Money for Graduate Students in the Physical & Earth Sciences 2010-2012

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A List of Fellowships, Grants, Awards, and Other Funding Programs Set Aside to Support Graduate Study, Training, Research, and Creative Activities in the Physical & Earth Sciences and a Set of Five Indexes: Sponsor, Residency, Tenability, Subject, and Deadline.

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Reference Service Press (RSP) began in 1977 with a single financial aid publication *(The Directory of Financial Aids for Women)* and now specializes in the development of financial aid resources in multiple formats, including books, large print books, disks, CD-ROMs, print-on-demand reports, eBooks, and online sources. Long recognized as a leader in the field, RSP has been called, by the *Simba Report on Directory Publishing,* "a true success in the world of independent directory publishers." Both Military.com and Kaplan Educational Centers have hailed RSP as "the leading authority on scholarships."

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This is one of five volumes that make up
Reference Service Press's *Graduate Funding Set.*
The other four titles in the set are:

1) *Money for Graduate Students in the Arts & Humanities*
2) *Money for Graduate Students in the Biological Sciences*
3) *Money for Graduate Students in the Health Sciences*
4) *Money for Graduate Students in the Social & Behavioral Sciences*

Contents

Introduction

WHY THIS DIRECTORY IS NEEDED

Have you decided to get a graduate degree in the physical or earth sciences? Congratulations. You have made a wise decision. According to the U.S. Bureau of the Census, the average salary for a college graduate is around $46,000. But, this figure rises to more than $62,000 for master's degree recipients and to $89,000 or more for those with doctoral or professional degrees.

Getting a graduate education, however, is expensive. It can cost more than $25,000 to complete a master's degree and $100,000 or more to finish some doctoral or professional degrees. That's more than most students can afford to pay on their own.

Fortunately, there are billions of dollars available to support graduate study, training, research, and creative activities (writing, artistic works, etc.) in atmospheric sciences, aviation, chemistry, computer science, engineering, geology, mathematics, physics, space sciences, technology, and the rest of the physical and earth sciences. The challenge, of course, is to identify those opportunities.

In the past, it was difficult to find out about funding available to graduate students in the physical or earth sciences. Traditional financial aid directories didn't offer much assistance. For example, fewer than 250 funding programs specifically for graduate students in the physical and earth sciences are described in the now out-of-date *Graduate Scholarship Book* (Career Press). And, the *Directory of Research Grants* (Schoolhouse Partners) emphasizes research and creative activities (rather than study), is aimed at the professional and postdoctorate rather than the graduate student, and is arranged by program title (so, to identify any graduate listings, you would have to scan through all of the entries in the directory).

As a result, many graduate students in the physical and earth sciences (along with the counselors and librarians trying to serve them) were unaware of the nearly 900 fellowships, awards, and grants available to support graduate activities in these fields. Now, with the ongoing publication of *Money for Graduate Students in the Physical & Earth Sciences* that has all changed. Here, in one place, you can find out about the wide array of funding programs set aside to support graduate study, training, research, and creative activities specifically in the physical and earth sciences.

The unique value of *Money for Graduate Students in the Physical & Earth Sciences,* along with the other four volumes in RSP's Graduate Funding Set *(Money for Graduate Students in the Arts & Humanities, Money for Graduate Students in the Biological Sciences, Money for Graduate Students in the Health Sciences,* and *Money for Graduate Students in the Social & Behavioral Sciences),* has been highly praised by the reviewers. In fact, *Guide to Reference* labels *Money for Graduate Students in the Physical & Earth Sciences* the best available reference source, "because of its usefulness, breadth of scope, and unique information." And, *Choice* has called the entire set of five *Money* books not only "reasonably priced" and "highly recommended," but a "welcome addition" as well.

WHAT'S INCLUDED?

Money for Graduate Students in the Physical & Earth Sciences is unique. First of all, the directory only lists programs open to graduate students. Most other directories mix together programs for a number of groups—high school students, college students, graduate students, or even postdoctorates. Now, you won't have to spend your time sifting through programs that aren't aimed at you.

Second, only funding that graduate students in the physical and earth sciences can use is included. If a program doesn't support study, training, research, or creative activities in one or more of these fields,

it's not listed here. As a result, you can now turn to just one place to find out about the funding available to support graduate-level activities in atmospheric sciences, aviation, chemistry, computer science, engineering, geology, mathematics, physics, space sciences, technology, and the rest of the physical and earth sciences.

Third, only "free" money is identified. If a program requires repayment, charges interest, or requires service to avoid loan repayment (e.g., a forgivable loan or loan-for-service), it is not listed. Here's your chance to find out about billions of dollars in aid, knowing that not one dollar of that will ever need to be repaid (provided, of course, that stated requirements are met).

Next, only the biggest and best funding programs are covered in this book. To be listed here, a program has to offer at least $1,000 per year. Many go way beyond that, paying $20,000 or more annually, or covering the full cost of graduate school attendance.

In addition, many of the programs listed here have never been covered in other financial aid resources. So, even if you have checked elsewhere, you will want to look at *Money for Graduate Students in the Physical & Earth Sciences* for additional leads.

Plus, you can take the money awarded by these fellowships to any number of schools. Unlike other financial aid directories that often list large number of awards available only to students enrolled at one specific school, all of the entries in this book are "portable."

Finally, the directory has been designed to make your search as easy as possible. You can identify programs by purpose (study/training or research/creative activities), specific subject, sponsoring organization, program title, where you live, where you want to study or conduct your research, and deadline date. Plus, you'll find all the information you need to decide if a program is right for you: purpose, eligibility requirements, financial data, duration, special features, limitations, number awarded, and application date. You even get fax numbers, toll-free numbers, e-mail addresses, and web sites (when available), along with complete contact information.

In all, the directory identifies the 895 biggest and best sources of free money available to graduate students interested in study, training, research, or creative activities in the physical or earth sciences. All types of funding are covered, including:

- *Fellowships.* Programs that support study, training, and related activities at the graduate level in the United States.
- *Grants.* Programs that provide funding to support innovative efforts, travel, projects, creative activities, or research in the United States.
- *Awards.* Competitions, prizes, and honoraria granted in recognition of personal accomplishments, research results, creative writing, artistic activities, or other achievements. Prizes received solely as the result of entering contests are excluded.

WHAT'S EXCLUDED?

The focus of *Money for Graduate Students in the Physical & Earth Sciences* is on "portable" funding that can be used to support study, training, research, or creative activities in the physical/earth sciences at practically any graduate school in the United States. Excluded from this listing are:

- *Programs in other areas:* Only funding for the physical and earth sciences is covered here. If you are looking for money to support graduate study, training, research, or creative activities in other areas, use one of the other books in Reference Service Press's Graduate Funding Set: *Money for Graduate Students in the Arts & Humanities, Money for Graduate Students in the Biological Sciences, Money for Graduate Students in the Health Sciences,* or *Money for Graduate Students in the Social & Behavioral Sciences.*

SAMPLE ENTRY

(1) **[552]**

(2) **SRC GRADUATE FELLOWSHIP PROGRAM**

(3) Semiconductor Research Corporation
Attn: Global Research Collaboration
1101 Slater Road, Suite 120
P.O. Box 12053
Research Triangle Park, NC 27709-2053
(919) 941-9400 Fax: (919) 941-9450
E-mail: apply@src.org
Web: grc.src.org/member/about/aboutgfp.asp

(4) **Summary** To provide funding to doctoral students interested in preparing for a career in microelectronics.

(5) **Eligibility** This program is open to students who are working on or planning to work on a Ph.D. degree in microelectronics under the guidance of faculty members sponsored by the Semiconductor Research Corporation (SRC). Applicants must be performing research under a contract funded by the SRC and be willing to provide of copy of their Ph.D. thesis to the SRC. They must be U.S. citizens or have permanent resident, refugee, or political asylum status in the United States.

(6) **Financial data** The fellowship provides tuition, fees, a monthly stipend of $2,186, and travel to the SRC graduate fellowship annual conference. In addition, $2,000 per year is given to the university department with which the student recipient is associated.

(7) **Duration** 1 year; may be renewed up to 4 additional years.

(8) **Additional information** This program began in 1986. It is expected, although not required, that the fellows will complete the Ph.D. in an area relevant to microelectronics and will secure employment with an SRC member, U.S. government agency, or accredited 4-year U.S. college or university.

(9) **Number awarded** Varies each year; recently, 6 new fellows were appointed. Approximately 48 fellows are being supported at any given time. Since the program began in 1986, more than 200 fellows have participated in the program.

(10) **Deadline** February of each year.

DEFINITION

(1) **Entry number:** Consecutive number assigned to the references and used to index the entry.

(2) **Program title:** Title of scholarship, fellowship, grant, or award.

(3) **Sponsoring organization:** Name, address, and telephone number, toll-free number, fax number, e-mail address, and/or web site (when information was supplied) for organization sponsoring the program.

(4) **Summary:** Basic program requirements; read the rest of the entry for additional detail.

(5) **Eligibility:** Qualifications required of applicants and factors considered in the selection process.

(6) **Financial data:** Financial details of the program, including fixed sum, average amount, or range of funds offered, expenses for which funds may and may not be applied, and cash-related benefits supplied (e.g., room and board).

(7) **Duration:** Period for which support is provided; renewal prospects.

(8) **Additional information:** Any benefits, features, restrictions, or limitations (generally nonmonetary) associated with the program.

(9) **Number of awards:** Total number of recipients each year or other specified period.

(10) **Deadline:** The month by which applications must be submitted.

- *Programs not aimed at graduate students:* Even if a program focuses on the physical and earth sciences, it's not listed here if it is open only to a different category of students (e.g., undergraduates, postdoctorates) or if it is not specifically for graduate students (e.g., an essay contest on astronomy open to any adult).
- *School-based programs:* The directory identifies "portable" programs—ones that can be used at any number of schools. Financial aid administered by a single school solely for the benefit of its own graduate students is not covered. Write directly to the schools you are considering to get information on their offerings.
- *Money for study or research outside the United States:* Since there are comprehensive and up-to-date directories that describe all available funding for study and research abroad (see the list of titles on the inside of the front cover), only programs that support study or research in the United States are covered here.
- *Programs that exclude U.S. citizens or residents:* If a program is open only to foreign nationals or excludes Americans from applying, it is not included.
- *Very restrictive programs:* In general, programs are excluded if they are open only to a limited geographic area (less than a state) or available to a limited membership group (e.g., a local union or a tightly targeted organization).
- *Programs offering limited financial support:* The focus is on programs that can reduce substantively the cost of graduate education. Fellowships, grants, and awards must offer at least $1,000 per year or they are not covered here.
- *Programs that did not respond to our research inquiries:* Programs are included only if the sponsors responded to our research requests for up-to-date information (we never write program descriptions from secondary sources). Despite our best efforts (described below), some organizations did not supply information and, consequently, are not described in this edition of *Money for Graduate Students in the Physical & Earth Sciences.*

WHAT'S UPDATED?

The preparation of each new edition of *Money for Graduate Students in the Physical & Earth Sciences* involves extensive updating and revision. To make sure that the information included here is both reliable and current, the editors at Reference Service Press 1) reviewed and updated all relevant programs currently in our funding database and 2) searched exhaustively for new program leads in a variety of sources, including directories, news reports, newsletters, annual reports, and sites on the Internet. Since we only include program descriptions that are written directly from information supplied by the sponsoring organization, we check the sponsor's Internet site and/or send up to four collection letters (followed by up to three telephone inquiries, if necessary) to each sponsor identified in this process. Despite our best efforts, however, some sponsoring organizations still failed to respond and, as a result, their programs are not included in this edition.

The 2010-2012 edition of *Money for Graduate Students in the Physical & Earth Sciences* completely revises and updates the previous (sixth) edition. Programs that have ceased operations have been dropped. Similarly, programs that have changed their focus and no longer make awards to graduate students or to graduate students in the physical or earth sciences have also been removed from the listing. Profiles of continuing programs have been rewritten to reflect current requirements; more than 85 percent of continuing programs reported substantive changes in their locations, deadlines, or benefits since the last edition. In addition, more than 300 new entries have been added. The result is a listing of 895 fellowships, grants, and awards of interest to students in the physical and earth sciences looking for graduate school funding.

HOW THE DIRECTORY IS ORGANIZED

The directory is divided into two sections: 1) a detailed list of funding opportunities open to graduate students in the physical and earth sciences and 2) a set of indexes to help you pinpoint appropriate funding programs.

Money for Graduate Study or Research in the Physical and Earth Sciences. The first section of the directory describes 895 fellowships, grants, and awards open to graduate students in the physical and earth sciences. The programs listed are sponsored by federal and state government agencies, professional organizations, foundations, educational associations, social and religious groups, corporations, and military/veterans organizations. Programs for master's, doctoral, professional, and other graduate-level degrees are covered.

To help you tailor your search, the entries in this section are grouped into two main categories:

- **Study and Training.** Described here are 634 fellowships and other funding opportunities that support structured and unstructured study or training in the physical and earth sciences on the graduate school level, including formal academic classes, courses of study, research training, degree-granting programs, and other educational activities. Funding is available for all graduate-level degrees: master's, doctoral, and professional.
- **Research and Creative Activities.** Described here are 261 grants and awards that support graduate-level research and creative writing in the earth and physical sciences.

Each program entry in the first section of the guide has been prepared to give you a concise but clear picture of the available funding. Information (when available) is provided on organization address, telephone numbers (including fax and toll-free), e-mail address, web site, purpose, eligibility, money awarded, duration, special features, limitations, number of awards, and application deadline. The sample entry on page 7 illustrates and explains the program entry structure.

The information provided for each of the programs covered in this section was supplied by sponsoring organizations in response to questionnaires we sent through the beginning of 2010. While *Money for Graduate Students in the Physical & Earth Sciences* is intended to cover as comprehensively as possible the funding available to this group, some sponsoring organizations did not respond to our research inquiries and, consequently, are not included in this edition of the directory.

Indexes. To help you find the aid you need, we have included five indexes; these will let you access the listings by sponsoring organization, residency, tenability, subject, and deadline. These indexes use a word-by-word alphabetical arrangement. Note: numbers in the index refer to entry numbers, not to page numbers in the book.

Sponsoring Organization Index. This index makes it easy to identify the 700 agencies that offer funding for graduate-level study, training, research, or creative activities in the physical and earth sciences. Sponsoring organizations are listed alphabetically, word by word. In addition, we've used a code to help you identify the focus of the funding programs sponsored by these organizations: study/training or research/creative activities.

Residency Index. Some programs listed in this book are restricted to residents of a particular location. Others are open to students wherever they live. This index helps you identify programs available only to residents in your area as well as programs that have no residency restrictions.

Tenability Index. Some programs in this book can be used only in specific cities, counties, states, or regions. Others may be used anywhere in the United States (or even abroad). Use this index to find out what programs are available to support your activities in a particular geographic area.

Subject Index. Use this index when you want to identify graduate funding in the physical or earth sciences by specific subject (more than 250 are included in this index). To help you pinpoint your search, we've also included hundreds of "see" and "see also" references.

Calendar Index. Since most financial aid programs have specific deadline dates, some may have closed by the time you begin to look for funding. You can use the Calendar Index to identify which

programs are still open. This index is arranged by purpose (study or research) and divided by month during which the deadline falls. Filing dates can and quite often do vary from year to year; consequently, the dates in this index should be viewed as only approximations after the year 2012.

HOW TO USE THE DIRECTORY

Here are some tips to help you get the most out of the financial aid listings in *Money for Graduate Students in the Physical & Earth Sciences:*

To Locate Funding by Purpose. If you want to get an overall picture of the kind of graduate funding that's available to support either study/training or research/creative activities in the physical or earth sciences, turn to the appropriate category in the first section of the guide and browse through the listings there. Originally, we also intended to subdivide these two chapters by degree level. Once the compilation was complete, however, it became clear that few programs limited funding to either master's degree or doctoral degree students exclusively. Thus, further subdivision beyond 1) study or training and 2) research or creative activities would have been unnecessarily repetitious.

To Find Information on a Particular Financial Aid Program. If you know the name and primary purpose of a particular financial aid program, you can go directly to the appropriate category in the first section of the directory, where you'll find program profiles listed alphabetically by title.

To Browse Quickly Through the Listings. Turn to the section that matches your funding needs (study/training or research/creative activities) and read the "Summary" field in each entry. In seconds, you'll know if this is an opportunity that you might want to pursue. If it is, be sure to read the rest of the information in the entry, to see if you are able to meet all of the program requirements before contacting the sponsor for an application form.

To Locate Financial Aid Programs Sponsored by a Particular Organization. The Sponsoring Organization Index makes it easy to determine which groups are providing graduate funding (700 are listed here) and to identify specific financial aid programs offered by a particular sponsor. Each entry number in the index is coded to indicate purpose (study/training or research/creative activities), to help you target appropriate entries.

To Locate Financial Aid Based on Residency or Where You Want to Study/Conduct Your Research. Use the Residency Index to identify funding that has been set aside to support applicants from your area. If you are looking for funding to support activities in a particular city, county, state, or region, turn to the Tenability Index. Both of these indexes are subdivided by broad purpose (study/training and research/creative activities), to help you identify the funding that's right for you. When using these indexes, always check the listings under the term "United States," since the programs indexed there have no geographic restrictions and can be used in any area.

To Locate Financial Aid for Study or Research in a Particular Subject Area. Turn to the subject index first if you are interested in identifying available funding in a specific subject area (more than 250 different subject areas are indexed there). As part of your search, be sure to check the listings in the index under the heading "General programs;" that term identifies programs supporting activities in any subject area (although they may be restricted in other ways). Each index entry indicates whether the funding is available for study/training or for research/creative activities.

To Locate Financial Aid by Deadline Date. If you are working with specific time constraints and want to weed out financial aid programs whose filing dates you won't be able to meet, turn first to the Calendar Index and check the program references listed under the appropriate section (study/training or research/activities). Note: not all sponsoring organizations supplied deadline information, so not all programs are covered in this index. To identify every relevant financial aid program, regardless of filing dates, go to the first section and read through all the entries in the chapter that represents your interest (study/training or research/creative activities).

PLANS TO UPDATE THE DIRECTORY

This volume, covering 2010-2012, is the seventh edition of *Money for Graduate Students in the Physical & Earth Sciences.* The next biennial edition will cover 2012-2014 and will be released in early 2012.

OTHER RELATED PUBLICATIONS

In addition to *Money for Graduate Students in the Physical & Earth Sciences,* Reference Service Press publishes several other titles dealing with fundseeking, including the companion volumes: *Money for Graduate Students in the Arts & Humanities, Money for Graduate Students in the Biological Sciences, Money for Graduate Students in the Health Sciences,* and *Money for Graduate Students in the Social & Behavioral Sciences.* For more information on these and other related publications, you can 1) write to Reference Service Press' marketing department at 5000 Windplay Drive, Suite 4, El Dorado Hills, CA 95762; 2) call us at (916) 939-9620; 3) send us a fax at (916) 939-9626; 4) send us an e-mail message at info@rspfunding.com; or 5) visit us on the web: www.rspfunding.com.

ACKNOWLEDGEMENTS

A debt of gratitude is owed all the organizations that contributed information to this edition of *Money for Graduate Students in the Physical & Earth Sciences.* Their generous cooperation has helped to make the seventh edition of this publication a current and comprehensive survey of graduate funding for students in those disciplines.

ABOUT THE AUTHORS

Dr. Gail Schlachter has worked for more than three decades as a library educator, a library manager, and an administrator of library-related publishing companies. Among the reference books to her credit are the biennially-issued *Directory of Financial Aids for Women* and two award-winning bibliographic guides: *Minorities and Women: A Guide to Reference Literature in the Social Sciences* (which was chosen as an "Outstanding Reference Book of the Year" by *Choice)* and *Reference Sources in Library and Information Services* (which won the first Knowledge Industry Publications "Award for Library Literature"). She is the former editor of *Reference and User Services Quarterly,* was the reference book review editor of *RQ* for 10 years, is a past president of the American Library Association's Reference and User Services Association, and is currently serving her fifth term on the American Library Association's governing council. In recognition of her outstanding contributions to reference service, Dr. Schlachter has been named the University of Wisconsin School of Library and Information Studies "Distinguished Alumna of the Year" and awarded both the prestigious Isadore Gilbert Mudge Citation and the Louis Shores–Oryx Press Award.

Dr. R. David Weber taught history and economics at Los Angeles Harbor College (in Wilmington, California) for many years and continues to teach history as an emeritus professor. During his years of full-time teaching there, and at East Los Angeles College, he directed the Honors Program and was frequently selected as the Teacher of the Year." Dr. Weber is the author of a number of critically-acclaimed reference works, including *Dissertations in Urban History* and the three-volume *Energy Information Guide.* With Gail Schlachter, he is the author of Reference Service Press's award-winning *High School Senior's Guide to Merit and Other No-Need Funding* and a number of other financial aid titles, including *Financial Aid for Veterans, Military Personnel, and Their Dependents* and *Financial Aid for the Disabled and Their Families,* which was selected as one of the "Best Reference Books of the Year" by *Library Journal.*

Money for Graduate Students in the Physical & Earth Sciences

Study and Training ●

Research and Creative Activities ●