASA
Sherwin J. Jacobson, USN
Gregory J. Marable, Old Dominion Engr
George L. Roderick, NASA
Randall R. Stowe, USN
Donna E. Vance, USN
John D. Cole, Jr., USN
John F. Tansey, USA
Teddy J. Barham, USN
William H. Colden, USN
Daniel Fernandez, USAF
Marvin B. Register, USN
Ivatary S. Raju, GWU
David C. Scott, Jr., USN
Neil E. Tollefsrud, USN
Dollard V. Chretien, Kentron
William L. Mosteller, USN

Academic Year 1982-83

Doctor of Science
Christine M. Darden, NASA
Kenji Uenishi, GWU
Lyle N. Long, GWU

Professional Degree
Patricia J. Block, NASA
George T. Carson, Jr., NASA

Master of Science
Chad D. Balch, GWU
John R. Carlson, GWU
Beatrice R. Santos, GWU
Jeffrey K. Viken, GWU
D. Stuart Pope, Sperry
Glynn R. Bartlett, GWU
Jeffrey W. Bantle, GWU
Edward H. Dotson, GWU
James R. Simons, GWU
Rosanne C. Anderson, GWU
Matthew Hsu, GWU
Thomas M. Moll, NASA

Master of Engineering Administration
Michael F. Cohen, NN Shipbuilding
Dean R. Johnson, NN Shipbuilding
J. Frederick Whitley, County of York
James W. Sarver, City of Va. Beach
Neal C. Jenkins, USN
Michael F. Harris, Rockwell
William F. McMillan, USN
Thomas M. Miller, USN
Robert R. McLaughlin, USA
Ronald D. Hitt, USN
William R. Sharp, NN Shipbuilding
James J. Sova, USA
William T. Holley, USN
Joseph M. LoFaso, USN
Academic Year 1983-84

Doctor of Science
Norman F. Knight, GWU
Sue-li Chuang, GWU

Professional Degree
John B. Anders, NASA

Master of Science
Don E. Avery, NASA
Richard L. Campbell, NASA
Letia M. Drewry, GWU
Grace C. Liu, NASA
Carey S. Buttrill, Tech Appl Inc
Charles R. Sadowski, USAF
Imran Abbasy, GWU
Robert V. Dompka, GWU
Michael A. Marcolini, NASA
Elizabeth B. Plentovich, NASA
Drew G. Orlino, USA
G. Thomas White, USA

Master of Engineering Administration
William F. Austen, GE
G. William Hogg, USA
Charles C. Meador, NN Shipbuilding
Kevin T. Stone, JJ Henry
Jesse D. Timmons, NASA
Gary A. Werlau, NN Shipbuilding
Douglas J. Wisniewski, US Coast Guard
Lewis H. Dixon, NN Shipbuilding
Ajay Kumar, NASA
Donald M. Newberry, USN
Carol I. Oliver, NN Shipbuilding
Rodney E. Venables, USAF
William D. Beasley, USN

Academic Year 1984-85

Doctor of Science
William B. Compton, III, NASA
Patrick C. Murphy, GWU

Professional Degree
Pamela F. Richardson, NASA

Master of Science
Michael D. Bray, NASA
Ruth M. Martin, NASA
Hai Q. Nguyen, GWU
Robert A. Hess, GWU
Matthew E. Johnson, GWU
Dorothy G. Arbiter, GWU
G. Thomas Holbrook, NASA
David B. Schein, GWU
Ann B. Carlson, NASA
N. Duane Melson, NASA
David M. Harmon, GWU
Jeffrey S. Jackson, GWU
Jeffrey L. Adelman, GWU
Peter A. Cuthbert, GWU
Vicki S. Johnson, NASA
Perry R. Ziegenbein, GWU

Master of Engineering Administration
Douglas L. Longwood, Farley Engr
Barry E. Claybrook, Howmet
Dale R. Curtiss, NN Shipbuilding
Michael J. Gierman, USA
William P. Henderson, NASA
Michael D. Jaroma, NN Shipbuilding
Lawrence E. Putnam, NASA
Deane G. Reis, USA
Sanjar Ghaem, GE
Andre Allen, Vitro Lab
Michael H. Collins, USA
Thomas B. Delaney, USA
Robert M. Greczek, USA
Richard D. Hofler, NASA
Dean A. Johnson, NN Shipbuilding
Patrick J. Reines, USAF
Sharon L. Waligora, USA

Academic Year 1985-86

Doctor of Science
Paul W. N. Y. Tan, GWU

Master of Science
W. Keith Belvin, NASA
Vincent R. Betzen, GWU
George T. Cheshire
Nevio D'Incecco
Douglas L. Dodson, USAF/GWU
Robert S. Green, USAF/GWU
Lucas G. Horta, NASA
Erik M. Johansson, USAF
Dan R. Morgan, USAF/GWU
Marshall Rouse, NASA
Christian J. Schwindt, GWU
Daniel G. Smith, UERD
John D. Walton, Weidlinger
Scott R. Berry, GWU
Michael A. Chapman, NASA
Frederick A. Costanzo, UERD
Glenn S. Diskin, GWU
Scott P. Fears, GWU
David E. Hahne, NASA
Lawrence D. Huebner, GWU
Sharon S. LaFleur, GWU
Robert L. Milliken, GWU
William C. Russell, GWU
Scott R. Thomas, NASA
Sherwood H. Tiffany, NASA
David A. Seidel, NASA

Master of Engineering Administration
Francis J. Dougherty, Sperry
Steven C. Heifner, NN Shipbuilding
Michael P. Hoban, USAF
Gary R. Meiser, USAF
Paul A. Oskvarek, USA
William H. Round, USN
Richard J. Shimko, USAF
Edgar G. Waggoner, NASA
George A. Hamilton, SAIC
William J. Hill, USN
Patrick J. Marolda, GE
Thomas P. Mundy, NN Shipbuilding
N. Wayne Perry, NN Shipbuilding
David M. Richwine, Kentron
Mark W. Sousa, USA

Academic Year 1986-87

Doctor of Science
J. Philip Drummond, NASA
Henry E. Jones, GWU

Master of Science
Susan L. Althoff, NASA
Zachary T. Applin, NASA
Kenneth S. Brentner, NASA
Donald E. Brown, PRC
Raquel Evangelista, GWU
Rosemary Guerra, GWU
Thomas J. Horvath, GWU
Anthony M. Ingraldi, GWU
Glenda L. Jeffrey, GWU
Dawn C. Jegley, NASA
Ronald S. McCandless, NASA
Pamela S. Phillips, NASA
Charles F. Swats, USA
Peter F. Covell, NASA
Timothy L. Fetterman, GWU
Patrick M. King, USAF/GWU
Daniel G. Murri, NASA
Lawrence F. Rowell, NASA
Dan D. Vicroy, NASA

Master of Engineering Administration
Paul S. Andrews, III, USN
Bradley E. Clark, USN
Christopher C. Chronik, USA
Mark Connors, USA
John K. Harrop, USN
Robert C. Hood, USA
Jonathan G. Metcalf, USAF
Claudia L. Novicki, USAF
Academic Year 1987-88

Doctor of Science
Joel L. Everhart, GWU

Master of Science
P. Douglas Arbuckle, NASA
Mark T. Beierle, USAF/GWU
Max L. Blosser, NASA
Gregory J. Brauckmann, NASA
Christopher I. Cruz, NASA
David A. Dress, NASA
Patsy S. Fulton, GWU
Louis J. Glaab, GWU
Clyde R. Gumbert, NASA
Judith M. Hoeffner, GWU
Lloyd B. Johnson, USAF/GWU
Jerry R. Karwac, Jr., UNISYS
Gary L. Martin, GWU
C. Byram Muchmore, GWU
Eric M. Queen, GWU
H. Gail Sandford, GWU
Douglas O. Stanley, GWU
John G. Taylor, GWU
Ian A. Waitz, GWU
Daniel W. Banks, NASA
Randy A. Bell, GWU
Earl R. Booth, Jr., NASA
Richard A. Caldwell, GWU
J. Micah Downing, GWU
Robert J. Foley, GWU
Gregory L. Gatlin, NASA
Lawrence L. Green, NASA
David A. Hinton, NASA
Trevor D. Hoy, USAF/GWU
Timmy T. Kariya, GWU
Terrence A. Leary, USAF/GWU
Catherine B. McGinley, NASA
Thomas M. O'Mara, GWU
Frank J. Rossi, USAF/GWU
Leigh A. Smith, NASA
Eric J. Stewart, USAF/GWU
Lam-Son Vinh, GWU
Gregory A. Wrenn, PRC

Master of Engineering Administration
William T. Bersson
Matthew A. Carr, USN
George S. Davis, Westinghouse Electric
Deborah L. Henry, USN
Larry D. Jones, NN Shipbuilding
John W. Levytsky, USAF
Eugene J. Llaneza, Bendix
Cameron B. Nerdahl, USA
Constantine T. Papas, USA
John H. Pruden, Bendix
Daniel P. Russell, NN Shipbuilding
Bret J. Wagner, NN Shipbuilding
Lawrence M. Callan, Gibbs & Cox
Stephan J. Castellan, NN Shipbuilding
William M. Foley, USN
Elaine C. Holt, NN Shipbuilding
Peter J. Karounos, USN
Michael J. Lewis, USAF
James N. Moss, NASA
Matthew C. Oetken, USAF
Mark W. Prentice, HRSD
John M. Rhatigan, NN Shipbuilding
Carolyn L. Tebault, Eaton Corp
Gerald E. Whitney, PRC

Academic Year 1988-89

Master of Science
Steven B. Abler, GWU
George B. Beeler, NASA
Donald J. Biersch, GWU
Patrick L. Cheatham, USAF/GWU
Craig S. Cleckner, NASA
Jeffrey S. Cundiff, USAF/GWU
Rachel A. Jasinski
Thomas A. Johnson
Kelly J. Latimer, USAF/GWU
Daniel R. Millman, GWU
Mark W. Nixon, NASA
Joseph A. Visintainer, GWU
Carol D. Wieseman, NASA
Floyd J. Wilcox, Jr., NASA
Richard Wydeven, GWU
Robert A. Braun, GWU
Kevin P. Breneman, GWU
Derek Y. Kamemoto, GWU
Perry D. Kent, GWU
Susan N. McMillin, NASA
Mark B. Person, GWU
David J. Pidgeon, GWU
Steven G. Turner, GWU

Master of Engineering Administration
Dawn M. Beatty, USA
Robert J. Beatty, USA
Harold W. Beazley, NASA
Bradford D. Bingel, CSC
Ronald D. Colangelo, USA
Larry E. Forbes, NFEC
Andre J. P. Gravel, Canadian AF
Jerry L. Hart, USAF
Alan G. Keller, USAF
David P. King, NN Shipbuilding
Clinton H. Langley, USAF
Samuel M. Liberto, USAF
Anthony P. Pare, NN Shipbuilding
Barry L. Price, NASA
Douglas C. Rinell, USAF
Jon C. Schuck, USA
Nicholas E. Smith, USA
Jerry J. Swank, USAF
Mark H. Witt, USAF
Mark C. Frassinelli, USAF
Joseph D. Mackin, USAF
William B. Pickerill, USAF

Academic Year 1989-90
Master of Science
Steven X. S. Bauer, NASA
David T. Fahrenkrug, USAF/GWU
Craig M. Kuhne, GWU
John T. Post, GWU
Gregory T. Szczepkowski, GWU
Alberto W. Schirmer, GWU
Douglas G. Thayer, USAF/GWU
Timothy A. Woods, USAF/GWU
Guy T. Kemmerly, NASA
Susan L. McCleary, Lockheed
Kristine R. Meadows, NASA
Joseph C. Naftel, NASA
Mitchell J. Stevens, GWU
Carl P. Tilmann, GWU
David J. Wing, GWU
Carl S. Byington, GWU
Prasun N. Desai, GWU
Miles O. Duquette, GWU
John S. Hausmann, GWU
Timothy E. Holden, GWU
Nicholas T. Lagen, GWU
Thomas P. Ratvasky, GWU
Rogard T. Ross, GWU
A. Louis Tahernia, GWU

Master of Engineering Administration
Mark L. Baggerly, USAF
Robert B. Brown, USAF
Lawrence E. Campbell, USAF
Branford J. McAllister, USAF
Eugene A. Miller, Jr., USN
Terrence C. Ryan, USN
Christopher E. Weeks, NN Shipbuilding
Vaughn D. Behun, Lockheed
Randy L. Buckner, USA
Jay T. Davidson, General Dyn
Matthew M. Ekdaal, NN Shipbuilding
Charles W. Fleming, City of Hampton
William L. Fox, USA
Barry V. Gibbens, SED
John E. Haynes, All. Colloids
Curtis A. Heckelman, NN Shipbuilding
Robert E. Hill, USAF
Ming-Leung Lau, USA
Michael J. Niezgoda, USAF
Robert J. Pregler, NN Shipbuilding
Mark S. Riggs, USAF
Logan C. Shelman, NN Shipbuilding
Morse N. Taxon, Siemens
James R. Wei, NN Shipbuilding

Master of Engineering Management
Michael E. Ball, II, NN Shipbuilding
Franklin W. Bolano, Naval Elec Engr Ctr
Raymond S. Calloway, FED
Marion E. Huber, USA

Academic Year 1990-91

Doctor of Science
Eugene A. Morelli, GW
Willie R. Watson, NASA

Professional Degree
Charles M. Fremaux, GW
David S. McDougal, NASA

Master of Science
Daniel G. Baize, GW
Heather R. Knight, USAF/GW
James A. Duricy, USAF/GW
Michael K. Ponton, NASA
David L. Raney, NASA
Anthony E. Washburn, GW
Douglas C. Young, NASA Wallops
Linda S. Bangert, NASA
Mark S. Chaffin, GW
Peter G. Coen, NASA
Inger P. Friedman, DEI
Kenneth H. Goodrich, NASA
Brian D. Killough, NASA
Scott O. Kjelgaard, NASA
Randall T. Voland, NASA
Brian A. Beaver, GW
Lynn M. Bowman, Lockheed
Brent R. Cobleigh, GW
Jennifer Heeg, NASA
Brian S. Levey, GW
Kurt W. Meyer, GW
John R. Micol, NASA
Wendy L. Poston, GW
Marcus A. Shaw, GW
William A. Straka, GW
Michael S. Warner, GW

Master of Engineering Management
Robert A. Bean, USA
Elizabeth B. Plentovich, NASA
Constance J. Bennett, County of York
Robert J. Rutherford, HRSD
David W. Clark, James City County
John J. Gantnier, NN Shipbuilding
David P. Gianettino, Tech Appl
Gregory J. Hempfing, NN Shipbuilding
John E. Herndon, Jr., USN
Ralph J. Hutt, Adv Tech
Christine M. Jankowski, NN Shipbuilding
Dennis S. Jarabak, NN Shipbuilding
Stephen L. Myers, NN Shipbuilding
James C. Peele, Comband Tech
Alan H. Phillips, NASA
Thomas Statopoulos, USAF
Larry J. Wiese, NN Shipbuilding
Paul E. Stoecker, USN

Academic Year 1991-92

Doctor of Science
Raymond E. Mineck, NASA

Master of Science
Juan R. Cruz, NASA
James A. Hubert, USAF
Su-Zu Juang
Mark L. McMillin, NASA
Daniel S. Ormsby, USAF/GW
Brad J. Snelling, USAF/GW
Ernest M. Thurlow, GW
Vincenzo N. Iannacci, GW
Kelly R. Laflin, GW
Douglas M. Nark, GW
Keith D. Noderer, GW
Jason P. Shimshi, GW
Jose R. Villeta, GW
Timothy W. Widrick, GW

Master of Engineering Management
Clifford B. Campbell, USN
Valerie A. Mahaffey, NASA
Anthony Montero, USAF
Zane D. Perry, USN
Robert R. Price, USN
Thomas J. Sullivan, NN Shipbuilding
Kenneth R. Alley, NN Shipbuilding
Marcus L. Brumfield, NASA
Robert G. Gaia, USAF
Austin T. Quesenberry, James City County
Michael J. Reilley, NN Shipbuilding
Michael B. Stewart, USN
Gail A. Warner, NN Shipbuilding
James L. Black, MOOG Controls
David H. Dentino, USAF
Brian L. Pollard, NN Shipbuilding
Colleen R. Quinn, USAF
Paul B. Short, USA
Lorelei Faber, USAF

Academic Year 1992-93

Doctor of Science
John A. Tanner, NASA
Steven E. Krist, GW
William B. Igoe, NASA
James L. Pittman, NASA

Master of Science
Gregory Fruth, GW
Kenneth M. Jones, NASA
Roger A. Lepsch, Jr., NASA
Karen E. Suzuki, USAF/GW
Steven F. VanLiew, GW
Karl A. Geiselhart, GW
Barry S. Lazos, NASA
Aimee D. Thornton, GW
Brooks P. Byam, GW
Daryl L. Bonhaus, NASA
Michel D. Cavanaugh, GW
Timothy J. Coats, GW
Preston S. Diamond, GW
Kevin E. Dutton, NASA
Paul G. Ferlemann, GW
Craig A. Hunter, GW
Eric N. Johnson, GW
Alexander Kokolios, GW
Donna K. Kraus, GW
Justin H. Lan, GW
Francesco Lanni, GW
David P. Lockard, GW
Patrick D. Marsden
John T. Navagh, GW
John C. Otto, NASA
Loukas Papadopoulos, GW
Michael Papadopoulos, GW
Mark S. Pape, GW
Christopher D. Sontag, GW
Royce W. Snider, GW
Chau T. Tran, GW

Master of Engineering Management
William J. LaMarsh, II, Unisys
Leonard W. Young, USN
Bernard M. Baker, Haynes
Owen W. Bissett, Wyle Laboratories
Wallace M. Catanach, III, IDAB
James H. Helm, Virginia Power
James F. Kazmer, Hughes Aircraft
Thomas M. Kulovits, Siemens Automotive
David L. Mann, USA
James E. Otis, USN
Bryan P. Pilati, USA
Donald J. Poitras, USAF
Kristi M. Skeens, Science & Technology

Academic Year 1993-94

Doctor of Science
Sandee Gupta, Vigyan, Inc.

Master of Science
Scott A. Baune, USAF/GW
Brett W. Fathauer, GW
John W. Gloystein, USAF/GW
Sherrie L. Krist, GW
Charles E. Cockrell, Jr., NASA
Christopher A. Croom, GW
Pamela A. Davis, NASA
David R. Gingras, GW
Jason S. Bacon, GW
Douglas L. Brown, GW
Jason K. Buhler, GW
Wayne D. Carlsen, GW
Marc D. DiPrinzio, GW
Howard S. Kanner, GW
Jose L. Maldonado-Salgado, GW
Michelle T. Martuccio, GW
Mark R. Pickenheim, GW
William D. Smith, GW
Barrett Dale Taft, GW
Eric C. Vannell, GW

Master of Engineering Management
Song Curl, NN Shipyard
William S. Saltzer, NN Shipyard
Alfred A. Wallace, USN
David J. Belanger, NN Shipyard
James D. Brown, USN
Kevin M. Brown, NN Shipyard
Robert J. Brust, USAF
Kevin L. Clark, Polaroid
Lawrence J. Cullivan, Jr., Virginia Power
James J. Gavin, Allen-Bradley Co., Inc
Alvin O. Geiger, ITT Tech
Martin J. Kaszubowski, Self-employed
Kenneth L. Marsh, Aetna Insulated Wire Co.
Jonathan A. McGee, NN Shipbuilding
Donald W. McPhail, NN Shipbuilding
Robert C. McSavaney, Earl Industries, Inc
Thomas H. Moore, ANSER
Prescott Sherrod, PEMCO
Bhupindar S. Rekhi, Virginia Power
Patrice E. Waller, USN
Raymond D. Whipple, NASA
Craig E. Young, NN Shipbuilding
Jennifer R. Boykin, NN Shipbuilding
James B. Mahoney, III, USN

Academic Year 1994-95

Doctor of Science
Stephen J. Scotti, NASA
Mark L. Hanson, GW

Professional Degree
Michael J. Cooper, DEI
Philip C. Graves, Vigyan
Keith D. Noderer, GW

Master of Science
Jacques Y. Clemenceau, GW
Julie E. Collins
Steven L. Garrahan, GW
John K. Lussier, USAF/GW
Mike E. Rice, USAF/GW
Gautum H. Shah, NASA
Michael G. Tison, USAF/GW
Craig W. Watry, USAF/GW
Henry S. Wright, NASA
Robert A. Sotack, GW
Bonifacio R. Calayag, GW
Peter A. Cavallo, GW
Hung-Sheng Chern, GW
Raymond C. Esposito, GW
Bradford E. Green, GW
Peter C. Holland, GW
Mark A. Johnson, GW
Jonathon C. Lawrence, GW
Jeffery A. Lyon, GW

13
Michael L. Osborne, GW
Janice M. Smith, GW
Christopher R. Tatnall, GW
Ronald E. Weber, GW
Patrick J. Yagle, GW

Master of Engineering Management
Andrea F. Angelucci, Alenia Spazio
Michael A. Jussila, USN
Eric W. Karkane, Norfolk Naval Shipyard
Edward S. Simmons, NN Shipbuilding
Scott S. Stolz, US Dept of Commerce
David G. Tuttle, ORG
Melvin S. Whitt, Virginia Power

Academic Year 1995-96

Professional Degree
Audree D. Newman, USAF

Master of Science
Karen A. Deere, GW
Brian D. Gallo, USAF/GW
Gerald R. Holmes, GW
Mark T. Lord, NASA
Matthew R. Whiting, GW
Corinne H. Johnson, GW
Matthew L. Wilbur, NASA
Michael W. Chen, GW
Deanna L. Chipman
Geoffrey M. Cook, GW
James N. Daniels, GW
Christian M. Fernholz, GW
Lynda J. Foernsler, NASA
Katherine L. Karr, GW
Melvin Kosanchick, III, GW
Kenneth P. Lawson, GW
John D. McMinn, NASA
Luong V. Nguyen, GW
Scott E. Ryun, GW

Master of Engineering Management
Lindy A. Fleck, NASA
Michael G. Kosalko, Vitronics
Edward L. Kules, USN
Steven D. Rich, USN
Russell E. Sloop, Walsh Construction
David S. Smith, USAF
Jeffrey R. Smith, USAF
Rufus Sykes, NASA
Christopher R. Bourque, American Shipping Bureau
John A. Boynewicz, USCG
Kristen F. Butler, Delta Research Corp
Jeffrey T. Crewe, USAF
Nicholas J. Dahlkamp, NN Shipbuilding
Timothy J. Fish, USAF
Lorelei S. Gibson, NASA
Rendell L. Green, Sears
Themozhi S. Jothimurugesan
Christopher A. Martin, USAF
Todd W. McCullough, USAF
Randall J. McFadden, USAF
Alan E. Neuschaefer, Lockheed Missiles
Russell A. Nieschlag
Harry J. Pelto, Jr., USN
Robert H. Winger, Jr., NN Shipbuilding
Gerard T. Coleman, USN
Larry H. Dryden, ACC CES/ESPE
Joseph Y. C. Kan, USN

Academic Year 1996-97

Professional Degree
Glenn P. Greiner, GW
Jill M. Marlowe, NASA
Christopher R. Tatnall, GW

Master of Science
Martin S. Annett, GW
Matthew C. Brennan, GW
Francisco J. Cestero, GW
Christopher A. Jones
Stephanie L. Heath, Technology Appl. Inc.
Jared S. Cox, GW
Jeffrey D. Flamm, NASA
Jonathan R. Hicks, GW
Terry L. Johnson, GW
Anthony J. Loretti, GW
Veloria J. Martinson, NASA
David S. McDaniel, USAF/GW
Jason E. Quinn, GW
Matthew N. Rhode, NASA
Melissa B. Rivers, NASA
Christopher L. Schierer, GW
Steven A. Smith, GW
Steven C. Stone, GW

Master of Engineering Management
Allan H. Anderson, MannTech
Allen L. Burdette, II, Linde Hydraulics
Craig S. Eller, USCG
Peggy A. Jackson, USA/Civ
Anita L. Jones-Quinones
Robert J. Lukens, Jefferson Labs
Karen S. White, TJNAF
Robert C. Williams, Jr., USAF

Academic Year 1997-98

Doctor of Science
Douglas M. Nark, GW
Eleanor A. (Ketchum) Silverman, NASA Goddard
Master of Science
Jarvis J. Arthur, NASA
Mark D. Guynn, NASA
James C. Leary, GW
Susan L. Linch, GW
Russell W. Shane, GW
Paul G. Wilkin, GW/I
Brandon L. Wilkerson, USAF/GW
Michael J. Doherty, GW
Sharon S. Graves, GW
Patrick N. Hinchy, GW
Brian M. Howerton, GW/I
Barbara A. Lakota, GW
Ngoc N. Nguyen, GW/I
Gordon S. Owsley, NASA
Young Henry Park, GW/I
Roger E. Thibaudeau, GW
William G. Tomek, NASA
Sally A. Viken, Innovative Aerodynamics Tech
Lawrence P. Barisciano, GW
Atherton A. Carty, GW
Jason L. Caton, GW
Timothy J. Curry, GW
Michael L. Dambach, GW
Carl C. Poteet, GW
Jaime V. Sanchez, GW
Mark S. Smith, GW
Daniel J. Stead, GW
Brande A. Tuck, GW

Academic Year 1998-99
Master of Science
Jeremy S. Agte, GW
Darren T. Baird, GW/I
Martha C. Brown, NASA
George J. Cancro, GW
Andrew T. Cochrane, GW
Steven E. Doerner, GW
William J. Eadie, GW
Khoshal Husainzada, GW
Todd D. Jack, GW
Luther N. Jenkins, NASA
Mia Kwak, GW
Thuan H. Khong, GW
Hanson Lee, GW/I
Brian S. Modrzewski, GW
Susana Munoz, GW
Brandon L. Stille, GW
Larry M. Zdanis, GW/I
Academic Year 1999-00 (partial)

Doctor of Science

Professional Degree
Patrick N. Hinchy, GW

Master of Science
Matthew S. Bradford, GW
Mark S. Emiley, GW
Matthew C. Hendrickson, GW
Thomas J. Schellenberg, GW
Deborah M. Tomek, NASA
APPENDIX 4

THESES AND DISSERTATIONS
NCC1-47


"Operational Evaluation of a Propeller Test Stand in the Quiet Flow Facility at Langley Research Center," P. J. Block, Engineer, Fall 1982.


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258. "On Maximizing the Effect of a Counter-Rotating Vortex on Vortex Sheet Roll-up Using a Point Vortex

259. "The Effects of Stiffness Nonlinearities on the Dynamic Response of Structures," M. J. Cooper,
Professional, Fall 1994.


1995.

264. "How Small Companies Can Use Shared Manufacturing Centers in the Virtual Corporation Environment

Spring 1995.

266. "The Measurement of the Thrust Produced by a Scramjet Combustor Model in a Direct-Connect

267. "Coupling Static Aeroelastic Predictions with an Unstructured-Grid Euler/Interacting Boundary Layer


269. "Momentum Accommodation Coefficient and Venue Atmospheric Density Variation From Magellan

270. "An Approach to the Constrained Design of Natural Laminar Flow Airfoils," B. E. Green, MS Thesis,
Summer 1995.

271. "Reducing Flexible Base Vibrations Using Kinematically Redundant Robots," M. L. Hanson, DSc

1995.


274. "The Effects of Convection Speed of a Random Load on a Structural-Acoustic System," J. C. Lawrence,

1995.


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<tr>
<td>294</td>
<td>&quot;Experimental Low Speed Impact Damage Threshold of a Metallic Thermal Protection System,&quot;</td>
<td>K. L. Karr</td>
<td>MS Thesis</td>
<td>Summer 1996</td>
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<td>298</td>
<td>&quot;Identification of Longitudinal Aerodynamic and Handling Qualities Parameters of the X-31A Aircraft from Flight Test Data,&quot;</td>
<td>L. V. Nguyen</td>
<td>MS Thesis</td>
<td>Summer 1996</td>
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<td>300</td>
<td>&quot;Internal Performance Characteristics of a Nozzle Using Fluidic Counterflow for Thrust Vectoring,&quot;</td>
<td>J. D. Flamm</td>
<td>MS Thesis</td>
<td>Fall 1996</td>
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<td>304</td>
<td>&quot;Piezoelectric Power Consumption for Active Vibration Control,&quot;</td>
<td>M. C. Brennan</td>
<td>MS Thesis</td>
<td>Summer 1997</td>
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<td>309</td>
<td>&quot;Effects of Mass Injection on Supersonic Cavity Drag with Applications to Scramjets,&quot;</td>
<td>J. E. Quinn</td>
<td>MS Thesis</td>
<td>Summer 1997</td>
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<th>Publication ID</th>
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<th>Author(s)</th>
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<tr>
<td>80-002</td>
<td>&quot;Air Quality Model Studies with Application for Southeastern Virginia&quot;</td>
<td>D. A. Brewer, E. E. Remsberg</td>
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<td>80-003</td>
<td>&quot;Effect of a Flexibly Mounted Store on the Flutter Speed of a Wing&quot;</td>
<td>H. L. Runyan, Jr.</td>
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<td>80-004</td>
<td>&quot;Maximum Likelihood Method for Estimating Airplane Stability and Control Parameters From Flight Data in Frequency Domain&quot;</td>
<td>V. Klein</td>
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<td>80-005</td>
<td>&quot;Noise from Vibrating Propeller&quot;</td>
<td>H. L. Runyan, Jr.</td>
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<td>80-006</td>
<td>&quot;Inlet Contour and Flow Effects on Radiation&quot;</td>
<td>J. Ville, R. J. Silcox</td>
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<td>80-007</td>
<td>&quot;Plane Waves at or Near Grazing Incidence in the Parabolic Approximation&quot;</td>
<td>G. L. McAninch, M. K. Myers</td>
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<td>80-009</td>
<td>&quot;Two-Stage Rayleigh-Ritz Technique for Nonlinear Analysis of Structures&quot;</td>
<td>A. K. Noor, J. M. Peters, C. M. Andersen</td>
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80-010  "Elastic Collapse Analysis of Shells Via Global-Local Approach"

80-011  "Polar Symmetry in Three-Dimensional Analysis of Laminates with Angle Plies"
Published: NASA TM 81852, Jul. 1980

80-012  "Numerical Experiments with a General Circulation Model Concerning the Stratospheric Distribution of Ozone"
Presented: IAMAP Int'l. Ozone Commission Quadrennial Ozone Symposium, Aug. 4-9, 1980, Boulder, CO.

80-013  "Study of the Response of Stratospheric Ozone to Perturbations in the Solar Constant and Solar Uv Flux"
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Presented: IAMAP Int'l. Ozone Commission Quadrennial Ozone Symposium, Aug. 4-9, 1980, Boulder, CO.

80-015  "Determination of Instrumentation Errors from Measured Data Using Likelihood Method"

80-016  "On the Acoustic Boundary Condition in the Presence of Flow"

80-017  "Experimental Investigation of the Radiation of Sound from an Unflanged Duct and a Bellmouth, Including the Flow Effect"
Published: NASA TP-1697, Aug. 1980.
80-018 "Interlaminar Stress Singularities at a Straight Free Edge in Composite Laminates"

I. S. Raju
J. H. Crews, Jr.

80-019 "Computational Methods in Nonlinear Structural and Solid Mechanics"

A. K. Noor
H. G. McComb, Jr. (Editors)

80-020 "Recent Advances in Reduction Methods for Nonlinear Problems"
Published: Computers and Structures, Vol. 13, No. 1/2, 1981, pp. 31-44.

A. K. Noor

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A. K. Noor
C. M. Andersen

80-022 "Survey of Computer Programs for Solution on Nonlinear Structural and Solid Mechanics Problems"

A. K. Noor

80-023 "Comets and the Photochemistry of the Paleoatmosphere"

J. S. Levine
T. R. Augustsson
R. E. Boughner
M. Natarajan
L. J. Sacks

80-024 "Research in Nonlinear Structural and Solid Mechanics"

H. G. McComb, Jr.
A. K. Noor (Compilers)
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<td>80-027</td>
<td>&quot;Fracture Toughness of Boron/Aluminum Laminates with Various Proportions of 0 Degrees and ±45 Degrees Plies&quot;</td>
<td>C. C. Poe, Jr., J. A. Sova</td>
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<td>80-028</td>
<td>&quot;A New Look at Numerical Analyses of Free-Edge Stresses in Composite Laminates&quot;</td>
<td>I. S. Raju, J. D. Whitcomb, J. G. Goree</td>
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<td>80-029</td>
<td>&quot;Design Considerations of Advanced Supercritical Low Drag Suction Airfoils&quot;</td>
<td>W. Pfenninger, H. L. Reed, J. R. Dagenhart</td>
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<td>80-030</td>
<td>&quot;Mixed Method of Analysis&quot;</td>
<td>A. K. Noor</td>
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<td>&quot;Analysis of Spatial Beamlike Lattices with Rigid Joints&quot;</td>
<td>A. K. Noor, M. P. Nemeth</td>
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<td>80-032</td>
<td>&quot;Nonlinear Dynamic Analysis of Curved Beams&quot;</td>
<td>A. K. Noor</td>
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<td>80-033</td>
<td>&quot;Nonlinear Analysis Via Global-Local Mixed Finite Element Approach&quot;</td>
<td>A. K. Noor, J. M. Peters</td>
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<td>80-034</td>
<td>&quot;Radiation in a Wall Jet Flow Environment&quot;</td>
<td>R. Ramakrishnan</td>
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80-035 "The Influence of NO and Cl0 Variations at Twilight on the Interpretation of Solar Occultation Measurements"
Published: Geophysical Research Letters, 1980.

80-036 "High Reynolds Number Research-1980"
Published: NASA CP-2183.

80-037 "Reliability of Various Empirical Potential Methods"

80-038 "Dislocation Dissociation in Some FCC Metals"

80-039 "Empirical Approaches to Interatomic Potentials"

80-040 "Width Effects on Stresses in Graphite/Epoxy Laminates with Loaded Holes"

80-041 "Nonlinear Dynamic Analysis of Space Trusses"

80-042 "Micropolar Beam Models for Lattice Grids with Rigid Joints"

80-043 "A New Look at Analyses of Free-Edge Stresses in (±45)\textdegree Laminates"

81-001 "Perturbation of Transonic Flow with Shocks"
81-002  "Transonic Small Disturbance Calculations Including Entropy Corrections"
Presented: Physical and Numerical Fluid Mechanics Conference, California State U.,

M. M. Hafez
D. Lovell

81-003  "Modification of Silicon Carbide Fiber for use in SiC/Ti Composites"

H. Landis
J. Unnam
S. V. N. Naidu
W. D. Brewer

81-004  "Reduced Basis Technique for Collapse Analysis of Shells"
Published: AIAA J., Vol. 19, No. 3,

A. K. Noor
C. M. Andersen
J. M. Peters

81-005  "Analytical Techniques for the Analysis of Stall/Spin Flight Test Data"
Published: Soc. of Automotive Engineers,
Inc., Apr. 7-10, 1981.

L. W. Taylor, Jr.
V. Klein

81-006  "Mixed Models and Reduced/Selective Integration Displacement Models for Vibration Analysis of Shells"
Presented: Int'l. Symposium on Hybrid and Mixed Finite Element Methods, Apr. 8-10,
1981, Atlanta, GA.
Published: Hybrid and Mixed Finite Element Methods, Edited by S. N. Atluri,
R. H. Gallagher and O. C. Zienkiewicz,

A. K. Noor
J. M. Peters

81-007  "Modification of Silicon Carbide Fibers for use in SiC/Ti Composites"

H. S. Landis
J. Unnam
W. D. Brewer
S. V. N. Naidu

81-008  "Aircraft Parameter Estimation"

W. R. Wells
V. Klein

81-009  "A Diagnostic Model for Studying Daytime Urban Air-Quality Trends"
Published: NASA TP 1843, May, 1981.

D. A. Brewer
E. E. Remsberg

81-010  "Nitrogen Condensation-Comparison of Airfoil Experiments with Homogeneous Nucleation Theory"
Presented: 1981 Virginia Academy of Science,
May 1981, Old Dominion U., Norfolk, VA.

R. M. Hall
P. B. Gooderum
E. H. Dotson
"Low-temperature Study of the Static and Dynamical Magnetic Properties of the Random One-Dimensional Antiferromagnet (CD₃)₄(CD₃)₄NMn₄Cu₁₋₉Cu₁₃"  

"Stress-Concentration Factors for Finite Orthotropic Laminates with a Pin-Loaded Hole"  
Published: NASA TP-1862, May 1981.

"Low Energy Electron Effects on Tensile Modulus and Infrared Transmission Properties of a Polypyromellitimide Film"  

"Resonant Frequency of Rectangular Microstrip Antennas"  

"Bifurcation and Postbuckling Analysis of Laminated Composite Plates Via Reduced Basis Technique"  

"Equivalence of Macroscopic and Microscopic Griffith Conditions for Subcritical Crack Growth"  

"Effects of Metal Coatings on Silicon Carbide Fiber Strength" (Abstract)  

"Determination of Model Structure and Parameters of an Airplane from Pre- and Post-Stall Flight Data"  
81-019  "On Making Large Nonlinear Problems Small"
Presented: Second Int'l. Conference on
Finite Elements in Nonlinear Mechanics,
U. of Stuttgart, West Germany, Aug. 25-28,
1981.
Published: Proceedings of Meeting, Edited
by J. St. Doltsinis, K. Straub, K. J. Williams,
North Holland Publishing, Amsterdam.
Published: Computer Methods in Applied
Mechanics and Engineering, 1982, Vol. 34,
pp. 955-985.

81-020  "A Catalog of Social Surveys of Residents'
Reactions to Environmental Noise (1943-1980)"

81-021  "Stress-Intensity Factor Equations for
Cracks in Three-Dimensional Finite Bodies"
Published: NASA TM-83200, Aug. 1981
Published: Fracture Mechanics: Fourteenth
Symposium-Vol. I: Theory and Analysis,
ASTM STP 791, J. C. Lewis and G. Sines, Eds.,
American Soc. for Testing and Materials,

81-022  "Shock Development in Sound Transmitted
Through a Nearly Choked Flow"
Presented: AIAA 7th Aeroacoustics Conference,
Oct. 5-7, 1981, Palo Alto, CA.
Published: AIAA Paper No. 81-2012.

81-023  "Determination of Airplane Model Structure
From Flight Data by Using Modified Stepwise
Regression"

81-024  "Survey of Computer Programs for Heat
Transfer Analysis"
Presented: Symposium on Computational
Aspects of Heat Transfer in Structures,
Nov. 3-5, 1981, NASA Langley Research
Center, Hampton, VA.
Published: NASA CP-2216, 1982, Computational
Aspects of Heat Transfer in Structures,
pp. 487-561.
Published: Structural Mechanics Software Series,
Update Published: Finite Elements in Analysis
81-025 "Mixed Models and Reduced/Selective Integration Displacement Models for Non-linear Shell Analysis"

A. K. Noor
C. M. Andersen

81-026 "The Transport of Trace Chemicals by Planetary Waves in the Stratosphere. Part I: Steady Waves"

R. J. Kurzeja

81-027 "Infrared Spectroscopic Analysis of the Effects of Simulated Space Radiation on a Polymide"

J. E. Ferl
E. R. Long, Jr.

81-028 "An Implementation of the Programming Structural Synthesis System (PROSS)"

J. L. Rogers, Jr.
J. Sobieski
R. B. Bhat

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H. C. Lester


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R. J. Silcox
H. C. Lester


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<td>&quot;Parallel Implementation of Large-Scale Structural Optimization&quot;</td>
<td>S. L. Padula S. C. Stone</td>
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<td>98-023</td>
<td>&quot;Estimation of Aircraft Nonlinear Unsteady Parameters From Wind Tunnel Data&quot;</td>
<td>V. Klein P. C. Murphy</td>
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99-005  "High-Speed Impulsive Noise Propagation"
Presented: 1999 AIAA Mid-Atlantic Region I Student
Conference, University of Virginia, Charlottesville,
VA, Apr. 16-17, 1999.  A-206

W. J. Eadie

99-006  "Feasibility of Calculating Zonal Winds Using
Accelerometer and Rate Data from Mars Global Surveyor"
Presented: 1999 AIAA Mid-Atlantic Region I Student
Conference, University of Virginia, Charlottesville,
VA, Apr. 16-17, 1999.  AS-178

D. T. Baird

99-007  "Acoustics of Nonuniform Locally Reacting Absorbers"
Presented: 5th AIAA/CEAS Aeroacoustics Conference, Bellevue
(Greater Seattle), WA, May 10-12, 1999.
Published: AIAA 99-1824.  A-297

M. K. Myers

R. R. Springer

99-008  "Conventional/Laser Diagnostics to Assess Flow Quality in a
Combustion-Heated Facility"
Presented: 35th AIAA/ASME/SAE/ASEE Joint Propulsion Conference
Published: AIAA Paper 99-2170.  FS-343

G. S. Diskin

M. W. Smith

99-009  "Supersonic Coaxial Jet Experiment for CFD Code Validation"
Presented: 30th AIAA Fluid Dynamics Conference, Norfolk, VA
Published: AIAA Paper 99-3588
Jun. 28 - Jul. 1, 1999.  FS-349

A. A. Carty

S. E. Doerner

G. S. Diskin

J. P. Drummond

99-010  "Microwave-Driven Smart Material Actuators"
Presented: 34th Intersociety Energy Conversion Engineering
Conference, Vancouver, British Columbia, Canada
Aug. 1-5, 1999.  FS-361

S. H. Choi

S-H. Chu

M. Kwak

A. D. Cutler

K. D. Song

99-011  "Smart Material Actuator Driven by Networked Rectenna Array"
Presented: 34th Intersociety Energy Conversion Engineering
Conference (IECEC), Vancouver, Canada, Aug. 2-5, 1999.
Published: Proceedings of the Meeting, IECEC.
Published: Paper No. 1999-01-2646.  FS-347

S. H. Choi

M. Kwak

A. D. Cutler

K. D. Song

99-012  "Utilization of Mars Global Surveyor Accelerometer Data
for Atmospheric Modeling"
Presented: AAS/AIAA Astrodynamics Specialist Conference,
Published: AAS 99-386.  AS-181

R. H. Tolson

G. M. Keating

S. N. Noll

T. J. Schellenberg

D. T. Baird

99-013  "Investigation of a Technique for Measuring Dynamic Ground Effect
in a Subsonic Wind Tunnel"

S. S. Graves

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99-014  "Development of Hot Diodes With New Thermal Dissipating Submount"  
S. H. Choi  
U. N. Singh  
A. D. Cutler  

99-015  "Modeling of Longitudinal Unsteady Aerodynamics of a Wing-Tail Combination"  
V. Klein  

99-016  "Supersonic Business Jet Design Through Bi-Level Integrated System Synthesis"  
Published: SAE 99WAC-48.  
J. S. Agte  
J. Sobieszczanski-Sobieski  
R. R. Sandusky, Jr.  

99-017  "Vortex Flow in a Convergent-Divergent Nozzle"  
A. D. Cutler  
R. W. Barnwell  

99-018  "Development and Validation of a Supersonic Helium-Air Coannular Jet Facility"  
A. A. Carty  
A. D. Cutler  

99-019  "Effects of Jet Swirl on Mixing of a Light Gas Jet in a Supersonic Airstream"  
S. E. Doerner  
A. D. Cutler  

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### APPENDIX 6

GRADUATE RESEARCH SCHOLAR ASSISTANTS EMPLOYMENT UPON GRADUATION

#### NASA-Langley Research Center

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Brad J. Snelling 91 USAF
Wendy L. Poston 91 Naval Surface Warfare Center, Dahlgren
D. Scott Ormbsy 91 USAF
Scott A. Baune 93 USAF
John W. Gloystein 93 USAF
Mike E. Rice 94 USAF
Michael G. Tison 94 USAF
John K. Lussier 94 USAF
Jason K. Buhler 94 Dept of Navy Civ., Cherry Point, NC
Craig W. Watry 94 USAF
Robert A. Sotack 95 US Navy
Brian D. Gallo 95 USAF
Corinne H. Johnson 96 USAF
Kenneth P. Lawson 96 Dept of Navy, Naval Air Warfare Ctr, Patuxent River, MD
David S. McDaniel 96 USAF
Brandon L. Wilkerson 97 USAF
Jeremy S. Agte 98 USAF
Barbara A. Lakota 98 Naval Surface Warfare Ctr, Indian Head, MD
Todd D. Jack 99 US Navy
Matthew S. Bradford 99 USAF
Mark S. Emily 99 USAF

INDUSTRY

Gary K. Navrotski 80 Reynolds Metals R&D, Richmond
Gerry L. McAninch 80 GE Aircraft Engines (now NASA Langley)
Wai-Wah Wong 81 Nash Engineering
Larry S. Weissstein 82 Lockheed Missiles & Space Sys, CA
Jeffrey W. Bantle 82 Contracting firm at NASA Johnson
Imran Abbasy 83 Schlumberger Inland Svc, Inc., Aberdeen, Scotland
Rosanne C. Anderson 83 Union Carbide Corp, TN
Sue-Li Chuang 83/DSc GE Aircraft Engines, Cincinnati (Carrier Corp., Syracuse, NY)
Lyle N. Long 83/DSc Lockheed, CA (now Assoc. Prof. @Penn State Univ.)
Kenji Uenishi 83/DSc GE Aircraft Engines, Cincinnati
Robert V. Dompka 83 Bell Helicopter, TX
Robert A. Hess 85 Systems Control Tech, MD
David B. Schein 85 Northrop Corp., CA
William C. Russell 85 Boeing, Seattle, WA
Lawrence D. Huebner 85 BDM Corp., AL (now NASA Langley)
Matthew E. Johnson 85 General Dynamics, Ft Worth
Jeffrey L. Adelman 85 Aeroflex Systems Corp., DC
David M. Harmon 85 McDonnell Douglas, St. Louis
Vincent R. Betzen 85 TRW/BMD, CA
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<td>Jose Maldonado-Salgado</td>
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Sikorsky, CT (Douglas A/C, CA, now in FL)
Douglas Aircraft, CA
Rockwell Int l, Rocketdyne Div., CA
Harris Corp., FL
Aerojet Techsystems, CA
Northrup, CA
ANSER in DC
Aircraft company in CA
Bionetics, DC (now NASA Headquarters)
General Dynamics, TX
Sikorsky, CT
Ford Aerospace, CA
GE Aircraft Engines, OH
GE Aircraft Engines, OH
Lockheed Aeronautical Systems, CA
Bell Helicopter, TX
Aerometrics, CA
Aerospace Corp., CA
Booz-Allen & Hamilton, Inc.
TRW Space & Technology, DC
Applied Research Lab @Penn State University
Northrup, CA
Geo-Control Systems, DC
Applied Research Lab., Penn State University
ANALEX Corp., OH
Aerospace Corp., CA
TRW
The Aerospace Corp., CA
The Aerospace Corp., CA
Rockwell Int l, CA
ANALEX Corp., OH
Computational Physics, Inc., VA
Environmental Career Orgn., Seattle, WA
ANSER
Stanford Telecom, VA
Systems Control Technology, MD
General Dynamics, Electric Boat Division
Westinghouse Electric., NY
TRW
Cummins Engine Co., IN
Boeing Vertol, Philadelphia, PA
ANSER, DC (now Hughes Aircraft, CA)
Systems Control Technology, MD
Hughes Space & Comm., CA
Utah Medical Products, Inc.
Robinson Helicopter, CA
ANSER, DC
Hughes Aircraft, CA
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<tr>
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<tbody>
<tr>
<td>Mark R. Pickenheim</td>
<td>Martin Marietta, Springfield, VA</td>
</tr>
<tr>
<td>Jason S. Bacon</td>
<td>Martin Marietta, Denver, CO</td>
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<tr>
<td>Michelle T. Martuccio</td>
<td>Allied Signal, NJ</td>
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<tr>
<td>Eric C. Vannell</td>
<td>ORBIT Advance Technologies, PA</td>
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<td>Jeffrey A. Lyon</td>
<td>Texas Instruments, Dallas</td>
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<td>Mark A. Johnson</td>
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<tr>
<td>Peter A. Cavallo</td>
<td>Analysis &amp; Design Application Co., NY</td>
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<tr>
<td>Jonathon C. Lawrence</td>
<td>Ford Motor Co., MI</td>
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<tr>
<td>Raymond C. Espiritu</td>
<td>ANSER, Arlington, VA</td>
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<td>Peter C. Holland</td>
<td>Allison Engine Co., IN</td>
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<td>Hung-Sheng Chern</td>
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<tr>
<td>Keith D. Noderer</td>
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<tr>
<td>Ronald E. Weber</td>
<td>Allied Signal Technical Services, MD</td>
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<td>Patrick J. Yagle</td>
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<td>Mark L. Hanson</td>
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<td>Gerald R. Holmes</td>
<td>GE Aircraft Engines, Schenectady, NY</td>
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<tr>
<td>Scott E. Ryun</td>
<td>Allison Gas Turbines, Indianapolis, IN</td>
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<td>Melvin Kosanchick, III</td>
<td>Boeing, Seattle, WA</td>
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<tr>
<td>Katherine L. Karr</td>
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<td>Geoffrey M. Cook</td>
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<tr>
<td>James N. Daniels</td>
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<tr>
<td>Luong Nguyen</td>
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<td>Michael W. Chen</td>
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<tr>
<td>Martin S. Annett</td>
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<tr>
<td>Matthew C. Brennan</td>
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<tr>
<td>Jared S. Cox</td>
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<tr>
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<td>Susan L. Linch</td>
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<td>Russell W. Shane</td>
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<td>Michael J. Doherty</td>
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<tr>
<td>Sharon S. Graves</td>
<td>SAIC @NASA Langley</td>
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<td>Roger E. Thibaudeau</td>
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<td>Lawrence P. Barisciano</td>
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<td>Jason L. Caton</td>
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<td>George J. Cancro</td>
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<td>Timothy J. Curry</td>
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<td>Jaime V. Sanchez</td>
<td>Pratt &amp; Whitney, Hartford, CT</td>
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<td>Daniel J. Stead</td>
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<td>Brade A. Tuck</td>
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<td>Susana Munoz</td>
<td>BF Goodrich Aerospace/Aerostructures, Chula Vista, CA</td>
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<tr>
<td>Darren T. Baird</td>
<td>GW JIAFS</td>
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<tr>
<td>William J. Eadie</td>
<td>Sikorsky Aircraft, Stratford, CT</td>
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<td>124</td>
<td>Khoshal Husainzada</td>
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<td>Patrick N. Hinchy (Prof)</td>
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<td>Thomas J. Schellenberg</td>
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**UNIVERSITIES**

1. Howard S. Landis
   - MIT
2. Chad D. Balch
   - Delft University
3. Matthew Hsu
   - Northwestern University
4. Robert L. Milliken
   - RPI (DSc) (Bell Helicopter, Textron, Ft Worth, TX)
5. C. Byram Muchmore
   - Texas A&M (DSc)
6. J. Micah Downing
   - Georgia Tech (DSc) (Wright-Patterson)
7. Ian A. Waitz
   - Cal Tech (DSc), Assistant Professor @MIT (1-92)
8. John T. Post
   - Texas A&M (DSc) (now U. of Texas (DSc))
9. Steven G. Turner
   - SD State University Faculty
10. Kurt W. Meyer
    - University of Colorado (PhD)
11. Keith D. Noderer
    - GW/JIAFS (Prof)
12. Douglas M. Nark
    - GW/JIAFS (DSc) (now emp/Hampton Univ)
13. Vincenzo N. Iannacci
    - graduate school (?Purdue)
14. Kelly R. Laflin
    - NC State University (PhD)
15. Michael S. Warner
    - Georgia Tech (PhD)
16. Michael D. Cavanaugh
    - University of Minnesota (DSc)
17. Aimee D. Thornton
    - Arizona (DSc)
18. Justin H. Lan
    - University of Washington (DSc)
19. Eric N. Johnson
    - MIT (DSc)
20. Brooks P. Byam
    - Michigan State University (DSc)
21. David P. Lockard
    - Penn State University (DSc)
22. Loukas Papadopoulos
    - Vanderbilt University (DSc)
23. Michael Papadopoulos
    - Vanderbilt University (DSc)
24. Steven A. Smith
    - North Carolina A&T State Univ
25. Chau T. Tran
    - Stanford University (DSc)
26. Bonifacio R. Calayag
    - Cal Tech (DSc)
27. Howard S. Kanner
    - VPI&SU (@ NASA Langley)
28. Bradford E. Green
    - GW/JIAFS (DSc)
29. Christopher R. Tatnall
    - GW/JIAFS (Prof)
30. Francesco J. Cestero
    - Stanford University, Stanford, CA
31. Glenn P. Greiner
    - Embry Riddle Aeronautical Univ
32. Patrick N. Hinchy
    - GW/JIAFS (Prof)
33. Mia Kwak
    - GW/JIAFS (Prof)
34. Andrew T. Cochrane
    - Northwestern University (DSc)

**OTHER**

1. Michael J. Cooper
   - Microcraft, Hampton, VA
2. James E. Ferl
   - Unknown
3. Letia M. Drewry
   - Homemaker
4. Richard A. Caldwell
   - Own Business, Race Technology, FL
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<td>Miles O. Duquette</td>
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<td>Brian S. Levey</td>
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<td>Jacques Y. Clemenceau</td>
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GRSA - Departed prior to completing degree requirements but still enrolled (Registered for Sp 2000)

Parker, Jeffrey
Michael Benes
Kandyce Smith
Scott Anderson
Ronald R. Springer (DSc)

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Full Time GW Students

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<td>Rachel A. Jasinski</td>
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<td>SHOT, Inc. Floyd Knobs, IN</td>
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<td>Thomas Johnson A.</td>
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<td>Research Triangle Institute @NASA Langley</td>
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<td>3</td>
<td>Seiichi Kawabe (Prof)</td>
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<td>AEA Hyprotech, Japan</td>
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<td>Patrick D. Marsden</td>
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<td>Storm Control Systems, Inc, Herndon, VA</td>
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<td>Julie E. Collins</td>
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<td>Total Systems Services, Columbus, GA</td>
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<td>Paul G. Wilkin</td>
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