



Building Bridges

*The History and Success of VEF,
Linking the United States and Vietnam
Since 2003*

(2012 edition)

Preface

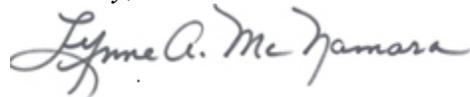
*As the Executive Director of the Vietnam Education Foundation (VEF), I am proud to present our summary of the history and accomplishments of VEF from 2003 to 2011, entitled **Building Bridges: The History and Success of VEF, Linking the United States and Vietnam Since 2003.***

Our success results from significant contributions made by many individuals and organizations in both Vietnam and the United States in the private, public, and governmental sectors. I wish to express our deepest gratitude to the friends of VEF for the support that they have provided over the years. I also would like to express my sincere thanks to the VEF Board of Directors for their positive and dynamic support. In particular, I wish to thank the VEF staff both in the United States and in Vietnam for their commitment and for their constant attention to quality, accuracy, and thoroughness.

For those of you who are new to VEF, I am confident that you will find this summary report an impressive statement about the ways in which VEF is building bridges between the United States and Vietnam through educational exchange. We are pleased with our remarkable achievements, which have been attained in a very short time.

I hope you enjoy reading about VEF. Please feel free to contact us at any time.

Sincerely,



*Lynne McNamara, Ph.D.
VEF Executive Director*

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Introduction

The Vietnam Education Foundation (VEF) was established by the U.S. Congress after the announcement of the bilateral agreement on scientific and technological cooperation, signed by former U.S. President Bill Clinton during his historic visit to Vietnam in 2000. According to the Vietnam Education Foundation Act of 2000, the VEF annual budget is \$5 million, with funding in place beginning in fiscal year 2001 and continuing through fiscal year 2018.

VEF began operations in 2003 and has enjoyed a high level of success in its many activities over the last nine years. This summary document briefly outlines the history of VEF and describes its mission, organization, activities, and vision for the future.

History

The following are milestones in the history of VEF (Table 1):

DATE	EVENT
December 2000	The Vietnam Education Foundation Act of 2000 (U.S. Public Law 106-554) was amended and passed by Congress.
April 2002	The first Board of Directors was elected. Mr. Herbert Allison (Chairman, President, and Chief Executive Officer of TIAA-CREF) was elected Chairman of the VEF Board of Directors in December 2002.
March 2003	The first Executive Director, Mr. Pham Duc Trung Kien, ¹ was appointed. VEF opened its headquarters in Arlington, Virginia.
Fall term 2003	The first cohort of 19 VEF Fellows began graduate studies in highly regarded U.S. research universities.
Fall 2003	The first gathering of VEF Fellows in the United States occurred when the 2003 cohort met in Washington, D.C., marking the beginning of the VEF annual conferences. At the request of VEF, the U.S. National Academies organized VEF annual conferences from 2003 until 2009, at which time VEF took over organizing the annual conference.
November 2003	The VEF overseas field office opened in Hanoi, Vietnam, staffed by Vietnamese contract employees.
April 2004	Dr. Phillip Griffiths of the Institute for Advanced Study in Princeton, N.J., was one of the first U.S. scientists sponsored by VEF to present a seminar in Vietnam, entitled <i>Building Science and Technology Capacity in Vietnam</i> . During his visit, he also discussed the creation of Centers of Excellence in Vietnam.

¹ Vietnamese names in this document are listed in the Vietnamese name order of last (family) name, followed by the middle name(s), and ending with the first (given) name, except for the VEF organizational chart, in which the names are listed in the English name order.

DATE	EVENT
February 2005	The U.S. Department of State authorized VEF as a designated sponsor of an Exchange Visitor Program.
June 2005	An official operating permit (license) from the Vietnam Ministry of Education and Training (MOET) was provided to VEF for its representative office in Vietnam.
June 2005	Prime Minister Phan Van Khai made his historic visit to the United States to meet President George W. Bush, and cited VEF as a means to encourage cultural and educational exchange between the United States and Vietnam.
July 2005	More than 100 high-quality U.S. universities joined the VEF Alliance ¹ in a cost-sharing arrangement to host VEF Fellows for graduate study.
August 2006	The first research report sponsored by VEF was completed: <i>Observations on Undergraduate Education in Computer Science, Electrical Engineering, and Physics at Select Universities in Vietnam</i> . Prof. Dr. Nguyen Thien Nhan, who was then the Vice Chairman of the People's Committee of Ho Chi Minh City, now Deputy Prime Minister, requested that VEF carry out this project and the related research.
November/ December 2006	VEF organized study tours at MOET's request for a MOET delegation, led by Prof. Dr. Nguyen Thien Nhan, then Minister of MOET, to visit Germany ² and the United States to observe high-quality universities as part of MOET's interest in establishing world-class universities in Vietnam.
January 2007	The second research report sponsored by VEF was completed: <i>Observations on the Current Status of Education in the Agricultural Sciences in Vietnam</i> .
February 2007	Vo Van Toi, Ph.D., was appointed the second Executive Director of VEF.
March 2007	MOET began emulating VEF's application and selection process, culminating in candidate interviews in August 2007, organized by VEF. The Vietnamese Government Overseas Scholarship Program, known as the 322 Program, is now known as the Vietnam International Education Development (VIED) program, under the direction of MOET.
April 2007	Nguyen Thi Thanh Phuong, Ph.D., was appointed as the first Country Director of the VEF overseas field office in Hanoi.
May 2007	The first cohort of 12 Visiting Scholars was selected to pursue postdoctoral self-designed professional development programs at U.S. universities for up to 12 months.
June 2007	For the first time, VEF senior leadership met with Prime Minister Nguyen Tan Dung, thus demonstrating the importance of the relationship between VEF and the Vietnamese government.

¹ As of November 2011, the VEF Alliance consisted of 109 leading U.S. universities that agree to share the educational costs for VEF Fellows in exchange for the opportunity to consider highly qualified Vietnamese talent for admission to graduate programs and to have the assistance of VEF to identify academic institutions and government entities in Vietnam of interest to the particular U.S. university.

² Rice University (Houston, Texas) had helped to establish a German university, which served as an example to MOET of how a U.S. university assists in such cooperative academic efforts with a foreign country.

DATE	EVENT
April 2008	VEF received a new operating permit from the Vietnamese government that provides VEF with tax-free Non-Return Official Development Assistance (ODA) status.
April 2008	The first cohort of four American professors was selected for the VEF U.S. Faculty Scholar Grants Program to teach at Vietnamese universities either on site or via videoconferencing during the 2008-2009 academic year.
August 2008	Marking the fifth year of interview panels in Hanoi and Ho Chi Minh City, U.S. scientists and experts organized by the U.S. National Academies interviewed VEF Fellowship candidates for the 2009 cohort.
December 2008	The first VEF Alumni Conference was organized by VEF in Hanoi for VEF Fellows and Visiting Scholars, who had returned to Vietnam.
November 2009	Lynne A. McNamara, Ph.D., was appointed as the third Executive Director of VEF.
January 2010	The 7th VEF Annual Fellows and Scholars Conference was the first VEF conference hosted by a VEF Alliance school, Rensselaer Polytechnic Institute (RPI), and co-organized with VEF. The theme was <i>Leaders of the Future: Entrepreneurs</i> . Each year on January 3-5, or at another appropriate time, VEF holds its annual conference at a different U.S. university.
January 2010	VEF successfully transferred its responsibilities for the Vietnam OpenCourseWare (VOCW) project as well as related software and hardware to MOET. VEF donated 15 servers dedicated to the VOCW project to 15 different Vietnamese universities. VEF, with the assistance of D&N International, ¹ facilitated the porting of the Creative Commons License into the Vietnamese language and law.
May 2010	At the invitation of the OpenCourseWare Consortium (OCWC), VEF co-hosted the 5th Annual OCWC Global Meeting (May 5-7) in Hanoi.
April 2011	At the request of former U.S. Ambassador Michael Michalak, VEF co-organized and co-sponsored, together with the U.S. Embassy in Hanoi and MOET, the 4th Annual Education Conference in Vietnam to strengthen higher education ties between the United States and Vietnam.
September 2011	VEF assumed full responsibility for administering in-house the application and selection process of its programs.

Table 1. Milestones in History of VEF

¹ D&N International is a law firm that VEF uses for legal consultation in Vietnam.

Mission

Compared to other international funding agencies, VEF is unique in that it is an independent government agency and reports directly to the President of the United States. The VEF mission, as indicated in the *Vietnam Education Foundation Act of 2000*, furthers the process of reconciliation and builds the bilateral relationship between the United States and Vietnam, thus serving the interests of both countries through education in the sciences (natural, physical, and environmental), mathematics, medicine, and technology (including information technology).

VEF focuses on providing scholarships and grants for Vietnamese and U.S. nationals. This activity is conceived as a transformative and cost-effective model that adheres to the VEF legislative mandate to develop highly skilled talent and leadership in science and technology for Vietnam.

The **VEF educational exchange programs** include:

1. **Fellowship Program**, bringing outstanding Vietnamese nationals to pursue graduate degrees at highly regarded U.S. universities with the goal of becoming leaders and pioneers in their fields.
2. **Visiting Scholar Program**, bringing exceptional Vietnamese postdoctoral educators and researchers to renowned U.S. universities for self-designed professional development programs of up to twelve months, thereby boosting their research and leadership capabilities in science and technology.
3. **U.S. Faculty Scholar Program**, offering American professors from U.S. universities the opportunity to teach at Vietnamese universities via videoconferencing or on site in Vietnam on topics in the fields supported by VEF. The VEF Faculty Scholar Program is developing sustainable educational and research programs in Vietnam as well as meaningful relationships between U.S. and Vietnamese institutions.

In building bridges between Vietnam and the United States, other VEF activities have addressed capacity building in Vietnam as one means to assist Vietnamese institutions and organizations as they work to upgrade their performance and capabilities to create favorable conditions for the return of VEF Fellows and Visiting Scholars to Vietnam. The capacity-building efforts of VEF have consisted of joint activities between the scientific and academic communities of Vietnam and the United States that share knowledge, skills, and resources in order to bring about change.

VEF has responded quickly and successfully to develop program and project models, suitable for U.S. academic institutions and for the academic, cultural, and socio-economic context of Vietnam. VEF's flexible infrastructure, efficient management, quality operations, and highly capable staff have all contributed to the rapidity of response. VEF has developed these models and is continuously evaluating their effectiveness, fine-tuning the details, and developing best practices. Quality and effectiveness remain top priorities for VEF in planning, implementing, and monitoring its programs and activities.

Organization

VEF is governed by a **Board of Directors** with thirteen members, including three U.S. Cabinet members, two U.S. Senators, two U.S. Representatives, and six presidential appointees. Current members as of November 2011 were:

- **Cabinet members:** Secretary of Education, Mr. Arne Duncan; Secretary of State, Ms. Hillary Rodham Clinton; and Secretary of Treasury, Mr. Timothy F. Geithner
- **Legislative members:** Senators Richard Blumenthal and David Vitter; Representatives Joseph R. Pitts and Loretta Sanchez
- **Presidential appointees:**
 - Mr. Christopher J. Fussner, Chairman, VEF Board of Directors, Owner & Founder, Trans Technology Pte Ltd.
 - Ms. Sandy Hoa Dang, Special Initiative Advisor, JBS International, Inc., and Change Management Consultant, Casey Family Programs
 - Mr. David Duong, CEO, California Waste Solutions
 - Ms. Marjorie Margolies, President, Women's Campaign International
 - Dr. Stephen F. Maxner, Director, Vietnam Center of Texas Tech University
 - Dr. Isaac F. Silvera, Professor, Harvard University

The **VEF Executive Director** is appointed by the Board of Directors and carries out the functions of the Foundation subject to the supervision and direction of the Board.

The headquarters of VEF is located in Arlington, Virginia, U.S.A., which is located in the Washington, D.C., area, with its field office in Hanoi, Vietnam. The following diagram, entitled VEF Organizational Chart, shows the organization of VEF and its current staff (Figure 1).

Vietnam Education Foundation Organizational Chart

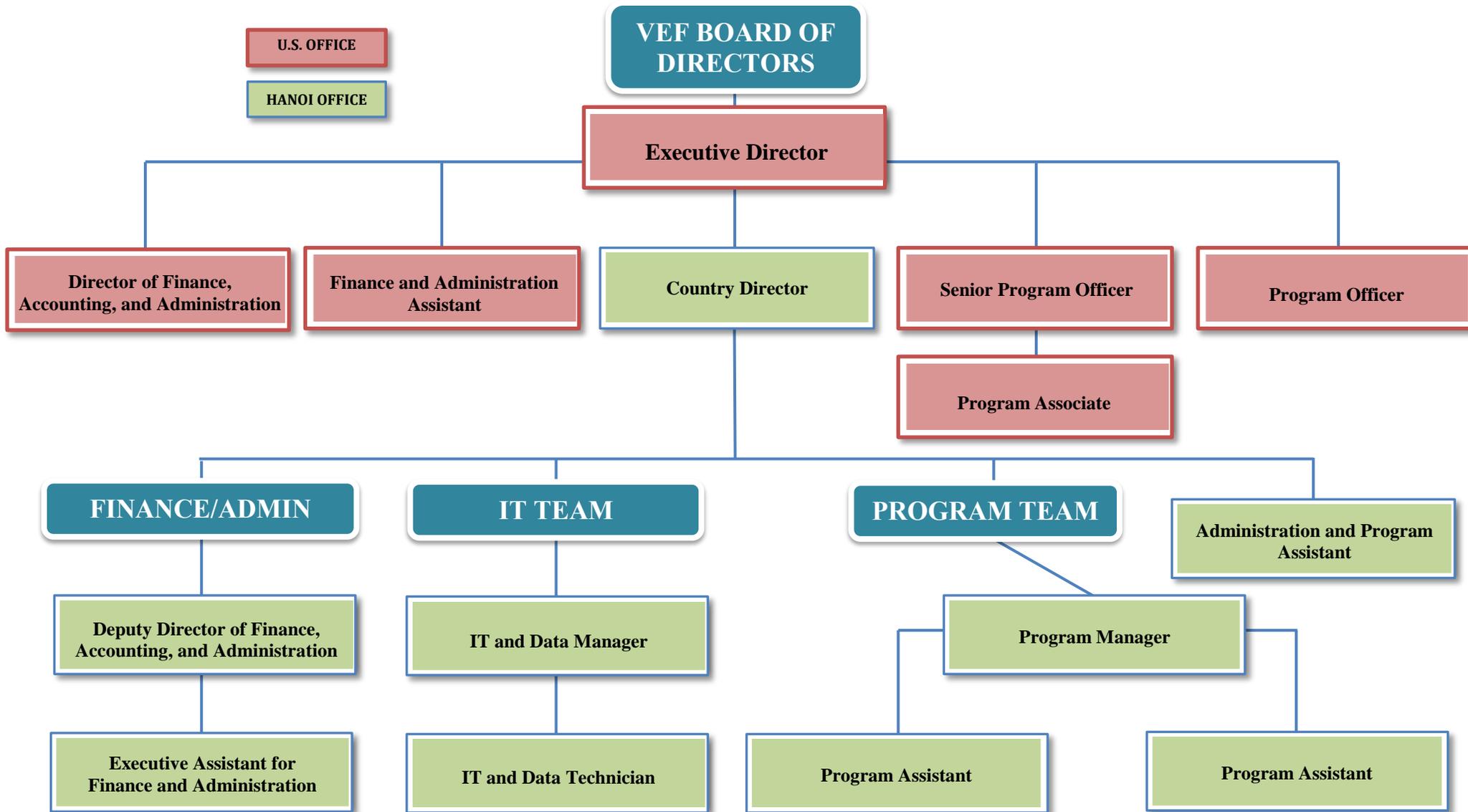


Figure 1. VEF Organizational Chart

Scholarships and Grants

Fellowship Program

As the flagship activity of VEF, which has been in effect since 2003, the VEF Fellowship Program creates opportunities for talented Vietnamese to become pioneers and leaders in their fields by pursuing graduate degrees at U.S. universities. VEF has designed a rigorous application and selection process to identify outstanding candidates. VEF assists the final nominees in applying to highly regarded U.S. universities. Fellows are chosen on the basis of individual merit, including academic performance, the potential for contributing to education and scientific research in their fields, and for bringing their knowledge and good will back to Vietnam. To facilitate relationships with U.S. universities, VEF established the VEF Alliance, a cost-sharing arrangement that includes 109 renowned U.S. research institutions. The following sections provide a summary of the VEF Fellowships programs, with accompanying supportive data, as of November 2011.

Application and Selection Process

The VEF Fellowship Program is not envisioned as a simple funding mechanism for graduate study in the United States. Instead, it aims to support talented and ambitious Vietnamese, who desire to contribute not only to the scientific and technological progress of Vietnam, but also to the VEF mission. To attract the best and brightest candidates, VEF has designed an open, competitive, and transparent application and selection process that provides confidence to U.S. universities about the highest quality applicants from Vietnam and that helps to build Vietnam's reputation in science, engineering, mathematics, medicine, and technology. Candidates must have an excellent academic record and significant professional and/or research experience. In addition, they must demonstrate a strong commitment to the development of Vietnam through their academic and research pursuits. The candidate is expected to be admitted to a renowned U.S. research university, which is well-known in the applicant's field.

The applicant can obtain a VEF Fellowship by applying through one of two processes, Process A or Process B. In Process A, after having succeeded in acquiring minimum required scores on standardized exams, specifically the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) and the Graduate Record Exam (GRE), applicants must demonstrate the ability to excel in the U.S. academic environment. They do so by passing a highly challenging oral exam and interview conducted in English by two renowned U.S. professors invited by VEF to Vietnam. The two U.S. professors, who serve on the subject-area review panel, provide an individualized letter of recommendation for each candidate that they consider to be worthy of receiving a VEF Fellowship. The letter may be used during the process of applying to U.S. universities.

After passing the oral exam/interview, the nominee, with support from VEF, applies to leading U.S. universities chosen by the candidate and confirmed or recommended by the U.S. professors during the interviews. These U.S. universities must belong to the VEF Alliance or must accept VEF's financial terms. After the candidate receives admission to one or more U.S. universities, VEF determines the best university for the candidate, taking into account the universities in which the candidate is most interested. The list of nominees is presented to the VEF Board of Directors, which selects the final list of Fellowship recipients, who have applied through Process A or Process B.

In Process B, the applicant must have already achieved admission to a U.S. university on their own. After passing a technical review conducted by prominent U.S. scientists and academics and a brief phone interview conducted by VEF staff to confirm sufficient English language and communication skills for success in graduate school, successful candidates are reviewed by the Selection Reviewer Committee of the VEF Board and then are recommended to the VEF Board of Directors to receive a VEF Fellowship award.

The VEF Fellowship Program is highly competitive. In the 2011 cohort Fellowship competition through Process A, 90 out of 290 initial registrants met the minimum requirements to continue to the technical review round. As a result of the technical review, 80 candidates were invited to the final stage of the competition, the oral exam/interview, to compete for a total of 45 Fellowships. During the 2011 cohort competition through Process B, 11 out of 174 initial registrants met the minimum requirements to continue to the next round, which was a technical review followed by a phone interview. Eight (8) were accepted as VEF Fellows. Thus, for the 2011 competition, a qualified individual had a 56% (45/80) chance of receiving a Fellowship through Process A and a 73% (8/11) chance of receiving a Fellowship through Process B.

To prepare Fellows for their new environment in the United States and to train them in leadership and team building, VEF organizes a Pre-Departure Orientation in June for the newly selected Fellows before their departure from Vietnam. The orientation seeks to hone the skills needed by Fellows to achieve success in academe, to ensure a smooth transition to the United States, and to enable them to join the VEF family.

MOET has recognized the success of the VEF Fellowship Program and is emulating the VEF application and selection process for its own scholarship program, known as the Vietnam International Education Development (VIED) Program, under the direction of MOET. In a collaborative effort and at the request of VIED, VEF has trained MOET staff on how to set up their own application and selection process, how to develop and use online electronic forms and files based on the VEF Online Management System (OMS), and how to manage systems and processes related to an overseas study program based on the VEF model. VEF's assistance to MOET in streamlining the VIED application and selection process is another bridge built between Vietnam and the United States.

VEF Alliance

In 2005, VEF established the VEF Alliance. More than one-hundred highly regarded U.S. universities that share its mission and that benefit from its success. The Alliance is open to other U.S. universities that provide at least a Master's program in the STEM¹ fields supported by VEF and that wish to join. Members of the VEF Alliance agree to provide a share of the educational costs in exchange for the opportunity to consider accepting highly qualified and talented Vietnamese students and academics for graduate programs and to receive support from VEF to identify academic institutions and governmental entities in Vietnam of interest to the particular U.S. university. VEF benefits from this relationship in many ways, including the cost-effective financial arrangement, which contributes to the efficiency of VEF program operations and conforms to the original legislative mandate to encourage U.S. universities to share in the costs of the exchange programs.

¹ Science, Technology, Engineering, Mathematics, and Medicine

The table below consists of 109 major research institutions across the United States constituting the VEF Alliance schools as of November 2011. Specific divisions/departments that participate in the Alliance are listed.

VEF ALLIANCE SCHOOLS (as of November 2011)		
#	University	Division/Department
1	Arizona State University	Ira A. Fulton School of Engineering
2	Binghamton University, the State University of New York	Graduate School
3	Boston College	Graduate School
4	Boston University	College of Engineering
5	Bradley University	Graduate School
6	Brandeis University	Graduate School
7	Brown University	Graduate School
8	California Institute of Technology	Graduate School
9	Carnegie Mellon University	Heinz School of Public Policy and Management
10	Case Western Reserve University	Biology; Chemistry; Civil Engineering; Epidemiology and Biostatistics; Macromolecular Science and Engineering; Materials Science and Engineering; Mathematics; Physics; Statistics
11	Catholic University	Graduate School
12	Clemson University	Graduate School
13	Colorado School of Mines	Graduate School
14	Colorado State University	Graduate School
15	Columbia University	School of Engineering and Applied Science
16	Cornell University	College of Agriculture and Life Sciences; School of Civil and Environmental Engineering
17	Duke University	Graduate School
18	Florida International University	Graduate School
19	Florida State University	Graduate School
20	Fordham University	Graduate School
21	Georgia State University	Graduate School
22	Gerstner Sloan-Kettering	Graduate School of Biomedical Sciences
23	Iowa State University	Graduate School
24	Johns Hopkins University	Whiting School of Engineering; Zanvyl Krieger School of Arts and Sciences
25	Kansas State University	Graduate School
26	Kent State University	Graduate School
27	Lehigh University	Graduate School
28	Louisiana State University Health Sciences Center	Graduate School
29	Loyola University Chicago	Graduate School
30	Michigan State University	Graduate School
31	Mississippi State University	Graduate School
32	North Carolina State University	Graduate School
33	Northeastern University	Graduate School
34	Northern Illinois University	Graduate School
35	Northwestern University	Graduate School
36	Oklahoma State University	Graduate School
37	Old Dominion University	Graduate School
38	Oregon State University	Graduate School
39	Pennsylvania State University	Graduate School
40	Princeton University	Graduate School

VEF ALLIANCE SCHOOLS (as of November 2011)		
#	University	Division/Department
41	Purdue University	Graduate School
42	Rensselaer Polytechnic University	Graduate School
43	Rice University	Graduate School
44	Rutgers University	Graduate School
45	Saint Louis University	Graduate School
46	Southern Illinois University at Carbondale	Graduate School
47	Stony Brook University, the State University of New York	Graduate School
48	Syracuse University	Graduate School
49	Temple University	Graduate School
50	Texas A&M University	Graduate School
51	Texas Tech University	Graduate School
52	Tulane University	Graduate School
53	University at Buffalo, the State University of New York	School of Engineering and Applied Sciences
54	University of Alabama at Birmingham	Graduate School
55	University of Arkansas at Fayetteville	Graduate School
56	University of California at Berkeley	Chemical Engineering; Chemistry; Comparative Biochemistry; Environmental Science, Policy and Management; Epidemiology; Logic and the Methodology of Science; Mathematics; Molecular and Biochemical Nutrition; Neuroscience; Nutritional Sciences and Toxicology; Physics; Plant and Microbial Biology; Vision Science; all College of Engineering departments
57	University of California at Davis	Graduate School
58	University of California at Irvine	Graduate School
59	University of California at Los Angeles	School of Engineering and Applied Sciences
60	University of California at Riverside	Graduate School
61	University of California at San Diego	Graduate School
62	University of California at San Francisco	Graduate Division
63	University of California at Santa Barbara	Graduate School
64	University of Colorado at Boulder	Graduate School
65	University of Colorado at Denver, Health Sciences Center	Graduate School
66	University of Connecticut	Graduate School
67	University of Delaware	Graduate School
68	University of Florida	School of Engineering
69	University of Georgia	Graduate School
70	University of Hawaii at Manoa	Graduate School
71	University of Houston	Graduate School
72	University of Idaho	Graduate School
73	University of Illinois at Urbana - Champaign	Graduate College
74	University of Iowa	Graduate School
75	University of Kansas	Graduate School
76	University of Kentucky	Graduate School
77	University of Louisville	Graduate School
78	University of Maine	Graduate School
79	University of Maryland at Baltimore	Graduate School
80	University of Massachusetts at Amherst	Graduate School
81	University of Michigan at Ann Arbor	College of Engineering (doctoral programs only)
82	University of Minnesota	Institute of Technology

VEF ALLIANCE SCHOOLS (as of November 2011)		
#	University	Division/Department
83	University of Mississippi	Graduate School, University of Mississippi; Medical Center (UMMC)
84	University of Missouri at Columbia	Graduate School
85	University of Nebraska at Lincoln	Graduate School
86	University of North Carolina at Chapel Hill	Graduate School (Except for Epidemiology Program)
87	University of North Carolina at Charlotte	Graduate School
88	University of North Texas	Graduate School
89	University of North Texas, Health Science Center at Fort Worth	Graduate School
90	University of Notre Dame	Graduate School
91	University of Oklahoma	Graduate School
92	University of Oregon	Graduate School
93	University of Pennsylvania	School of Arts and Sciences; School of Nursing
94	University of Rhode Island	Graduate School
95	University of Southern California	College of Letters, Arts and Sciences; Viterbi School of Engineering
96	University of Texas at Arlington	Graduate School
97	University of Texas at Austin	Graduate School
98	University of Texas at Houston	Graduate School of Biomedical Sciences
99	University of Toledo	Graduate School
100	University of Utah	Graduate School
101	University of Vermont	Graduate School
102	University of Virginia	Graduate School
103	University of Washington	Environmental and Occupational Health; Interdisciplinary Program in Pathobiology, Materials Science and Engineering
104	University of Wyoming	Graduate School
105	Virginia Commonwealth University	Graduate School
106	Virginia Polytechnic Institute and State University	Graduate School
107	Washington State University	Graduate School
108	Washington University in St. Louis	Graduate School
109	Yale University	Graduate School (doctoral programs only)

Table 2. 109 VEF Alliance Schools as of November 2011

Funding Arrangements

VEF provides an annual grant to the U.S. university of U.S. \$27,000 per Fellow for each of the first two years of graduate study. The university manages and supplements the VEF grant funds to cover all required tuition, fees, health/medical insurance, books and equipment, and a monthly stipend for 12 months, which must be equivalent to whatever is paid to a graduate student in the designated department. Through a graduate assistantship or other means, the university must fully support a VEF doctoral Fellow from the third year. Each Fellow also receives U.S. \$1,000 per year as a Professional Development Grant (PDG) to use for professional purposes, provided that the Fellow is enrolled full-time and is not involved in Academic Training (an off-campus employment benefit of the J-1 visa status). VEF provides this annual grant to the university, and the university disburses it to the Fellow.

Fellowship Program Statistics

The following tables and charts provide summary data on all VEF Fellows as of November 2011 and address the following: numbers in each cohort; U.S. universities enrolling VEF Fellows; fields that VEF Fellows are pursuing in graduate study as well as specialties in engineering; gender; degrees sought/received (master's or doctorate); age; region of origin in Vietnam; and professional publications through 2011. Included in this summary report is an analysis of VEF Fellows who have graduated, including the employment status of alumni who have returned to Vietnam and the employment situations and positions of Fellows, who are pursuing Academic Training before returning to Vietnam.

Numbers in Each Cohort

From March 2003 through the fall term 2011, VEF has supported 378 VEF Fellows, consisting of 9 separate cohorts, placed in graduate programs at 80 top-tier U.S. research universities, which are listed further below. A cohort is defined as a group of Fellows, who begin graduate studies in the United States together in the same year, which is identified in the table below according to the fall term of that academic year. The numbers in the VEF Fellowship cohorts are summarized in Table 3.

COHORT YEAR	NUMBER OF VEF FELLOWS
2003	19
2004	81
2005	47
2006	37
2007	40
2008	38
2009	38
2010	35
2011	43
TOTAL	378

Table 3. Numbers of VEF Fellows by Cohort

U.S. Universities Enrolling VEF Fellows

While VEF Fellows apply on their own to U.S. universities, VEF provides financial support for applications to five recommended universities. VEF pays for the following: the review of each Fellow's statement of purpose for the university application; GRE Subject Tests, if required by the university; submissions to the universities of standardized test score results; and application fees, if required by non-VEF Alliance universities. To date, 80 American universities have enrolled VEF Fellows since 2003 (Table 4).

#	U.S. UNIVERSITY ENROLLING VEF FELLOW(S)
1	Arizona State University
2	Auburn University
3	Boston University
4	Bradley University
5	Brown University
6	California Institute of Technology
7	Carnegie Mellon University
8	Case Western Reserve University
9	Clark University
10	Clemson University
11	Columbia University
12	Cornell University
13	Duke University
14	Emory University
15	Florida State University
16	Georgia Institute of Technology
17	Indiana University
18	Iowa State University
19	Johns Hopkins University
20	Massachusetts Institute of Technology
21	Memorial Sloan-Kettering Cancer Center
22	Michigan State University
23	New York University
24	Northeastern University
25	Northwestern University
26	Ohio University
27	Oklahoma State University
28	Old Dominion University
29	Pennsylvania State University
30	Princeton University
31	Purdue University
32	Rensselaer Polytechnic Institute
33	Rice University
34	Rutgers University

#	U.S. UNIVERSITY ENROLLING VEF FELLOW(S)
35	Stanford University
36	State University of New York at New Paltz
37	Texas A&M University
38	Toyota Technological Institute at Chicago
39	Tufts University
40	University at Buffalo, the State University of New York
41	University of Alabama at Birmingham
42	University of Arizona
43	University of Arkansas at Fayetteville
44	University of California at Berkeley
45	University of California at Davis
46	University of California at Los Angeles
47	University of California at Riverside
48	University of California at San Diego
49	University of California at Santa Barbara
50	University of Colorado at Denver, Health Sciences Center
51	University of Delaware
52	University of Florida
53	University of Georgia
54	University of Hawaii at Manoa
55	University of Houston
56	University of Illinois at Chicago
57	University of Illinois at Urbana - Champaign
58	University of Iowa
59	University of Maryland at College Park
60	University of Massachusetts at Amherst
61	University of Michigan at Ann Arbor
62	University of Minnesota
63	University of Missouri at Columbia
64	University of North Carolina at Chapel Hill
65	University of Notre Dame
66	University of Oklahoma
67	University of Pennsylvania
68	University of Pittsburgh
69	University of South Florida
70	University of Southern California
71	University of Texas at Austin
72	University of Texas at Houston
73	University of Utah
74	University of Virginia
75	University of Washington
76	University of Wisconsin at Madison

#	U.S. UNIVERSITY ENROLLING VEF FELLOW(S)
77	Virginia Commonwealth University
78	Virginia Polytechnic Institute and State University
79	Washington State University
80	Yale University

Table 4. U.S. Universities Enrolling VEF Fellows

Fields Represented

Fields of study of VEF Fellows are grouped into eight broad fields as in Figure 2 below. The eight fields in numerical order from highest participation to lowest participation on average since 2003 are:

1. Engineering (39%)
2. Computer Sciences (18%)
3. Biological and Biomedical Sciences (11%)
4. Physical Sciences (10%)
5. Public Health (10%)
6. Mathematical Sciences (6%)
7. Agriculture (4%)
8. Natural Resources (2%)

Interestingly, the number of Fellows studying in the broad field of Biological and Biomedical sciences has risen from 0% of the 2003 cohort to 21% of the 2011 cohort. The field of Public Health has held at around 10% of VEF Fellows in recent years.

All VEF Fellows by Field of Study

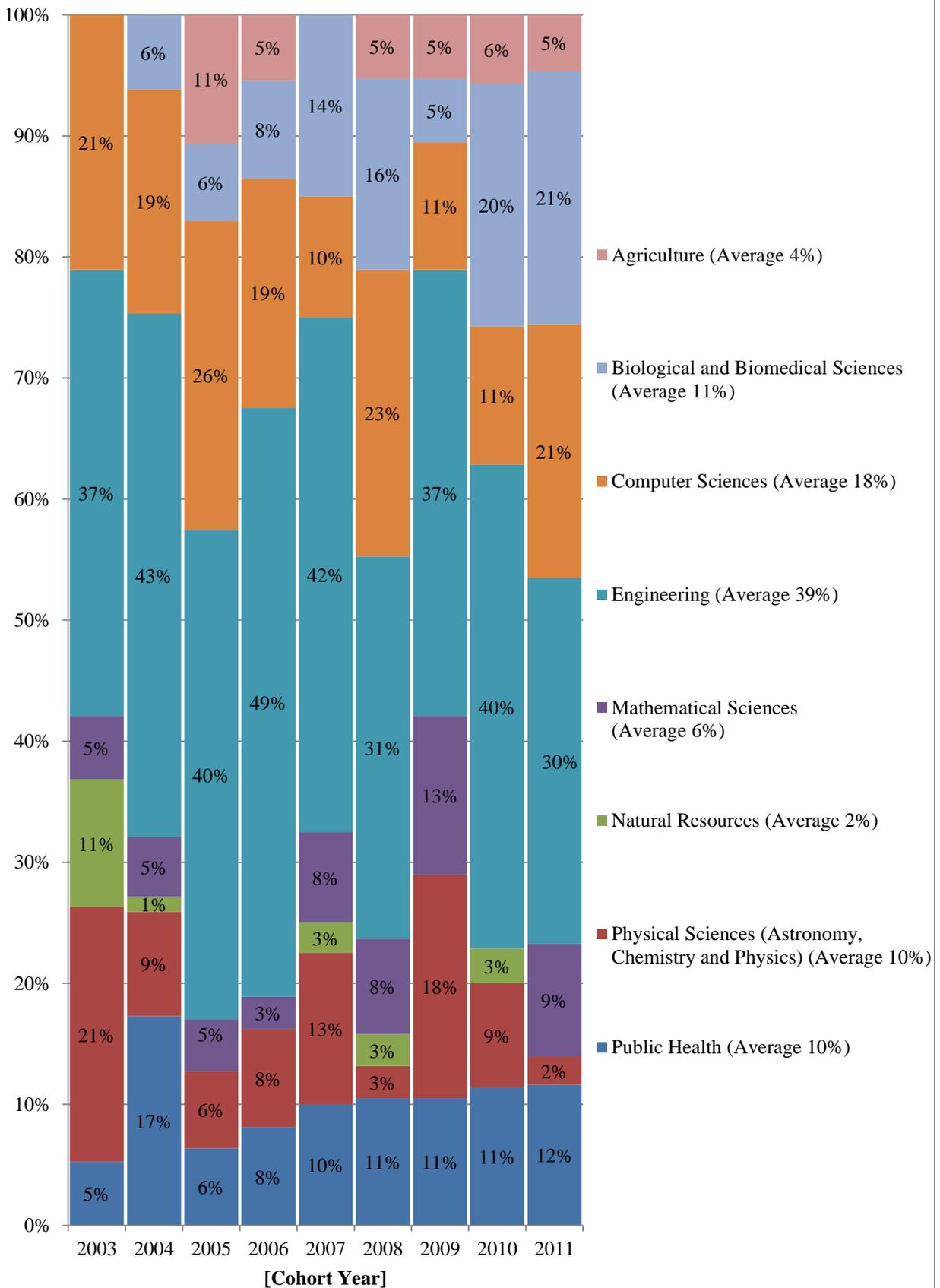


Figure 2. All VEF Fellows by Field of Study

Specialties in Engineering

Since Engineering is the major field of study of VEF Fellows (39%: 149 Fellows out of a total of 378 Fellows), an analysis of the various Engineering specialties is informative. Computer, Electrical, and Electronics Engineering is the primary specialty, averaging 40% of all Fellows in Engineering, followed by Civil Engineering (25%), Mechanical Engineering (12%), and then Chemical Engineering (7%). (Figure 3)

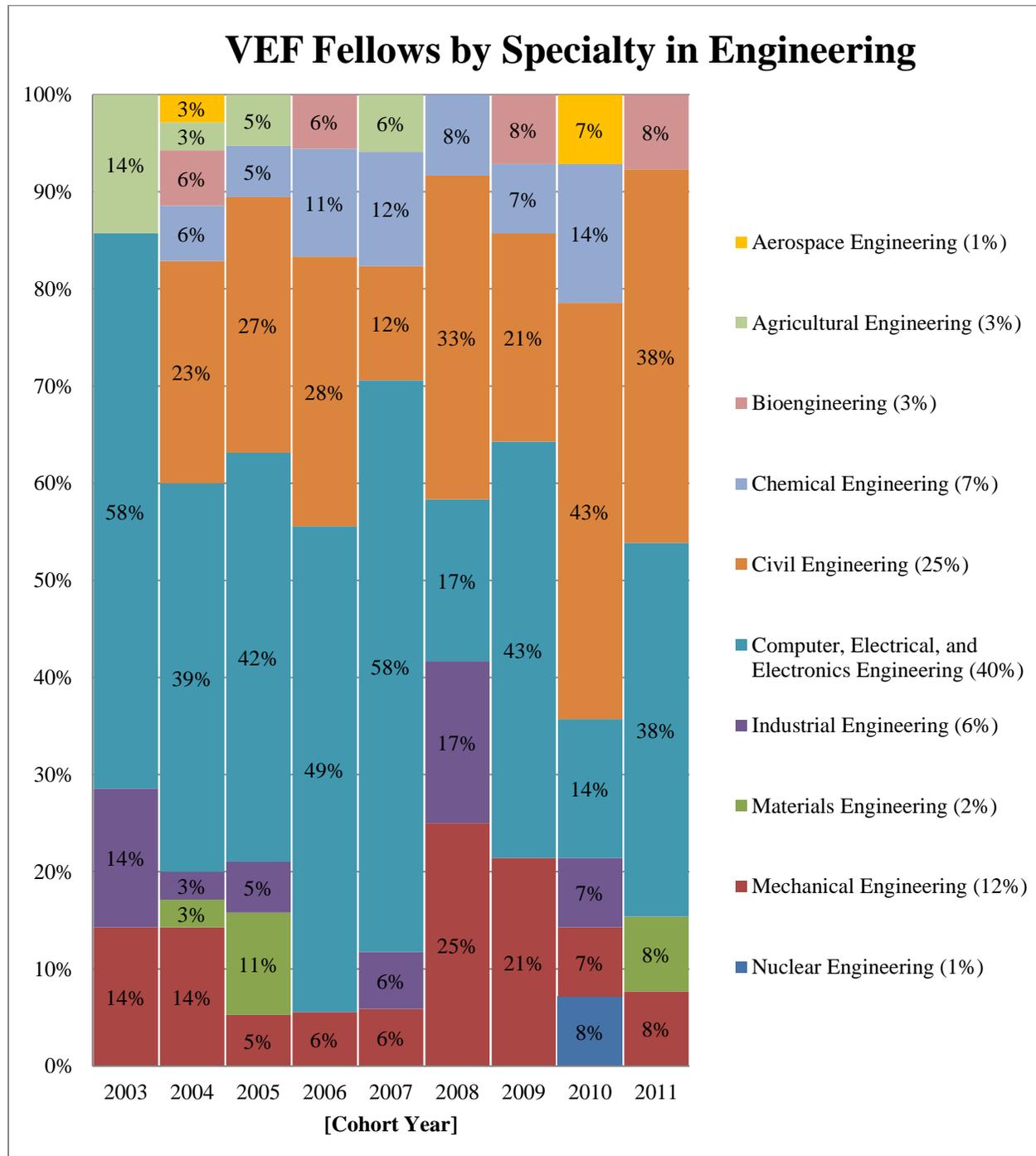


Figure 3. All VEF Fellows by Specialty in Engineering

Gender

Overall, the breakout by gender for VEF Fellows is 71% male and 29% female, but the percentages vary from year to year. Although there are fewer women than men in each VEF Fellowship cohort, the number of female Fellows has increased significantly, from 5% in 2003 to more than 30%, beginning in 2008 (Figure 4). This change is in line with VEF efforts to increase the number of underrepresented groups among VEF Fellows. In recent years, priority has been given to female VEF applicants, provided that all other qualifications are equal.

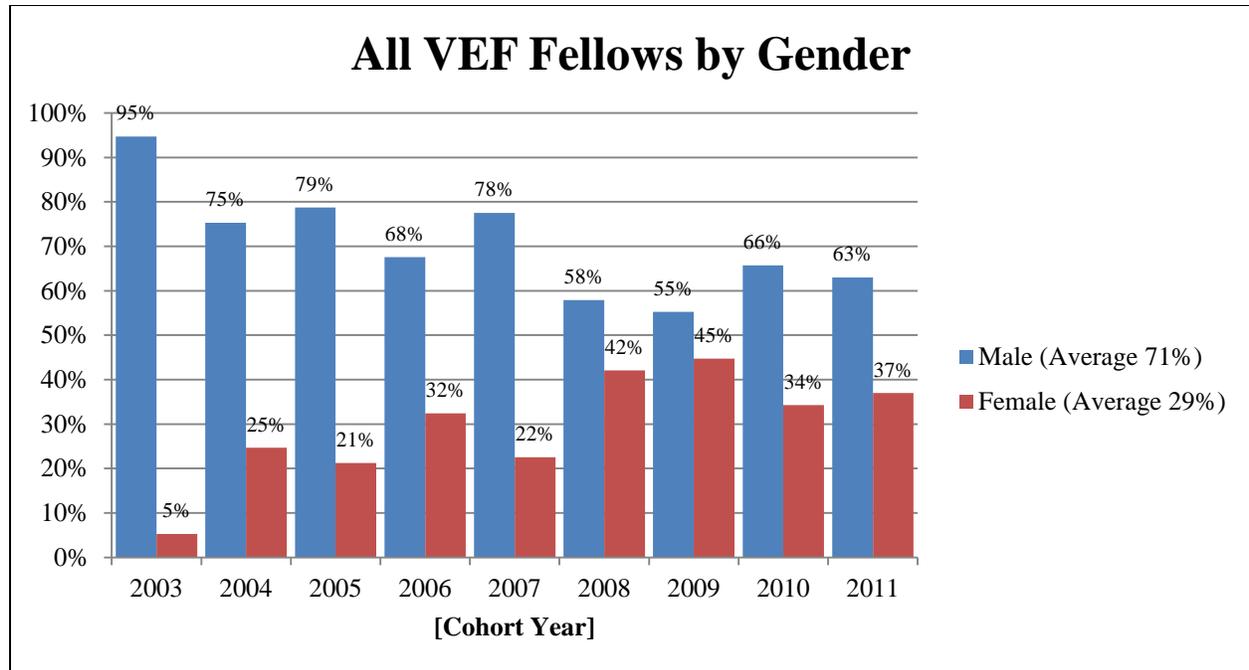


Figure 4. All VEF Fellows by Gender

Degree Sought/Received

The table below analyzes the degrees sought or received by all 378 VEF Fellows. As of November 2011, 157 Fellows have completed their degree programs. One hundred and one (101) Fellows received doctoral degrees and 56 have received master's degrees. The remaining 221 current Fellows are pursuing their graduate degrees, which are identified as Degree Sought. Only eight (8) current Fellows are pursuing a master's degree, while 213 current Fellows are pursuing a doctoral degree. Fellows admitted to a M.S./Ph.D. degree are listed below as pursuing a Ph.D. because the doctoral degree is their intention.

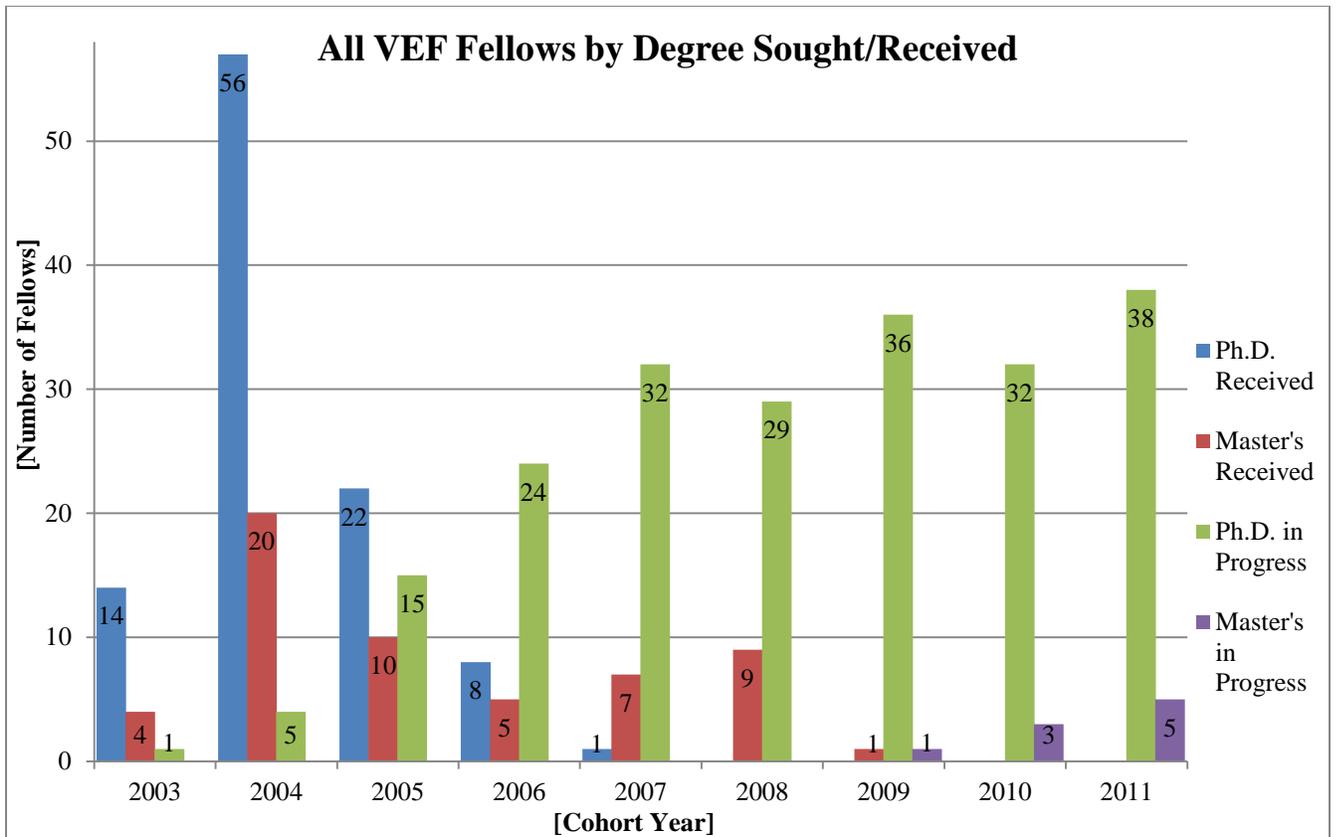


Figure 5. All VEF Fellows by Degree Sought/Received

Age

Among all Fellows, the majority received VEF Fellowship awards when 21 to 26 years of age (72%), while 18% were in the 27 to 30 year range, with 10% older than 30. The youngest age group increased from 53% in 2003 to 87% in 2008, and while decreasing somewhat in recent years, most Fellows were selected when they were 21 to 26 years old (Figure 6).

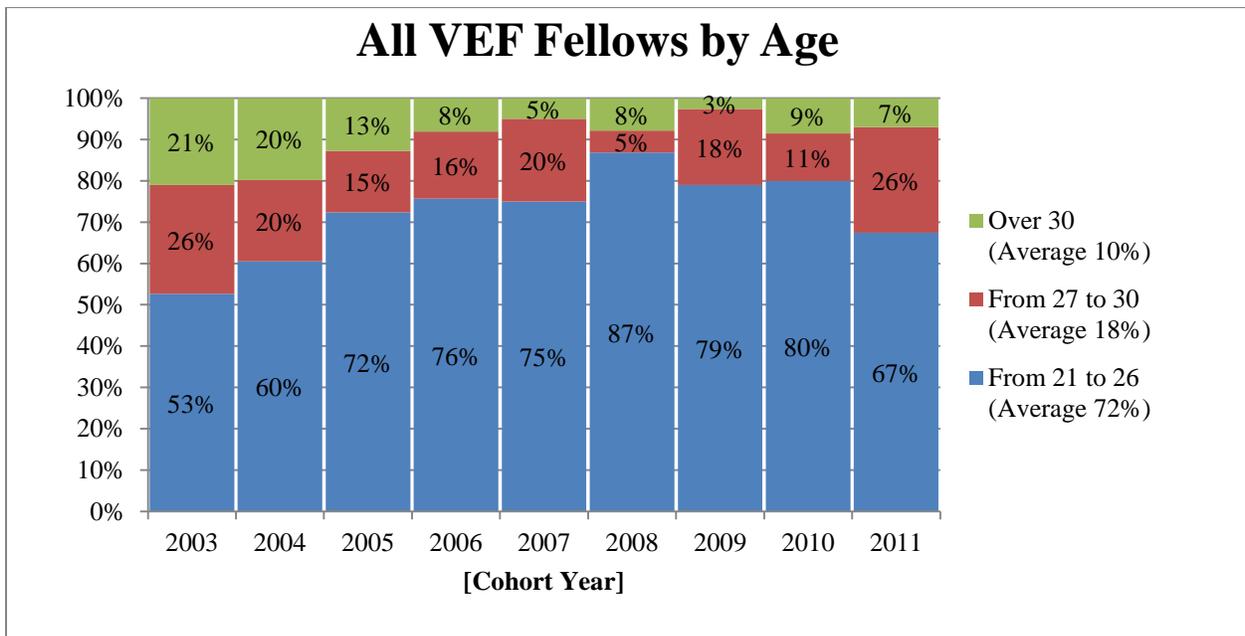


Figure 6. All VEF Fellows by Age

Origin in Vietnam

Vietnam can be divided into three regions (North, Center, and South), according to the Statistics Directory of 2009, issued by the General Statistics Office of Vietnam. The North includes the Red River Delta (11 provinces) and Northern mountainous areas (14 provinces). The Center includes the Northern Central areas and coastal areas in the Center (14 provinces) and the Highlands (5 provinces). The South includes the South Eastern areas (6 provinces) and the Mekong Delta (13 provinces).

The place of origin in Vietnam is determined by the place of birth. For those Fellows who were born overseas, the official place of residence according to the Vietnamese ID card after returning to Vietnam is used. While the distribution has varied from year to year, the overall majority of Fellows (58%) are from the North, while the remaining 42% are from the Center (23%) and the South (19%) (Figure 7). Since 2008, the number of Fellows from both the Center and the South has increased significantly. VEF has made a strong effort to achieve equal representation of Fellows throughout the country by extensive outreach activities in the Center and the South and by giving priority to applicants from these two regions, provided that all other qualifications are equal.

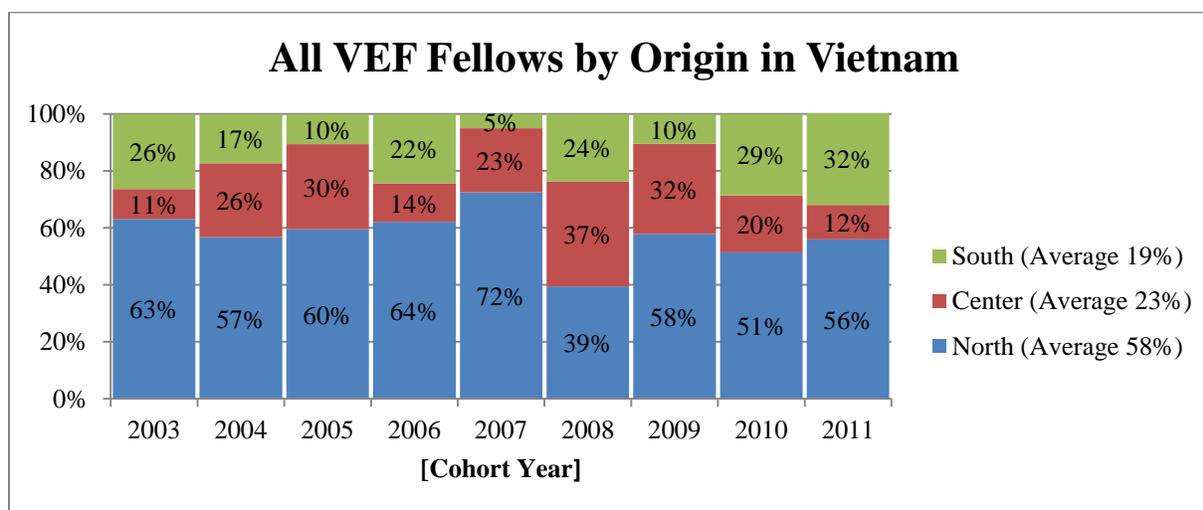
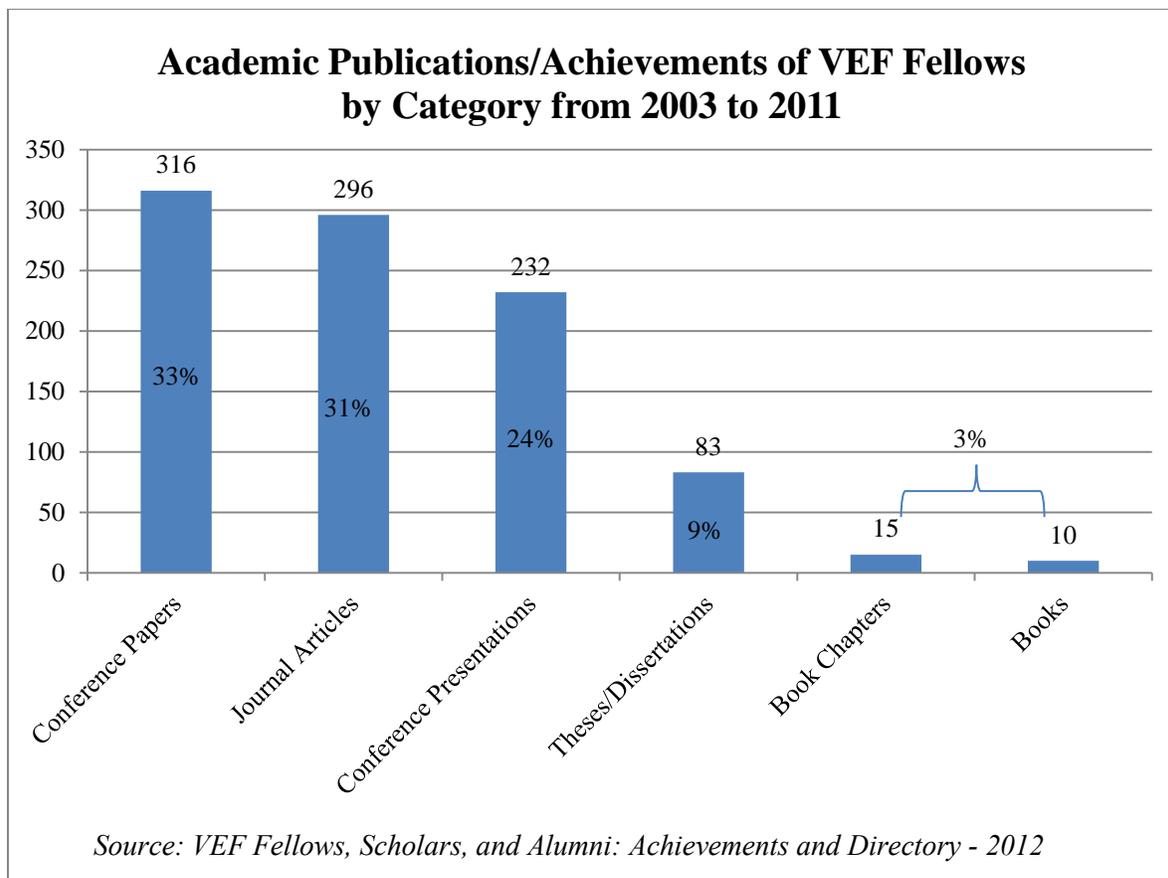


Figure 7. All VEF Fellows by Origin in Vietnam

Academic Publications of VEF Fellows

VEF Fellows have achieved laudable results in terms of professional publications that are categorized into 6 types: books, book chapters, conference papers, conference presentations, journal articles, and theses/dissertations. Conference papers make up the largest portion of total publications, 316 papers in nine years, from 2003 to 2011, equivalent to 33% of all publications. Journal articles account for 296 publications (equal to 31%), while 232 conference presentations (24%) occurred, and 83 (9%) theses/dissertations were completed. The number of book chapters and books is modest, consisting of less than 25 (3%), which is not surprising for academics in STEMM fields (Figure 8). In short, from 2003 to 2011, VEF Fellows have produced an impressive number of academic achievements, most of which are conference papers and journal articles. A VEF publication entitled “VEF Fellows, Scholars and Alumni: Achievements and Directory - 2012”, which is published online at the VEF website: https://oms.vef.gov/achievement_and_directory/index.php, describes the achievements of VEF awardees in detail.



**Figure 8. Academic Publications/Achievements of VEF Fellows
by Category from 2003 to 2011**

Academic Training

VEF encourages Fellows to pursue Academic Training (AT) after degree completion, an activity that provides additional professional experience and opportunities and that helps VEF Fellows to develop their skills beyond their core academic studies. Furthermore, Fellows on AT strengthen their ties with U.S. experts in their fields, whether in academia or in other sectors, before returning to Vietnam, so that the chances of maintaining contact with U.S. colleagues and continuing collaborations with them are increased. The maximum time allowed for AT for cohorts 2003 – 2009 was 18 months for those who finished a master’s degree and 36 months for those who completed a doctoral degree. For cohorts 2010 and beyond, the time permitted for AT after both master’s and doctoral degree program completion is 18 months. VEF Fellows agree to return to Vietnam for at least two years after completing their academic program and subsequent AT in the United States.

Table 5 below lists in alphabetical order the names of 70 U.S academic institutions or companies that have hosted 76 Fellows, who have pursued post-graduate AT since 2006 when the first Fellow completed his degree program and pursued an AT position. These 76 Fellows have held 89 different positions, the majority of which (63%) are within the academic sector while the rest (37%) are in the corporate sector. The red number in brackets in the table below represents the number of Fellows having the same position in the same academic institution or corporate entity.

**Organizations and Educational Institutions Hosting Fellows
for Academic Training in the United States**

#	U.S. HOST ORGANIZATION, LOCATION	POSITION
1	Adecco/Thomson Reuters, New York, NY	Software Engineer
2	Advanced Research Institute, Arlington, VA	Postdoctoral Associate
3	Airvana Company, Chelmsford, MA	Software Engineer
4	Argonne National Laboratory, Argonne, IL	Postdoctoral Appointee
5	Armored Computing Inc., Champaign, IL	Software Engineer
6	Army Research Laboratory, Adelphi, MD	Postdoctoral Researcher
7	Auburn University, Auburn, AL	Postdoctoral Research Fellow
8	Baylor College of Medicine, USDA/ARS Children's Nutrition Research Center, Houston, TX	Postdoctoral Associate [2]
9	Bloomberg L.P., New York, NY	Financial Software Developer
10	Brown University, Providence, RI	(1) Postdoctoral Research Associate (2) Research Assistant
11	Bytemobile Inc., Champaign, IL	Software Engineer in Multimedia Networking
12	California Institute of Technology, Pasadena, CA	Postdoctoral Scholar
13	Caterpillar Champaign Simulation Center, Champaign, IL	Postdoctoral Staff Engineer
14	Caterva Inc., Champaign, IL	Lead Technical Engineer
15	Cazoodle Inc., Champaign, IL	Lead Software Engineer
16	Colorado School of Mines, Golden, CO	Postdoctoral Fellow
17	Columbia Center for Computational Learning Systems, New York, NY	Volunteer Research Assistant
18	Columbia University, New York, NY	Ritt Assistant Professor
19	Deccan International, San Diego, CA	Operations Research Developer
20	Dentex Corporation, Philadelphia, PA	General Dentist Associate
21	General Motors, Warren, MI	(1) Materials Engineer/Researcher (2) Postdoctoral
22	Golder Associates Inc., Atlanta, GA	Geotechnical Engineer
23	Google Inc., Mountain View, CA	Software Engineer [2]
24	GT Solar, Merrimack, NH	Electrical Engineer

**Organizations and Educational Institutions Hosting Fellows
for Academic Training in the United States**

#	U.S. HOST ORGANIZATION, LOCATION	POSITION
25	Herrero Contractors Inc., San Francisco, CA	Virtual Design and Construction Technician
26	Intel Corporation, Folsom, CA	Product Engineer
27	International Business Machines (IBM) Research, Hawthorne, NY	Postdoctoral Researcher
28	Iowa State University, Ames, IA	Postdoctoral Researcher
29	Jax Kneppers Associates Inc., Walnut Creek, CA	Construction Consultant
30	Johns Hopkins University, Baltimore, MD	(1) Postdoctoral Fellow (2) Postdoctoral Researcher
31	Middlebrook and Louie Structural Engineers, San Francisco, CA	Design Engineer
32	Moffatt and Nichol, Walnut Creek, CA	Structural Engineering Design Analyst
33	National Institute of Standards and Technology, Gaithersburg, MD	Research Associate
34	National Institutes of Health (NIH), Bethesda, MD	Postdoctoral Visiting Fellow
35	Northeastern University, Boston, MA	Postdoctoral Research Associate
36	Northwestern University, Evanston, IL	Postdoctoral Researcher
37	Oak Ridge National Laboratory, Oak Ridge, TN	Postdoctoral Researcher
38	Palantir Technology, Palo Alto, CA	Software Engineer: Simulation
39	Penridge Dental Associates, Sellersville, PA	General Dentist Associate
40	Pennsylvania State University, State College, PA	Postdoctoral Scholar
41	Quantum Dynamic Inc., McLean, VA	Electrical Engineer
42	Research In Motion Corporation, Irving, TX	Technical Staff Member
43	Rhode Island Hospital, Providence, RI	Postdoctoral Research Associate [2]
44	SAC Capital Advisors LLC., Stamford, CT	Developer
45	Samsung Information Systems America Inc., Irvine, CA	Senior Research Engineer
46	Sandia National Laboratories, Albuquerque, NM	Postdoctoral Appointee
47	Scientific Computing and Imaging Institute, Salt Lake City, UT	Postdoctoral Research Fellow
48	Secureworks, Atlanta, GA	Quality Assurance Engineer
49	Sigma Designs, Milpitas, CA	Design Engineer
50	Smilebuilderz LLC., Lancaster, PA	General Dentist Associate
51	Sony Electronics Inc., San Jose, CA	Senior Engineer
52	Stanford Research Institute (SRI) International, Menlo Park, CA	Computer Scientist
53	Stanford University, Stanford, CA	Postdoctoral Scholar [4]

Organizations and Educational Institutions Hosting Fellows for Academic Training in the United States		
#	U.S. HOST ORGANIZATION, LOCATION	POSITION
54	Stevens Institute of Technology, Hoboken, NJ	Research Assistant
55	Tervela Inc., New York, NY	Consultant
56	University of California at Davis, Davis, CA	Postdoctoral Scholar
57	University of Illinois at Urbana - Champaign, Urbana, IL	(1) Postdoctoral Research Associate (2) Software Engineer (3) Specialist (4) Visiting Research Assistant Professor (5) Visiting Research Associate
58	University of Maryland at College Park, College Park, MD	Research Associate
59	University of Massachusetts at Amherst, Amherst, MA	Postdoctoral Fellow
60	University of Michigan at Ann Arbor, Ann Arbor, MI	(1) Postdoctoral Fellow (2) Postdoctoral Researcher (3) Research Fellow
61	University of Minnesota, Saint Paul, MN	Postdoctoral Researcher
62	University of Nebraska at Lincoln, Lincoln, NE	Postdoctoral Research Associate
63	University of New Mexico, Albuquerque, NM	Postdoctoral Fellow
64	University of North Carolina at Chapel Hill, Chapel Hill, NC	Postdoctoral Research Associate
65	University of South Florida, Tampa, FL	Postdoctoral Researcher
66	University of Texas at Houston, MD Anderson Cancer Center, Houston, TX	Postdoctoral Fellow [2]
67	University of Texas at Houston, School of Public Health, Houston, TX	(1) Graduate Assistant (2) Postdoctoral Fellow (3) Postdoctoral Research Fellow
68	University of Virginia, Charlottesville, VA	(1) Postdoctoral Research Associate (2) Research Associate
69	Virginia Commonwealth University, Richmond, VA	Postdoctoral Fellow
70	Virginia Polytechnic Institute and State University, Blacksburg, VA	Postdoctoral Associate

**Table 5. Organizations and Educational Institutions Hosting VEF Fellows
for Academic Training in the United States**

VEF Fellowship Alumni

As of November 2011, 119 Fellows had completed their degree program and AT, which represents 31% of all Fellows (119/378) as of that date. The degrees obtained are as follows: 63 doctorates (53%) and 56 master's degrees (47%). The graduates are pursuing various interests, which can be summarized as follows:

- 101 (86%) are working in different sectors, specifically: 40 (39%) are working in the corporate sector; 35 (35%) are working the academic and research sector; 11 (11%) are working in the development sector; 12 (12%) are heading their own private companies or are self-employed; and 3 (3%) are working in the civil service sector.
- 12 (9%) are continuing onto doctoral programs with other sources of funding.
- 4 (3%) have just returned to Vietnam and are pursuing employment opportunities.
- 2 (2%) are currently in the United States on J-2 status (spouse of a J-1 student).

The chart and tables that follow present further data on the VEF Fellowship alumni, including the types of employment (academic, civil service, corporate, development, or self-employment sectors), and the universities/institutes where VEF alumni are pursuing their doctoral programs with other sources of funding.

Employment Sectors of VEF Fellowship Alumni

Of 101 alumni who are employed, the majority (39% or 40 alumni) work in the corporate sector while 35% (35) hold positions in the academic and research sector. Twelve (12 or 12%) head their own private companies or are self-employed, eleven (11 or 11%) work in the development sector, and three (3 or 3%) work in the civil service sector (Figure 9).

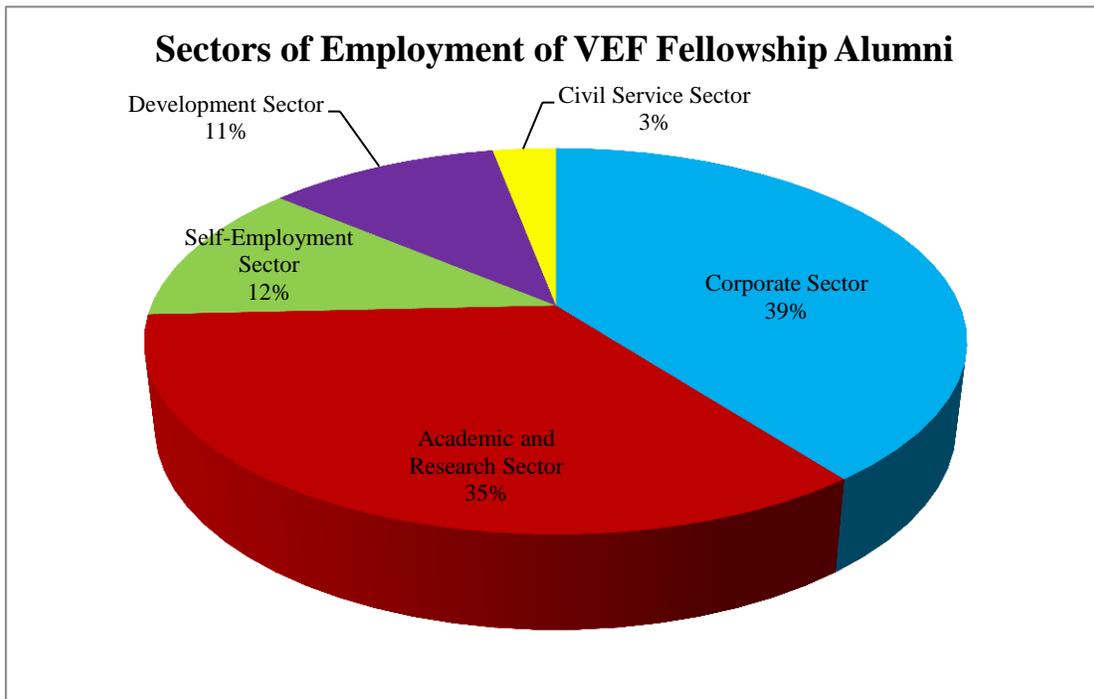


Figure 9. Sectors of Employment of VEF Fellowship Alumni

The VEF Alumni have attained significant positions (see the tables below) in the corporate, academic, and development sectors, and some are self-employed or are working in the civil service sector. A brief analysis precedes each table, summarizing the degrees obtained and the location of employment. Numbers listed in red in brackets indicate the number of VEF Fellowship Alumni with that title at that organization.

CORPORATE SECTOR EMPLOYMENT

Of the 40 VEF Alumni working in the corporate sector, the majority (68%) obtained a master's degree while (32%) received a Ph.D. in the United States. Table 6 below lists in alphabetical order the 36 companies and corporations where VEF Alumni work.

Corporate Sector Employment of VEF Fellowship Alumni		
#	COMPANY/CORPORATION, LOCATION	POSITION/TITLE
1	Avalue Vietnam, Hanoi	Vice General Director
2	Cazoodle, Inc., Hanoi	Chief Technology Officer and Director of Cazoodle@VN
3	Dell Company, Atlanta, Georgia, U.S.A.	Quality Assurance Leader
4	Dry Dispersible Powder (DDP) Materials Company Ltd., Ho Chi Minh City	Vice Managing Director
5	Environmental Resources Management (ERM) (an international consultancy firm), Ho Chi Minh City	Consultant
6	Finmatech Ltd., London, England	Managing Director
7	French Electricity Company (EDF), Paris, France	Research Engineer
8	Global Link Vietnam, Ho Chi Minh City	Marketing and Public Relations Manager
9	Go.vn Website, Vietnam Television Corporation (VTC) Online Joint Stock Company, Hanoi	Vice Director
10	Hewlett-Packard (HP) Vietnam, Ho Chi Minh City	Senior Software Engineer
11	Hong Kong Shanghai Banking Corporation (HSBC) Vietnam	Project Manager and Business Partner
12	Integrated Electronics and Communications Joint-stock Company, Hanoi	Vice Director
13	Intel Products Vietnam, Ho Chi Minh City	(1) Engineer (2) Industrial Engineer [2]
14	International Business Machines Corporation (IBM) Vietnam, Ho Chi Minh City	Bid Manager
15	Life Technology, Inc., Carlsbad, California, U.S.A.	Senior Engineer
16	Mai Thu Printing Ltd. Company, Ho Chi Minh City	Vice Director
17	Market and Society Joint-stock Company, Hanoi	Director

Corporate Sector Employment of VEF Fellowship Alumni		
#	COMPANY/CORPORATION, LOCATION	POSITION/TITLE
18	M-Service Joint-stock Company, Ho Chi Minh City	Vice President of Business Development
19	Nata Technology Ltd., Hanoi	Senior Consulting Engineer
20	Nuvixa Vietnam Company, Ho Chi Minh City	Deputy Director of Research and Development
21	Orient Biofuels Company, Ho Chi Minh City	Technical Manager
22	PetroVietnam Automation and Information Technology Company, Hanoi	(1) Deputy Manager of Software Department (2) General Director and CEO
23	PetroVietnam Automation and Information Technology Company, Ho Chi Minh City	Deputy Chief Engineer
24	PetroVietnam Oil and Gas Group, Hanoi	Control and Instrumentation Engineer
25	Siemens Ltd. Vietnam, Ho Chi Minh City	IT Engineer
26	Siemens Water Technologies, Sydney, Australia	Process Development Engineer
27	Thomas Leung Structural Engineering, Inc., Vancouver, Canada	Senior Structural Engineer
28	Thornton Tomasetti, Ho Chi Minh City	Representative in Vietnam
29	Total Building Systems Ltd. Company, Ho Chi Minh City	General Manager
30	Turner International LLC - Turner Construction Company, Hanoi	Commercial Engineer
31	Vietserve Technology, Ho Chi Minh City	Assistant General Manager
32	VietSoftware International Incorporated (VSII), Hanoi	Project Manager
33	VinaProjects Ltd., Hanoi	Deputy Project Manager
34	VNDirect Securities Corporation, Ho Chi Minh City	Director
35	VNG Corporation, Ho Chi Minh City	(1) Research Manager (2) Vice President of Web Business
36	Vsilicon Joint-stock Company, Hanoi	Integrated Circuit (IC) Design Engineer

Table 6. Corporate Sector Employment of VEF Fellowship Alumni

ACADEMIC AND RESEARCH SECTOR EMPLOYMENT

As of November 2011, 35 VEF Alumni work in the academic and research sector. 54% (19) work as faculty members in universities and 46% (16) work in research institutions or organizations. Table 7 below is organized alphabetically by the name of the academic institution or research institute.

Academic and Research Sector Employment of VEF Fellowship Alumni		
#	ACADEMIC INSTITUTION/RESEARCH INSTITUTE, LOCATION	POSITION/TITLE
1	<i>Center for Interventions, Treatment, and Addictions Research (CITAR)</i> , Project of University of Texas at Houston - School of Public Health, Ho Chi Minh City	Postdoctoral Research Fellow
2	Eastern International University, Binh Duong	Lecturer
3	Florida Gulf Coast University, Fort Myers, Florida, U.S.A.	Assistant Professor
4	Hanoi Medical University, Hanoi	Vice Chair, Histology and Embryology Department
5	Hanoi Obstetrics and Gynecology Hospital, Hanoi	Head, Department of Research and Training
6	Hanoi University of Civil Engineering, Hanoi	Lecturer
7	Hanoi University of Science and Technology, Hanoi	Lecturer [2]
8	Ho Chi Minh City University of Medicine and Pharmacy, Ho Chi Minh City	Lecturer
9	Ho Chi Minh City University of Science, Vietnam National University, Ho Chi Minh City	Lecturer [3]
10	Institute of Hygiene and Public Health, Ho Chi Minh City	Researcher
11	International University, Vietnam National University, Ho Chi Minh City, Department of Applied Chemistry, School of Biotechnology, Ho Chi Minh City	Lecturer [2]
12	National Institute of Hygiene and Epidemiology, Hanoi	Research Scientist
13	Nong Lam University, Ho Chi Minh City	Lecturer
14	Pennsylvania State University, State College, Pennsylvania, U.S.A.	Postdoctoral Researcher
15	Princeton University, Princeton, New Jersey, U.S.A.	Lecturer

Academic and Research Sector Employment of VEF Fellowship Alumni		
#	ACADEMIC INSTITUTION/RESEARCH INSTITUTE, LOCATION	POSITION/TITLE
16	Program in Periodontics and Implantology, Temple University, Philadelphia, Pennsylvania, U.S.A.	Researcher
17	School of Health Sciences and Sansom Institute for Health Research, Social Epidemiology and Evaluation Research Group, Adelaide, Australia	Research Fellow
18	School of Public Health, University of Texas at Houston, Department of Health Promotion and Behavioral Sciences, Houston, Texas, U.S.A.	Statistical Consultant
19	Singapore Institute of Manufacturing Technology, Singapore	Research Scientist
20	Swiss Federal Institute of Technology (ETHZ), Institute of Theoretical Computer Science, Zurich, Switzerland	Postdoctoral Fellow
21	Tan Tao University, Long An	Lecturer
22	Technion - Israel Institute of Technology, Haifa, Israel	Visiting Fellow
23	University of Bristol, Department of Engineering, Bristol, England	Research Assistant
24	University of Leicester, Department of Geography, Leicester, England	Research Associate
25	University of Melbourne, Department of Chemical and Bio-Molecular Engineering, Melbourne, Australia	Postdoctoral Research Fellow
26	University of Science, Vietnam National University, Hanoi	(1) Lecturer (2) Researcher
27	University of Southampton, Southampton, England	Lecturer
28	University of Toronto, Toronto, Canada	Lecturer
29	University of Twente, Enschede, the Netherlands	Postdoctoral Scholar
30	University of Ulsan, Department of Mathematics, Ulsan, Korea	Visiting Assistant Professor

Table 7. Academic and Research Sector Employment of VEF Fellowship Alumni

DEVELOPMENT SECTOR

As of November 2011, eleven (11) VEF Alumni are working in the development sector at seven (7) non-governmental organizations, as shown in the table below (Table 8).

Development Sector Employment of VEF Fellowship Alumni		
#	ORGANIZATION, LOCATION	POSITION/TITLE
1	Elizabeth Glaser Pediatric AIDS Foundation, Washington, D.C., U.S.A.	Monitoring and Evaluation Officer
2	Family Health International Vietnam, Hanoi	(1) Manager (2) Senior Program Officer (3) Technical Specialist and Senior Program Officer
3	Higher Engineering Education Alliance Program, Ho Chi Minh City	Country Manager
4	Institute of Social and Medical Studies, Hanoi	(1) Director (2) Founder and Vice Director
5	United Nations Children's Fund (UNICEF) Vietnam, Hanoi	Health Policy Specialist
6	United Nations Development Program Vietnam, Hanoi	(1) Head of Inter-Agency Unit (2) United Nations Volunteer Specialist in Statistics and IT
7	United Nations Population Fund, Hanoi	Program Analyst (HIV Prevention)

Table 8. Development Sector Employment of VEF Fellowship Alumni

SELF-EMPLOYMENT SECTOR

As of November 2011, twelve (12 or 12%) VEF Fellowship Alumni head their own private companies or are self-employed. Six (6) have established their own companies (shown in Table 9), while six (6) are working as free-lancers.

Self-Employment of VEF Fellowship Alumni		
#	ORGANIZATION, LOCATION	POSITION/TITLE
1	EQuest Academy, Hanoi	CEO
2	LEAD Consulting Company, Hanoi	CEO
3	Nuvixa Vietnam Company, Ho Chi Minh City	Co-founder and Director
4	OC TECH Joint-stock Company, Hanoi	CEO
5	Omega Mart, Hanoi	CEO
6	Techburg Joint-stock Company, Hanoi	CEO

Table 9. Self-Employment of VEF Fellowship Alumni

CIVIL SERVICE SECTOR

As of November 2011, three VEF Alumni work in the civil service sector, comprising three percent (3%) of the total. All of them obtained a Ph.D. in the United States and hold important positions in government agencies in Vietnam, as shown in the table below (Table 10).

Civil Service Sector of VEF Fellowship Alumni		
#	AGENCY, LOCATION	POSITION/TITLE
1	Ho Chi Minh City Department of Science and Technology, Ho Chi Minh City	Specialist
2	Ministry of Agriculture and Rural Development, Information Center for Agriculture and Rural Development, Institute of Policy and Strategy for Agriculture and Rural Development, Hanoi	Vice Director
3	Vietnam Ministry of Health, Hanoi	Specialist

Table 10. Civil Service Sector of VEF Fellowship Alumni

VEF Fellowship Alumni Continuing onto Doctoral Programs with Other Sources of Funding

As of November 2011, 12 VEF Fellowship Alumni are pursuing doctoral programs with other sources of funding. Ten of them (83%) are pursuing doctoral programs at universities in the United States (shown in Table 11) while two (17%) are in doctoral programs in Switzerland. Table 11 below lists in alphabetical order the 9 universities/institutes where VEF Alumni are continuing onto their doctoral programs with other sources of funding.

Doctoral Programs Pursued by VEF Fellowship Alumni		
#	UNIVERSITY/INSTITUTE, LOCATION	PROGRAM/FIELD OF STUDY
1	Carnegie Mellon University, Pittsburgh, Pennsylvania, U.S.A.	Computer Science
2	Georgia Institute of Technology, Atlanta, Georgia, U.S.A.	(1) Electrical and Computer Engineering (2) Pharmaceutical and Biomedical Sciences
3	Stevens Institute of Technology, Hoboken, New Jersey, U.S.A.	Chemical Engineering
4	Swiss Federal Institute of Technology (ETHZ), Zurich, Switzerland	(1) Chemistry (2) Information Technology and Electrical Engineering
5	University of California at Irvine, Irvine, California, U.S.A.	(1) Earth System Science (2) Electrical and Computer Engineering
6	University of Illinois at Urbana-Champaign, Urbana-Champaign, Illinois, U.S.A.	Electrical Engineering
7	University of Massachusetts at Amherst, Amherst, Massachusetts, U.S.A.	Computer Science
8	University of Minnesota, Minneapolis, Minnesota, U.S.A.	Computer Science
9	University of Texas Health Science Center, Houston, Texas, U.S.A.	Epidemiology

Table 11. Universities/Institutes where VEF Alumni are continuing onto their doctoral programs

Visiting Scholar Program

The VEF Visiting Scholar Program was established in 2007 for Vietnamese nationals who already hold a doctorate in fields supported by VEF, including science, mathematics, medicine, engineering, and technology. The Visiting Scholar Program invigorates leadership development in education by helping researchers and educators from Vietnamese academic institutions and research institutes to improve their professional skills and research knowledge in highly regarded U.S. universities. The Visiting Scholar pursues a self-designed program for five to twelve months. This may include formal courses, workshops, seminars, laboratory and field research, and other types of professional development activities. Upon returning to Vietnam, the Visiting Scholar must train others using the knowledge and skills acquired in the United States. Thus, this postdoctoral endeavor has a multiplying effect as a training-of-trainers (TOT) program.

Selection of Visiting Scholar (VS) applicants is highly competitive and based on the following criteria:

- ✓ Academic and professional merit of the candidate
- ✓ Quality of the proposed professional development program
- ✓ Expected outcomes
- ✓ Breadth of the proposed TOT activities upon return to Vietnam
- ✓ Potential of future contributions to Vietnam

The U.S. host institution must formally accept the Visiting Scholar's proposed professional development plan and provide logistical support, while financial support is not expected. The applicant's home institution in Vietnam must allow the Visiting Scholar to be absent during the proposed period of time to pursue the professional development program in the United States. After a technical review by prominent U.S. scientists and professors, applicants with the highest recommendation of the review panel will be interviewed by telephone.

VEF has awarded 32 Visiting Scholar grants since 2007. The numbers in each cohort are summarized in Table 12.

COHORT YEAR	NUMBER OF VEF VISITING SCHOLARS
2007	12
2008	7
2009	7
2010	3
2011	3¹
TOTAL	32

Table 12. Numbers of VEF Visiting Scholars by Cohort

A quick sketch of the demographics of the 2007-2011 cohorts of Visiting Scholars shows that the Visiting Scholars are primarily from the northern region of Vietnam and in the age group of 36-45. Here is a brief summary of the five cohorts of Visiting Scholars:

- The primary fields of specialization are agriculture, biological and biomedical sciences, engineering, and physical sciences.
- Most (62%) are male, while 38% are female.
- Their regions of origin in Vietnam are distributed as follows: 59% from the North and the remaining 41% from the Center (22%) and the South (19%).

¹ One will defer to Academic Year 2012-2013.

- The ages of Visiting Scholars range from 26 to 63 years old. The majority (41%) are in the age group between 36 and 45 while the youngest age group (26 to 35 years old) comprises 34%, and the 46 to 63 age group makes up 25%.

U.S. Faculty Scholar Program

To meet the requirements of the VEF legislation, the U.S. Faculty Scholar Program was established in late 2007 with three main goals:

1. To help build capacity in Vietnam in science, mathematics, medicine, engineering and technology through teaching and related research activities.
2. To help Vietnamese institutions address specific educational needs, including curriculum development, integration of research opportunities, identification of student learning outcomes, and evaluation.
3. To build positive relationships between U.S. and Vietnamese higher education institutions and faculty members that may lead to sustainable partnerships.

The U.S. Faculty Scholar teaches courses in English at Vietnamese universities either on site in Vietnam or by interactive, real-time videoconferencing from the United States. In the latter model, the U.S. Faculty Scholar must go to Vietnam at the beginning and the end of the course for at least one week each time. VEF is the organizer and sponsor of this project while the Faculty Scholars work in cooperation with the Vietnamese and U.S. institutions. VEF invites renowned U.S. scientists and academics to conduct the technical review of qualified proposals and recommends finalists for a final telephone interview, which is conducted by U.S. professors or former U.S. Faculty Scholars and senior VEF staff.

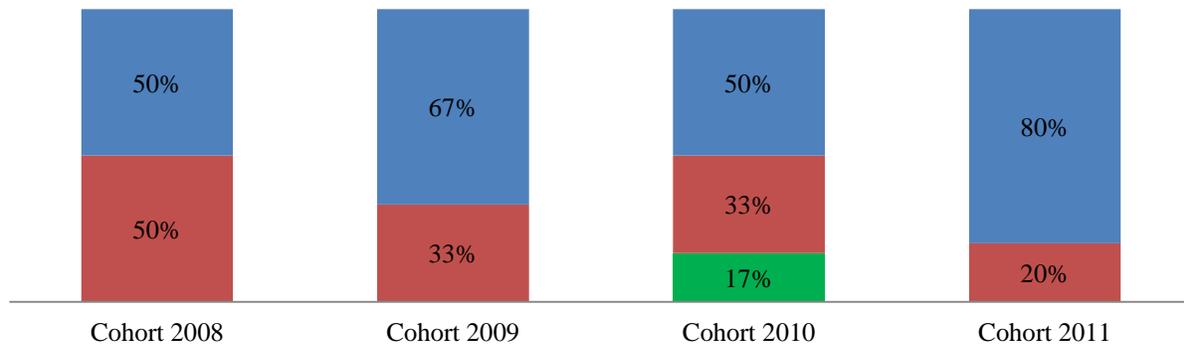
Under the U.S. Faculty Scholar Program that started in 2008, 17 U.S. Faculty Scholar grants have been awarded for U.S. professors to teach courses at 16 Vietnamese universities and research institutions. The number of grants issued for each cohort are summarized in Table 13.

COHORT YEAR	NUMBER OF VEF U.S. FACULTY SCHOLAR GRANTS
2008	4
2009	3
2010	6
2011	5
TOTAL	17

Table 13. Numbers of VEF U.S. Faculty Scholars Grants by Cohort

The primary fields of teaching programs are computer science, mathematical sciences, and medicine. On average to date, 58% of the courses taught are at the graduate level and 42% are at the undergraduate level. The teaching models in each cohort are presented in Figure 11 below, showing that most of the Faculty Scholars (62%) conduct their programs via videoconferencing from the United States.

U.S. Faculty Scholar Teaching Model



Averages of Models of Teaching 2008 - 2011:

- Videoconferencing from the United States (62%)
- On site in Vietnam (34%)
- Hybrid: On site in Vietnam and Videoconferencing from the United States (4%)

Figure 10. U.S. Faculty Scholar Teaching Model

Additional Support

To encourage networking, VEF organizes an Annual Conference in the United States as a forum to share opinions, knowledge, and experience among the Fellows, the Visiting Scholars, the U.S. Faculty Scholars, and other scientists and U.S. experts. Through these activities, VEF builds a spirit of community, solidarity, and professionalism among its Fellows and Visiting Scholars to help them sustain professional and personal support systems while in the United States and when they return to Vietnam. Typically, Vietnamese and U.S. dignitaries, and prominent entrepreneurs and professors give motivational presentations on such topics as leadership, emerging technologies, and the relationship between research, education, and entrepreneurship. VEF Fellows and Visiting Scholars also have opportunities to present their scientific research results at the VEF Annual Conference.

VEF is committed to helping Fellows and Visiting Scholars return to Vietnam to contribute to their country. As an example, since 2008 the annual conferences have included a session with the theme *All the Ways Home*. The discussions and activities are designed to stimulate proactive thinking among VEF Fellows and Visiting Scholars about ways to better serve Vietnam upon their return and, most importantly, to create positive communication on this topic between VEF Fellows and Visiting Scholars, and Vietnamese leaders and guests. To promote professional opportunities, a Job Fair highlights Vietnamese universities, research institutions, and government entities, as well as corporations and companies working in Vietnam.

One further example of VEF support is the effort to establish a VEF Alumni network. The first VEF Alumni Conference was held in Hanoi, Vietnam, in December 2008, the second in Ho Chi Minh City, Vietnam, in August 2010, and the third was co-hosted by VEF and Can Tho University in August 2011. Team-building and academic sessions bring all the Fellows and Scholars together. Alumni Fellows and Scholars can be expected to support each other in the future in ways that cannot yet be anticipated or measured.

Capacity Building Activities

VEF has conducted activities ranging from international conferences, seminars, and workshops to special projects that help build Vietnam's capacity in science, mathematics, medicine, engineering, and technology. As of November 2011, VEF had sponsored at least 50 scientists, engineers, and experts from more than 40 U.S. institutions to deliver a minimum of 140 lectures and presentations at more than 40 Vietnamese host institutions throughout Vietnam. Each year during the Fellowship interviews in Vietnam, VEF arranges opportunities for the U.S. professors, serving as interviewers, to give lectures in their specialties at Vietnamese universities and research institutions. Eleven VEF seminars/workshops were organized by VEF in Vietnam and led by 29 experts, representing 16 U.S. educational institutions.

Special projects were initiated and/or developed by VEF, including:

- (1) Millennium Science Initiative (MSI) to establish Centers of Excellence in Vietnam in science and technology in cooperation with the Institute for Advanced Study (Princeton, NJ) and the Science Initiative Group (2004 – 2006). Initiated at the request of the Ministry of Science and Technology (MOST).
- (2) World Class University (International Standard University) development in Vietnam: arrangements to visit leading U.S. universities (2006). Initiated at the request of the Ministry of Education and Training (MOET).
- (3) Vietnam Fund for Supporting Technological Creations (VIFOTEC), encouraging creativity in the sciences and technology in Vietnam (2006, 2007) in cooperation with MOET.
- (4) Conferences in Vietnam: Young Vietnamese Scientists Meeting (June 2005, July 2007); International Biomedical Engineering Conference (July 2007); and OpenCourseWare Consortium (OCWC) Global Meeting (May 2010).
- (5) Vietnam OpenCourseWare (VOCW) in Vietnam: a repository of high quality, up-to-date teaching and learning materials, available free as open educational resources. VEF successfully transferred its responsibilities for the VOCW program to MOET in January 2010. The project began in 2005.
- (6) Creative Commons License (CCL) Vietnam to facilitate recognition of intellectual property rights related to VOCW, while CCL serves all forms of creativity. VEF transferred its responsibilities in 2010 to Creative Commons International and a Vietnamese law firm, D&N International.

Furthermore, VEF sponsored two ground-breaking studies to contribute to the development of higher education in science and technology in Vietnam:

1. *Observations on Undergraduate Education in Computer Science, Electrical Engineering, and Physics at Select Universities in Vietnam* (completed in August 2006)
2. *Observations on the Current Status of Education in the Agricultural Sciences in Vietnam* (completed in January 2007)

The reports summarized issues facing higher education in Vietnam and provided extensive recommendations. As a follow-up, VEF organized a workshop in Hanoi in August 2007 to discuss the relevance and feasibility of these recommendations and to identify innovative approaches, pilot projects, and partnerships. VEF prepared a summary of the outcomes, *Opportunities for Enhancing STEM Education in Vietnam: A Forum for the Discussion of VEF's Reports on Undergraduate and Agricultural Education*. All three reports were developed with assistance from the U.S. National Academies and are available free to the public at the VEF website (www.vef.gov).

In addition, at the request of the former U.S. Ambassador Michael Michalak, VEF co-organized and co-sponsored, together with the U.S. Embassy in Hanoi and MOET, the 4th Annual Education Conference in Vietnam in April 2011 to strengthen ties in higher education between the United States and Vietnam. Vietnamese and U.S. educators had the chance to interact with each other, thus making possible research and teaching collaboration projects of mutual interest.

Future Directions

During the first nine years of operations from 2003 to 2011, VEF has established an excellent infrastructure as well as effective and efficient procedures for maintaining high-quality operations. With an optimistic vision, VEF will excel at the next level of operations, focusing on sustainable and high-standard activities that will continue to serve as a bridge between the United States and Vietnam.

VEF has a profound scientific and technological impact on Vietnam by facilitating partnerships between U.S. and Vietnamese research and educational institutions through the VEF Fellows, Visiting Scholars, and U.S. Faculty Scholars. Areas of focus for educational exchange endeavors include emerging technologies and sciences, interdisciplinary collaboration, and building the indispensable relationship between research, education, and entrepreneurship.

Education is the means to great ends: through scientific and cultural knowledge we build on the past and strive for success in the future. VEF Fellows, Visiting Scholars, and U.S. Faculty Scholars are contributing to the mutually-beneficial relationship between Vietnam and the United States. VEF, taking full advantage of the active involvement of U.S. and Vietnamese scientists, engineers, and experts in the United States and Vietnam, is dynamically welding together solid connections that build the bridge between the United States and Vietnam. These efforts will lead to a bright and productive future for U.S.-Vietnam relations.

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