

# DISCCRS Program Report

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**Background:** The Dissertations Initiative for the Advancement of Climate Change Research, DISCCRS is an educational and human resource program. It targets biological, chemical, geological and physical science researchers and mathematicians who study atmospheric, aquatic and terrestrial sciences, human ecology, and mathematics and modeling, and who are conducting or interested in research related to climate changes and its impacts. Social scientists are being recruited as well. The program is sponsored by American Geophysical Union (AGU), American Meteorological Society (AMS), American Society of Limnology and Oceanography (ASLO), and Ecological Society of America (ESA). All program and symposium application procedures are accomplished through the ASLO webpage (<http://aslo.org/phd.html>). To assist in disseminating program information, all sponsoring societies (AGU, AMS, ASLO and ESA) have linked their webpages to this site. Recent PhDs are targeted in order to introduce graduates to the community, catalyze interdisciplinary understanding, enhance early career development, and foster collegial interactions across peer groups.

The initiative includes a **Registry of PhD dissertation abstracts** which is available on-line in a fully searchable format (<http://www.aslo.org/phd/discrsdcite.html>). An **electronic newsletter** transmits job and other announcements to recent grads, and a capstone **symposium** brings together 40 recent grads to share their dissertation research and forge lasting collegial bonds. As part of the process to register their dissertation abstract, graduates are asked to complete a **demographic profile**. This paper summarizes results from the first DISCCRS program cycle.

The DISCCRS Program targeted graduates completing **PhD degrees between January 1, 2001 and March 31, 2003**. The program is fully international, with 55% of the 200 registrations receiving PhD's from US institutions and rest from abroad ([Table I](#) and [II](#)).

Because the number of participants for any one country is small, most of this report concentrates on American citizens and U.S. graduates. In some cases, participants are grouped by region for comparison.

**Citizenship:** [Figure 1](#) summarizes citizenship by region. The 200 program participants included citizens of 49 countries: **United States (82)**, Argentina (2), Australia (5), Austria (2), Bangladesh (1), Brazil (3), Belgium (1), Cambodia (1), Canada (20), Chile (2), China (8), Columbia (1), Cuba (1), Egypt (1), Estonia (1), Ethiopia (1), Finland (1), France (4), Germany (15), Ghana (1), India (10), Indonesia (1), Israel (1), Japan (1), Malaysia (1), Nepal (1), Netherlands (1), Nigeria (2), Norway (1), Peru (1), Portugal (1), Russia (2), Spain (3), Sudan (1), Sweden (3), Switzerland

(2), Thailand (1), Turkey (1), United Kingdom (10) and Uruguay (1). Two did not specify citizenship.

**Country of PhD:** [Figure 2](#) summarizes country of PhD by region. Of the 200 participants, **109 (55%) completed their PhD in the United States.** Of the 82 Americans, 76 completed their PhD in the United States. The others conducted their PhD work in Australia (1), Canada (3), and the United Kingdom (2). Of the 109 graduates from US institutions, 76 were American citizens and the others were from: Argentina (1), Canada (6), Chili (1), China (7), Cuba (1), Egypt (1), Esotonia (1), Germany (2), India (1), Malaysia (1), Nigeria (2), Portugal (1), Spain (1), Sudan (1), Turkey (1), Uruguay (1), United Kingdom (2), and two are unknown.

**Gender:** Of the 200 participants, 63% were male and 37% were female. The 82 American citizens included 39 (48%) males and 43 (52%) females ([Figure 3](#)). The non-American participants consisted of 86 (73%) males and 32 (27%) females.

**Ethnicity:** Of the 82 American DISCCRS participants there were **10% from underrepresented minorities: 6 (7%) Hispanic Americans, 1 (1%) American Indian and 1 (1%) Multiethnic.**

The DISCCRS registry does not ask about visa status, so results cannot be compared directly with NSF statistics.

**Disciplinary Specialty:** The majority (35%) of the 200 participants indicated their primary area of interest as oceanography ([Figure 4](#)). American participants included 27 (33%) oceanographers, 22 terrestrial ecologists, 8 limnologists, 8 atmospheric scientists, 6 hydrologists, 6 global scientists, 4 social scientists and 1 aquatic scientists.

**Jobs:** Graduates tend to register with the program within the first few months post degree, so most are on their first job. Of the 82 American citizens, 6 (7%) were unemployed ([Figure 5](#)). Most (60 or 73%) were in academia. Of the rest, 11 (13%) were employed by the Federal Government, 2 (2%) non-profit, and 1 (1%) each for commercial, state government, and other (active duty). More Americans were unemployed than their European counterpart (3 or 3%).

Of the 76 American citizens who were employed, 63% were postdocs, while 21% held permanent or potential permanent positions, 12% held other temporary positions and 4% did not specify ([Figure 6](#)).

**Perceptions of the job Market:** Participants were asked to rate the job market. Americans seemed quite optimistic, with 91% rating the market as neutral, good or excellent ([Figure 7](#)) and 33% rating it as good or excellent. No gender differences were apparent. Non-Americans were slightly less optimistic, with 89% rating the market as neutral, good or excellent.

**Age:** Median age at PhD was 31.5 years.

**Marriage and Children:** Overall, 50% of participants were married. Gender differences were noted with 40% of females and 56% of males indicating they were married. Less than 3% were

divorced or separated. Among Americans, 37% of females and 71% of males were married (Figure 8).

### **Support**

DISCCRS is made possible through funding from **U.S. National Aeronautics and Space Administration**, Office of Earth Science and **National Science Foundation** Geosciences Directorate (NSF 0105201 to Whitman College).

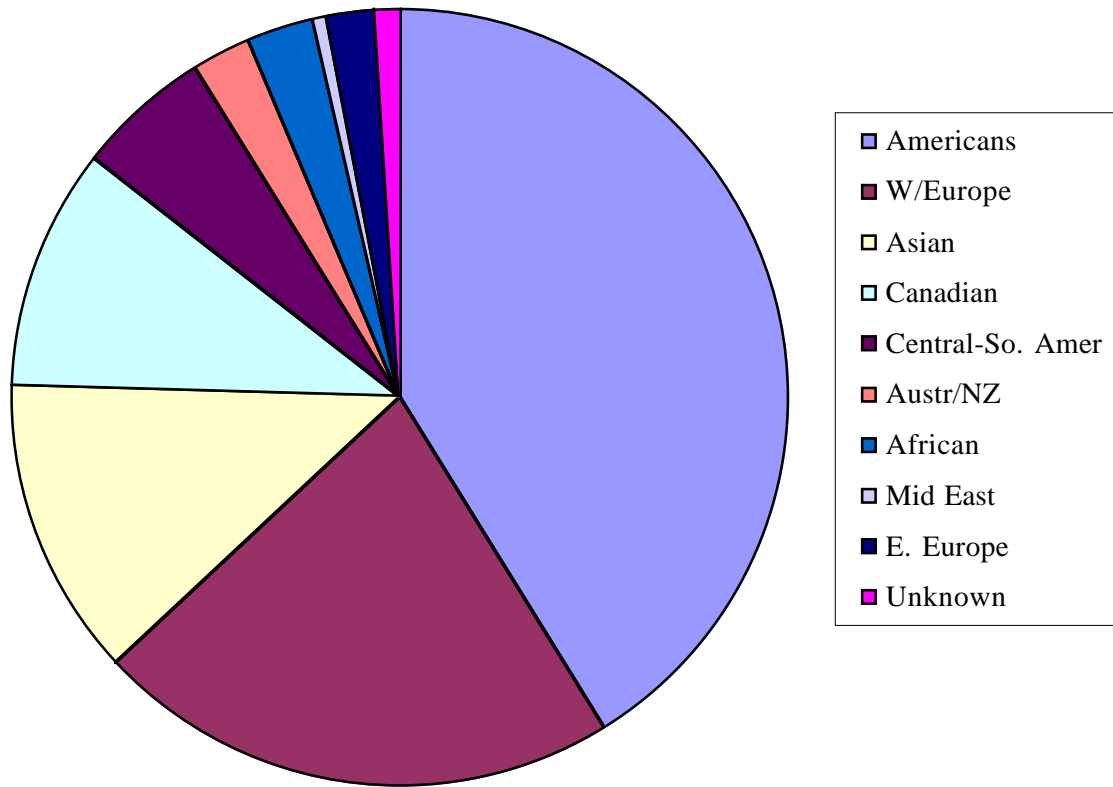
**Table I:** U.S. Institutions granting PhD degrees to DISCCRS program participants. Of the 200 graduates who registered with DISCCRS, 109 (55%) completed their PhD in the U.S. These included 30 oceanographers, 10 limnologists, 25 terrestrial ecologists, 19 atmospheric scientist, 11 hydrologists, 7 global scientist, 6 social scientists and 1 aquatic scientist.

<b>Lim</b>	<b>Oce</b>	<b>Other</b>	<b>Institution</b>	<b>Lim</b>	<b>Oce</b>	<b>Other</b>	<b>Institution</b>
	1	1 <sup>t</sup>	Boston University			1 <sup>t</sup>	Univ of California at Davis
		1 <sup>t</sup>	Brown University			1 <sup>at</sup>	Univ of California at Irvine
		1 <sup>s</sup>	Clark University	1	1	2 <sup>at</sup>	Univ of California at Los Angeles
	2		College of William and Mary			1 <sup>at</sup>	Univ of California at San Diego
	2	1 <sup>g</sup> 1 <sup>at</sup>	Columbia University	1	2	2 <sup>h</sup>	Univ of California at Santa Barbara
1	1		Cornell University	1	1	1 <sup>at</sup>	Univ of Colorado
	1		Dartmouth College	1		1 <sup>g</sup> 1 <sup>s</sup>	Univ of Colorado at Boulder
1			Drexel University			1 <sup>h</sup>	Univ of Connecticut
	1 <sup>t</sup>		Duke University	1			Univ of Georgia
1			Florida Institute of Technology	1			Univ of Hawaii
	1 <sup>s</sup>		George Mason University			1 <sup>at</sup> 1 <sup>h</sup>	Univ of Illinois Urbana-Champaign
	1 <sup>t</sup>		Indiana University			1 <sup>h</sup>	Univ of Iowa
	1 <sup>t</sup>		Indiana Univ at Bloomington			1 <sup>t</sup>	Univ of Kansas
	1 <sup>t</sup>		Kansas State University			1 <sup>t</sup>	Univ of Maryland
1			Lehigh University			1 <sup>aq</sup>	Univ of Miami Rosenstiel School
	1		Louisiana State University	1			Univ of Michigan
	3		Massachusetts Institute of Tech			1 <sup>h</sup>	Univ of Minnesota
	1 <sup>t</sup>		Michigan Tech University			2 <sup>t</sup>	Univ of Minnesota at Twin Cities
1			Naval Postgraduate School			1 <sup>at</sup>	Univ of Nebraska
	1 <sup>g</sup> 1 <sup>t</sup>		New Mexico Inst of Mining/Tech			1 <sup>g</sup>	Univ of Oklahoma
	2 <sup>at</sup> 2 <sup>s</sup>		Pennsylvania State University			1 <sup>at</sup>	Univ of Oklahoma
1	1 <sup>at</sup> 1 <sup>g</sup>		Princeton University			1 <sup>t</sup>	Univ of Oregon
	1 <sup>g</sup>		Rice University	2			Univ of Puerto Rico
1	1 <sup>at</sup>		Rutgers University	1			Univ of Rhode Island
1			Scripps Institute of Oceanography			1 <sup>h</sup>	Univ of Rochester
	3 <sup>t</sup>		Stanford University	1			Univ of South Carolina
	1 <sup>at</sup> 1 <sup>g</sup>		State Univ of New York at Albany	1			Univ of South Carolina-Columbia
	1 <sup>s</sup>		Syracuse University	1	1 <sup>h</sup>		Univ of Texas at Austin
	1 <sup>t</sup>		Tufts University			1 <sup>at</sup>	Univ of Utah
	1 <sup>at</sup> 1 <sup>h</sup> 1 <sup>t</sup>		Univ of Alaska at Fairbanks	1	1	1 <sup>at</sup> 1 <sup>t</sup>	Univ of Washington
2	1 <sup>at</sup> 1 <sup>h</sup> 2 <sup>t</sup>		Univ of Arizona	1	1 <sup>at</sup> 1 <sup>h</sup>		Univ of Wisconsin at Madison
	2 <sup>t</sup>		Univ of California at Berkeley			1 <sup>t</sup>	Washington State Univ
				<b>10</b>	<b>30</b>	<b>69</b>	<b>TOTAL</b>

**Table II:** Non-U.S. Institutions granting Ph.D. degrees to DISCCRS program participants. Of the 200 graduates who registered with DISCCRS, 91 (45%) completed their Ph.D. outside the U.S. These included 40 oceanographers, 17 limnologists, 15 atmospheric scientists, 11 terrestrial ecologists, 4 global scientists, 2 hydrologist and 2 social scientists.

Lim	Oce	Other	Institution	Lim	Oce	Other	Institution	
		1 h	Albert-Ludwigs-Universität Freiburg (Germany)			1	Uiversidade de Vigo (Spain)	
		1 at	Asian Institute of Technology (Thailand)			2	Ume University (Sweden)	
1			Australian Catholic University National (Australia)			1	Université de Montréal (Canada)	
	1	1 at	Australian National University (Australia)			1	Universite de Versailles/St.Quentin - En-Yvelines (France)	
		1 at	Brazilian Institute of Space Research (Brazil)			2	Universite Pierre et Marie Curie (France)	
		1 at	CCS Haryana Agril University (India)			1	Univ Federal of Rio de Janeiro (Brazil)	
		1	Ctr for Scientific Res/Higher Edu in Ensenada (Mexico)			1	Univ of Bremen (Germany)	
		1 g	Chalmers University of Technology (Sweden)			3	Univ of British Columbia (Canada)	
	2		Cochin University (India)		1	1 t	Univ of Cambridge (United Kingdom)	
		1	Dalhousie University (Canada)			1	Univ of Cologne (Germany)	
1			ETH Zuerich (Switzerland)			2	Univ of Concepcion (Chile)	
		1	Ghent University (Belgium)		1	1 at 1 g	Univ of East Anglia (United Kingdom)	
		1 t	Gifu University (Japan)			1	1 t	Univ of Edinburgh (United Kingdom)
		1 s	Indian Institute of Management Ahmedabad (India)			1 t	Univ of Freiburg (Germany)	
		1 at	Indian Institute of Science (India)			1	Univ of Geneva (Switzerland)	
		1 at	Indian Institute of Technology (India)			1	Univ of Ghana (Ghana)	
1			Inst of N Industrial Ecology Problems (Russia)			1	Univ of Guelph (Canada)	
		1	James Cook University (Australia)			4 at	Univ of Hamburg (Germany)	
		1	Kiel University (Germany)			2	Univ of Helsinki (Finland)	
1			Kyoto University (Japan)			1	Univ of Kiel (Germany)	
1	1		Laval University (Canada)			1	Univ of Las Palmas de Gran Canaria (Spain)	
		1 t	Lund University (Sweden)			1 t	Univ of Liverpool (United Kingdom)	
		1 g	McGill University (Canada)			1 g	Univ of Newcastle (United Kingdom)	
1		1 t	McMaster University (Canada)			1	Univ of Oldenburg (Germany)/Univ Paris VI (France)	
		1	Méditerranée University (France)			1 s	Univ of Otago (New Zealand)	
		1 at	Monash University (Australia)			1 h	Univ of Oxford (United Kingdom)	
		1 at	Murdoch University (Australia)			1	Univ of Potsdam (Germany)	
1			Napier University (United Kingdom)			1	Univ of Rio Grande (Brazil)	
		1 at	National Institute for Space Research (Brazil)			1	Univ of Tasmania (Australia)	
		1 t	Osmania Univesity (India)			1	Univ of Utrecht (Netherlands)	
		1	Oxford University (United Kingdom)			1	Univ of Vienna (Austria)	
2			Queen's University at Kingston (Canada)			1	Uppsala University (Sweden)	
1			Rani Durgavati University (India)			1 at	Vikram University (India)	
		1	Russian Academy of Science (Russia)			1 t	Wageningen University (Netherlands)	
		1	St Andrews University (United Kingdom)			1	Weizmann Institute of Science (Israel)	
		1 t	Swedish Univ of Agricultural Sci (Sweden)			1	York University (Canada)	
		1 t	Swiss Federal Inst of Technology Zurich (Switzerland)					
						<b>17 40 34</b>	<b>TOTAL</b>	

**Figure 1: Citizenship of DISCCRS Participants**



Forty one percent of participants were American Citizens. Twenty two percent were Western Europeans, 12.5% Asian, 10% Canadian, 5.5% Central or South American, 2.5% Australian or New Zealander, 3% African, .5% Middle Eastern, 2% Eastern Europe and 1% unknown.

**Figure 2: Location of PhD-Granting Institutions among DISCCRS participants**

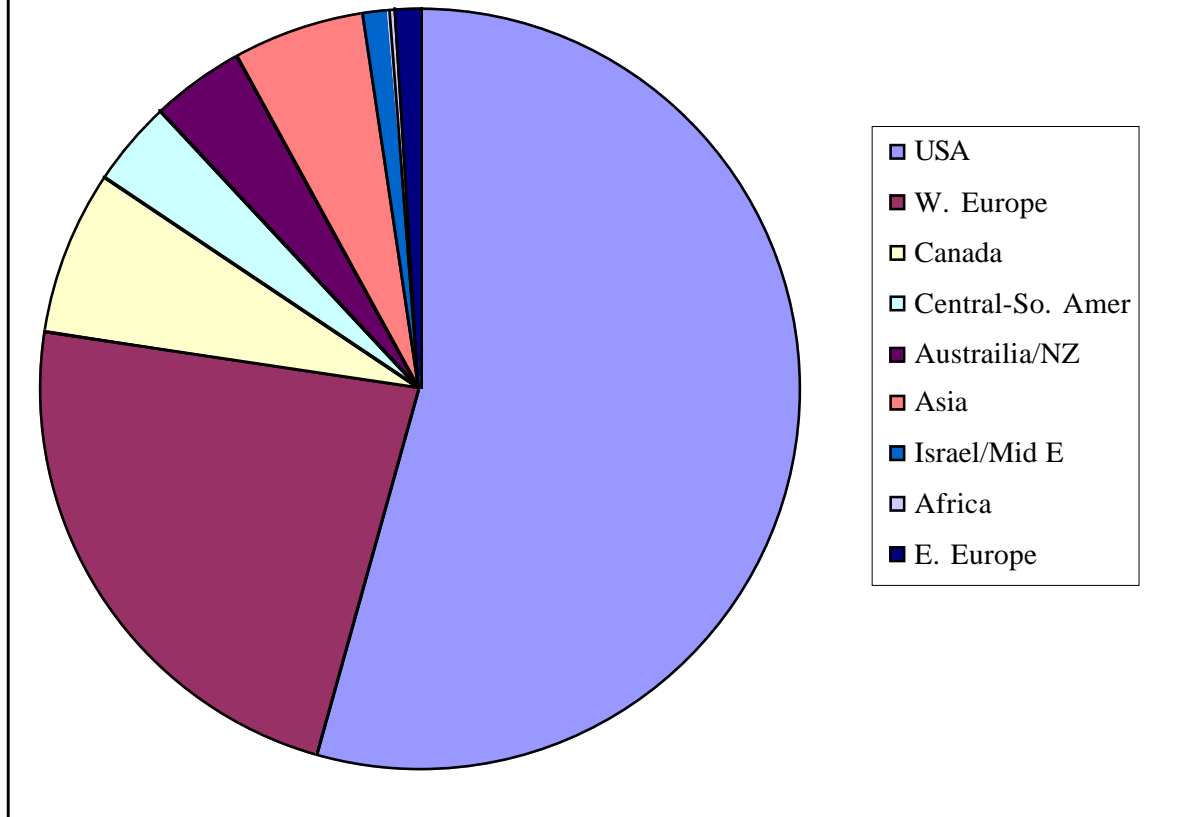
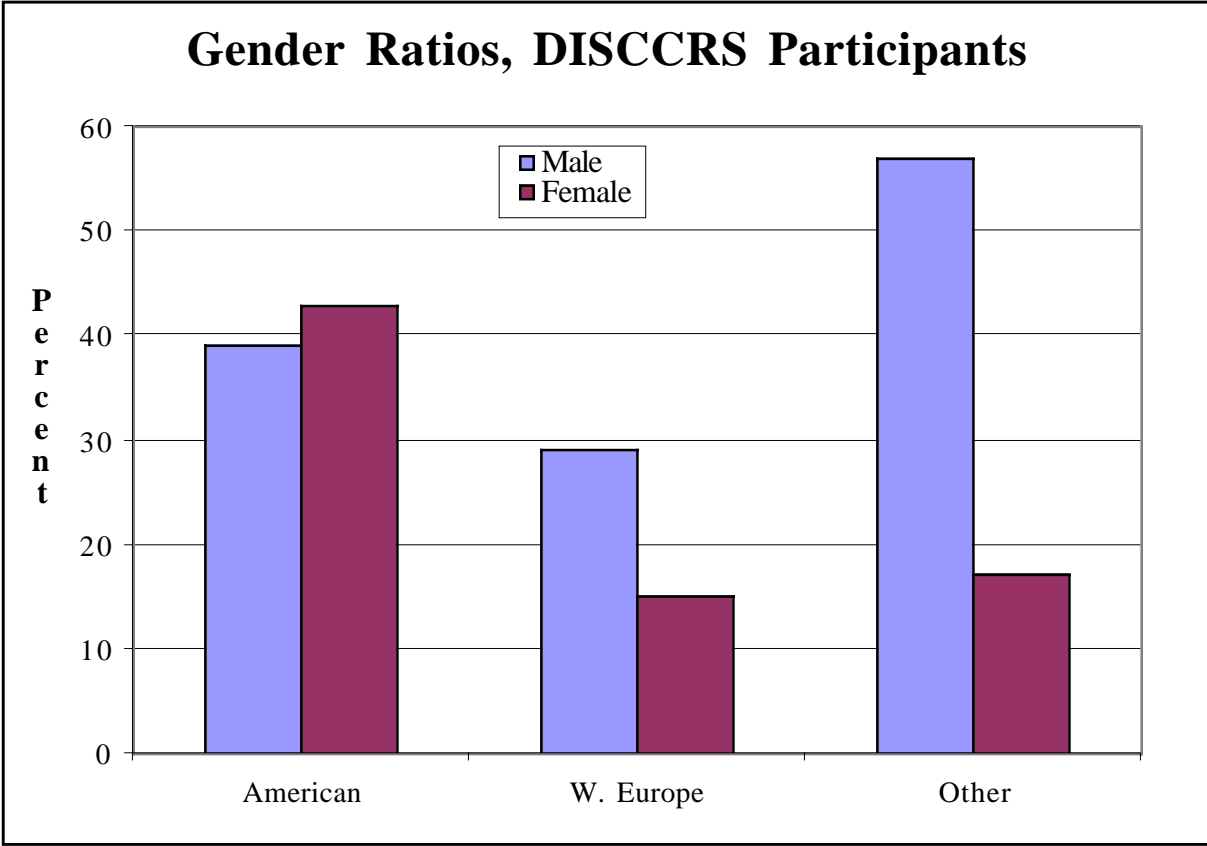


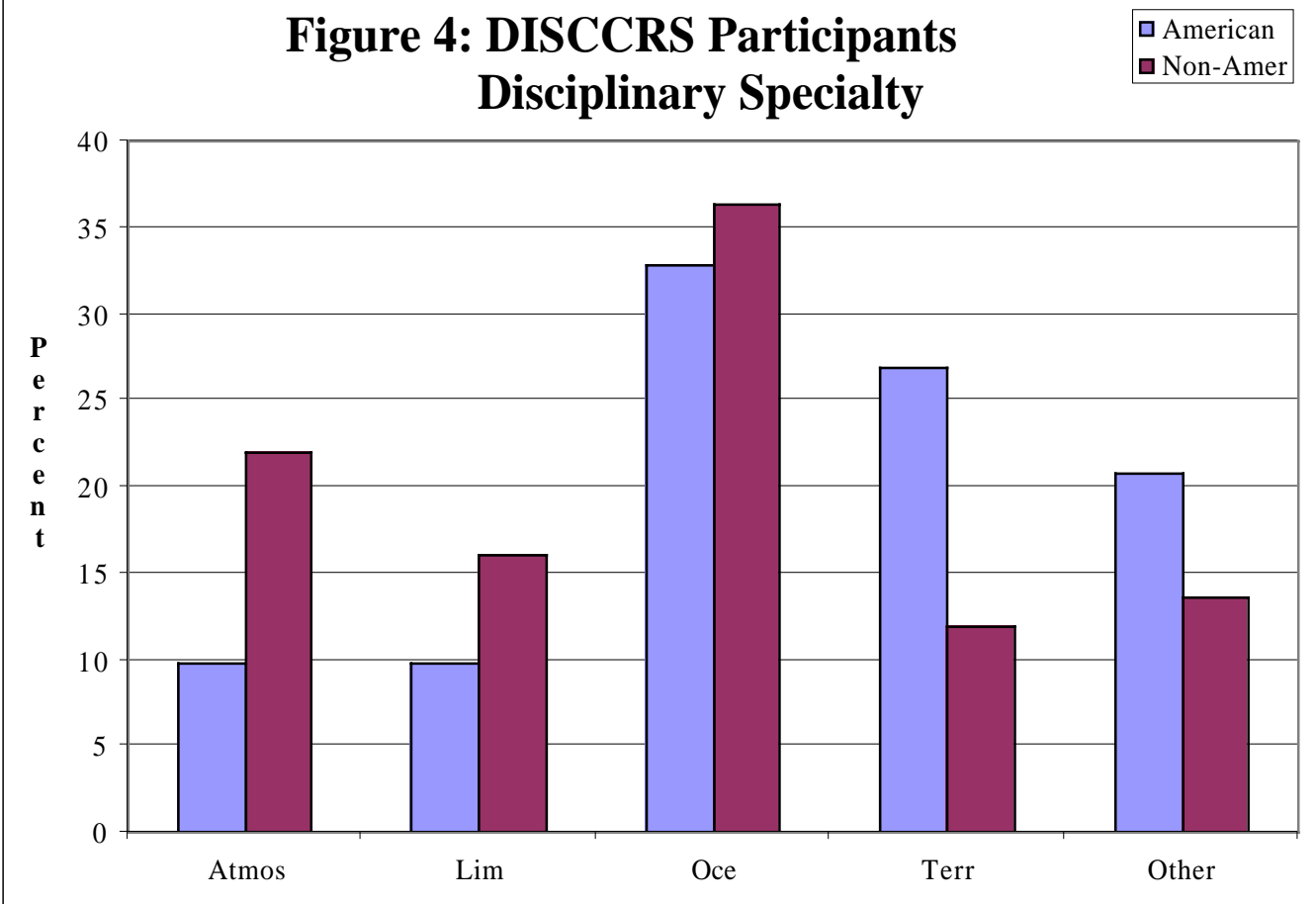
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Figure 3. Gender ratios, DISCCRS participants. Overall, 63% of participants were male and 37% were female. The 82 American citizens included 39 (48%) males and 43 (52%) females (Figure 3).

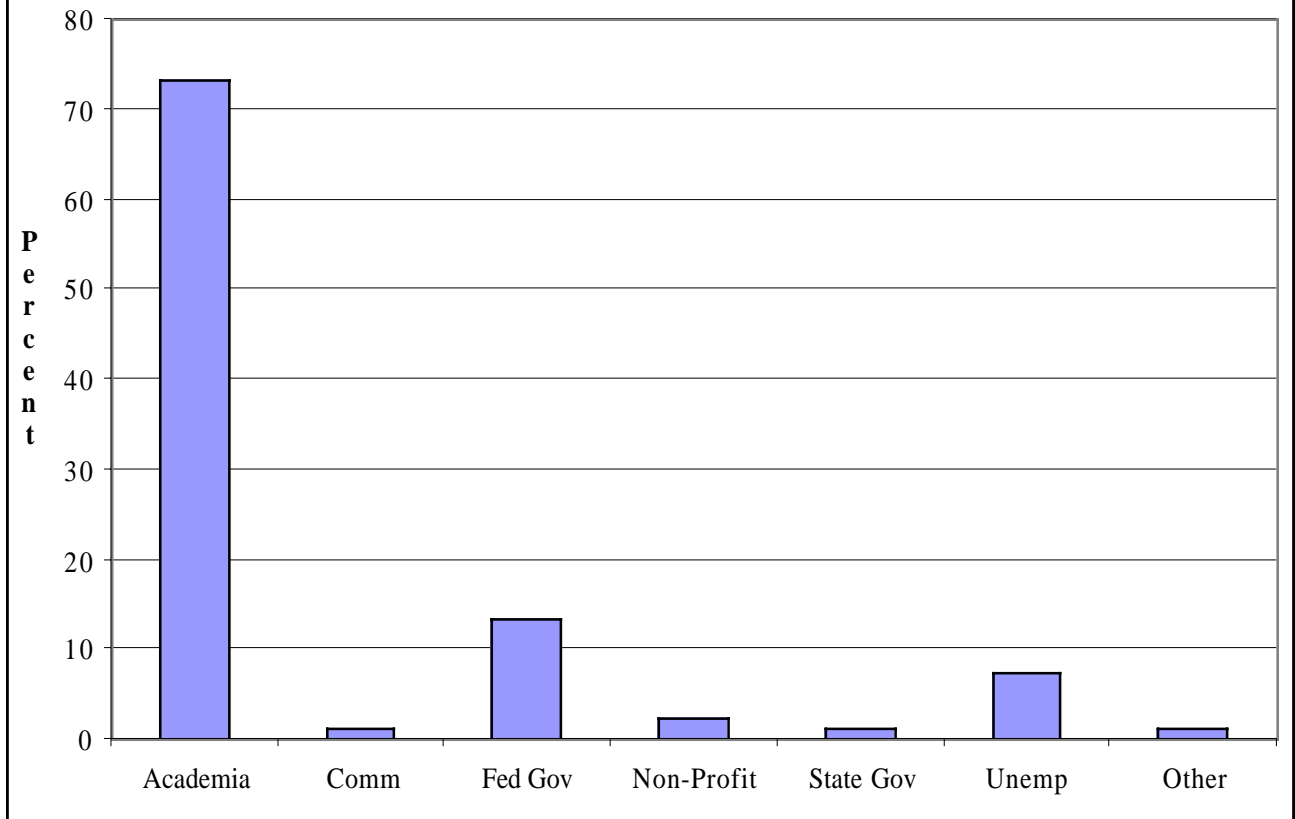


Citizenship Grouping	No. Male	No. Female
American	39	43
W. Europe	29	15
Asia	23	2
Canada	13	7
Central/S. America	7	4
Australian/New Zealander	2	3
African	6	
Middle Eastern	1	
E. Europe	3	1
Unknown	2	
<b>Total</b>	<b>125</b>	<b>75</b>

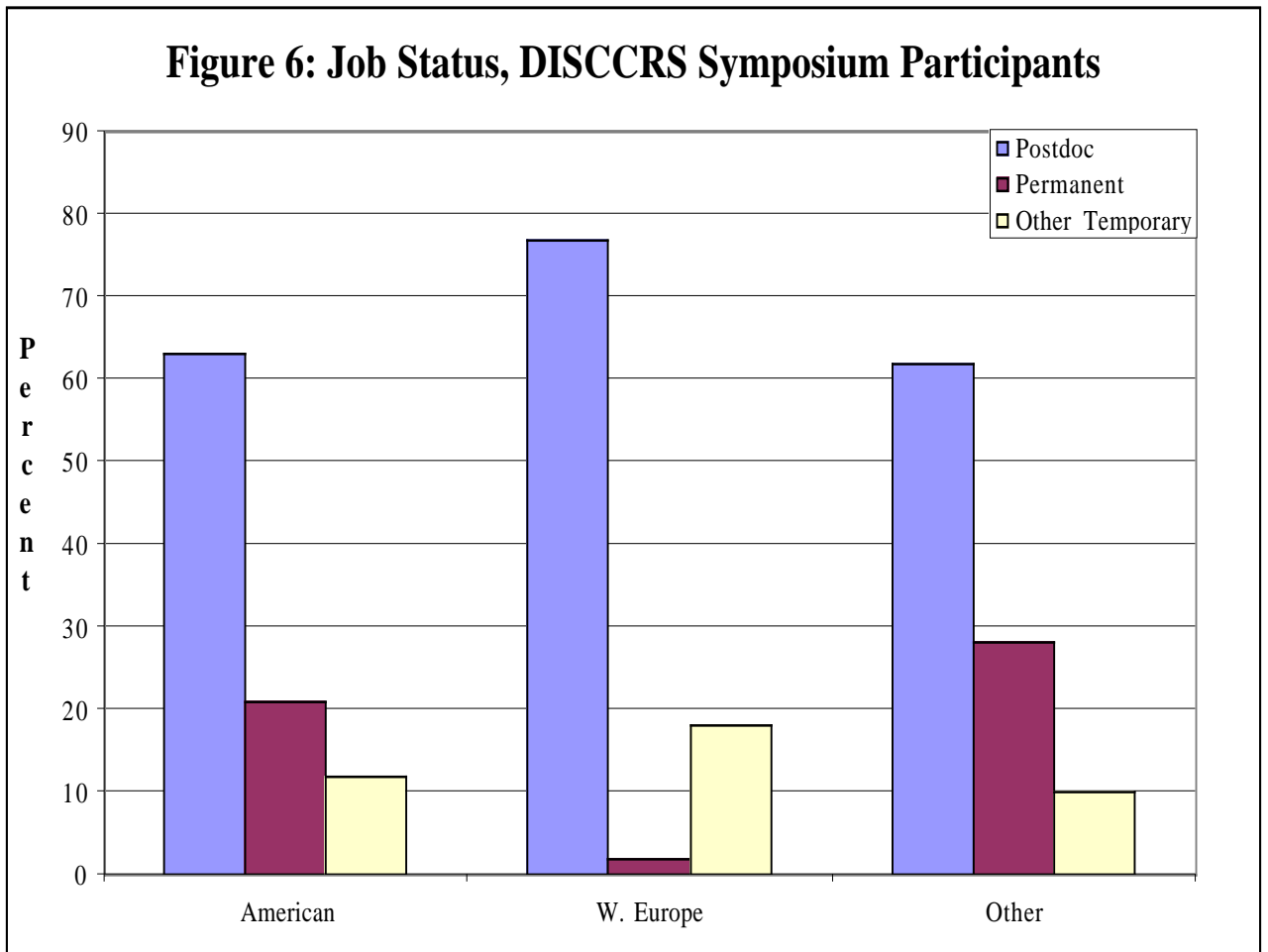
**Figure 4: DISCCRS Participants  
Disciplinary Specialty**



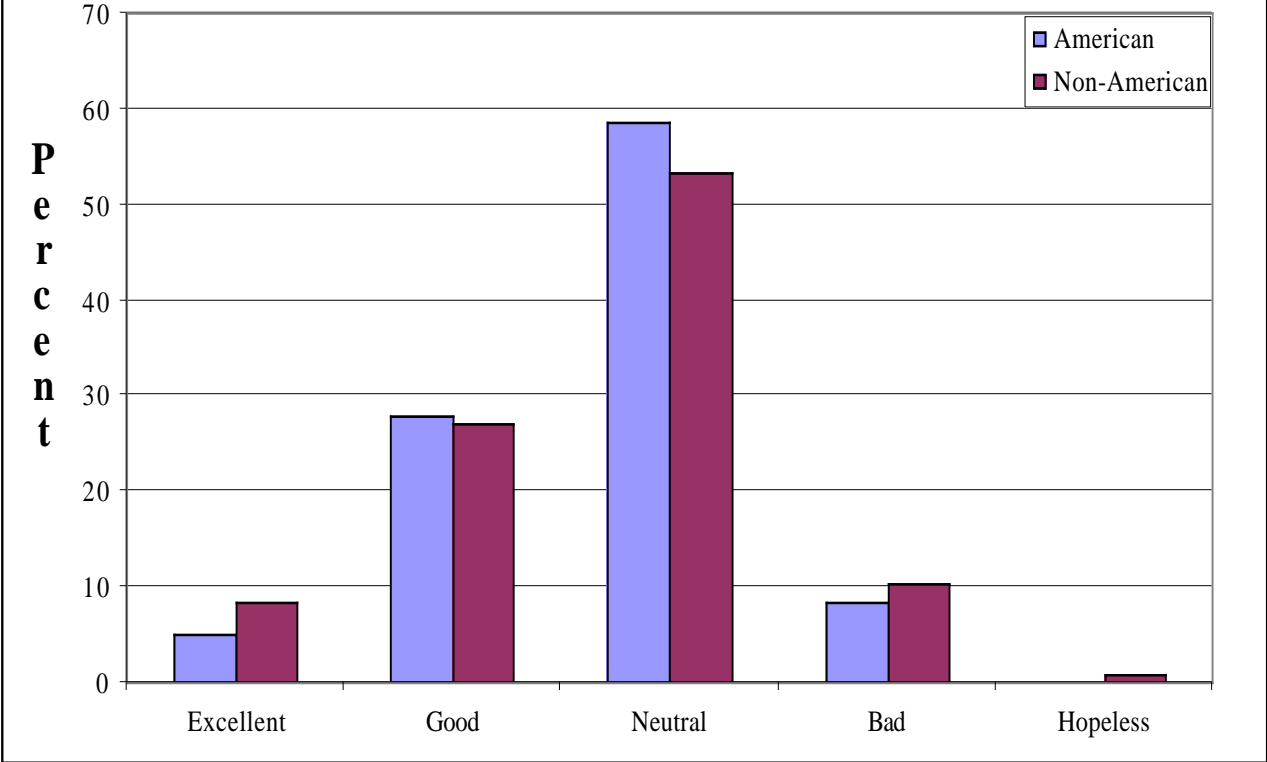
**Figure 5: Employment Sector, American Participants**



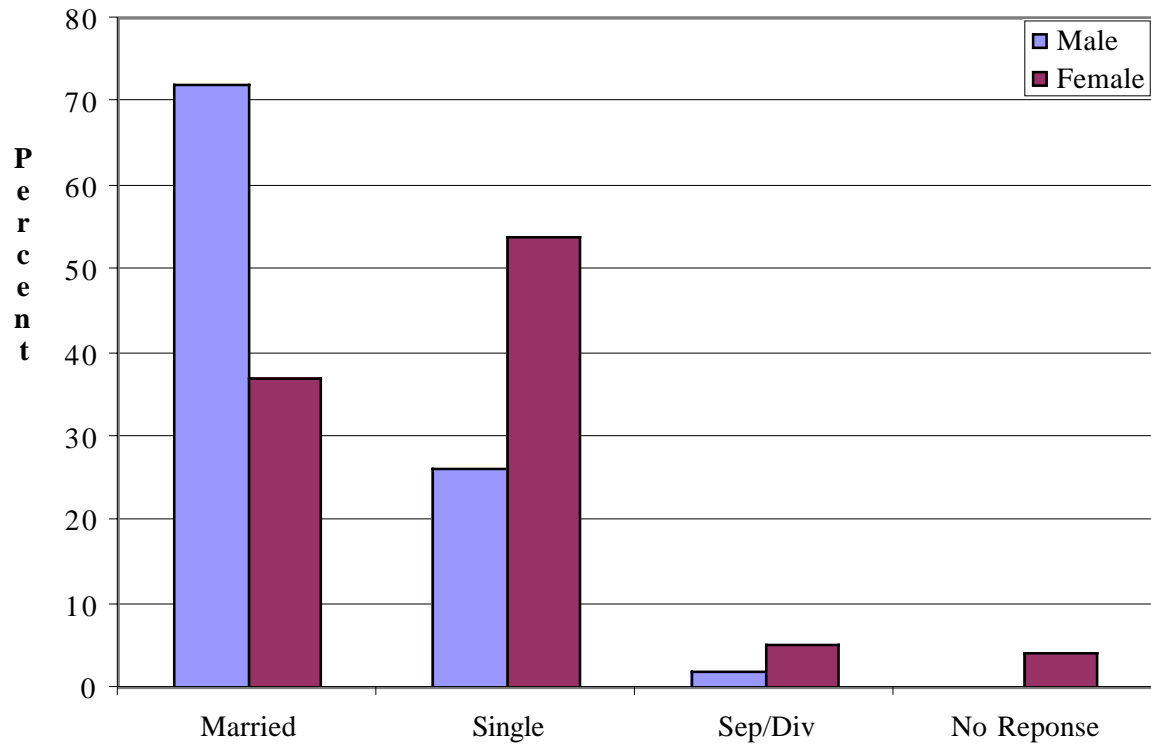
**Figure 6: Job Status, DISCCRS Symposium Participants**



**Figure 7: Job Market Perceptions**



**Figure 8: Marital Status DISCCRS  
American Participants**



**Figure 9: Family size, married American Participants.**

