Award ID: 0801465
Project Characteristics
PI: Phillips, Colin - Reporting Year: 2011

NSF directorates:
Biological Sciences
Computer and Information Science and Engineering
Social, Behavioral, and Economic Sciences

Did you support any IGERT trainees during the current project year?
Yes

Considering the IGERT trainees as a group, how do they compare with graduate students you usually see in terms of their academic/research potential?
Somewhat better than our usual graduate students

How do trainees in your program earn their doctoral degrees?
Trainees earn their degrees from traditional single-discipline departments.
Trainees earn their degrees from multidisciplinary/interdisciplinary programs, centers, or units other than IGERT.
Other (certificates, etc.): Neuroscience & Cognitive Science Certificate Program

Does your IGERT project include undergraduate involvement?
No

Does your IGERT project include postdoctoral involvement?
No

Indicate the amount of funds from the current year of IGERT support that will be carried over to the next year.
Total funds carried over to the next year: 526123
Participant support costs carried over to the next year: 453522
Stipends carried over to the next year: 223969

Printed: May 01, 2011

Award ID: 0801465
Research Achievements
PI: Phillips, Colin - Reporting Year: 2011

First achievement:
A team of students drawn from 4 departments (Computer Science, Linguistics, Second Language Acquisition, Hearing & Speech Sciences) continued the research that was begun at our first Winter Storm workshop (Jan 2009), using computational modeling to investigate the causes of ?critical period? effects in language learning, i.e., the decline around puberty in the ability to learn languages to a native-like level. The team presented their work at the leading international conference in Second Language Acquisition research, and it is in submission for journal publication. This is a project that relied crucially on the combined talents of the participating students, as none of them could have provided all of the skills on their own.

Second achievement:
Cross.department teams of students are working on projects that have emerged from our subsequent Winter Storm workshops (2010, 2011). One team is using electrophysiological brain recordings to investigate parallels between language and memory processes. This is a new technique for most of the team members. Another team is developing a speech perception training paradigm to understand the perceptual abilities of Heritage Language speakers, i.e., speakers whose primary language is English, but whose first language was the language of their parents (and they continue to use the family language). Sunyoung Lee-Ellis, a member of our first trainee cohort, discovered that these speakers show striking difficulty in perceiving some native language sound contrasts, despite early and frequent exposure. The new team is testing whether Heritage Language speakers show latent perceptual abilities, as revealed by an ability to ?reawaken? their ability to perceive the native language sound contrasts.

Third achievement:
An ever-increasing group of students and faculty are pursuing research projects in the new area of experimental semantics, in conjunction with faculty mentors from linguistics, philosophy, and psychology. One team is investigating the source of preschoolers? well-known difficulty in comprehending sentences that describe false beliefs. This difficulty has often been linked to problems with the cognitive ability known as Theory of Mind, but the team has discovered new techniques to uncover abilities in children that are hidden in classic tasks. Another team is investigating children and adults? calculation of the meaning of quantificational sentences, using a variety of psychophysical paradigms. Yet another team is investigating children?s understanding of implicatures: aspects of meaning that are implied by a sentence, even if they are not explicitly asserted.

First achievement:
A highlight of our program?s activities in the past year was the dramatic increase in student leadership and organization. This was a result of the first meeting of our external advisory board, which recommended formalization of the emerging student leadership. Students created committees to organize activities such as our Winter Storm 2-week workshop, outreach programs, and the student-led portion of our on-line resources. Leaders of each committee form the Student Executive Committee, which works closely with the Faculty Executive Committee. This increased student leadership has not only led to better organized activities, it has fostered a greater sense of collaboration, and a greater sense of student ownership of the program. This has also encouraged less parochial perspectives, and a deeper understanding of what it takes to do effective interdisciplinary work. This leadership experience should serve the students well in their future careers.

Second achievement:
As in past years, our program?s signature event was the 2-week intensive ?Winter Storm? workshop, held during winter session. The organization of this event is refined each year, based on a student-led assessment of the previous year?s event. This year?s event was overwhelmingly student run, and it was the largest to-date, with upwards of 80 participants. In addition to our own students and faculty, this included students from Gallaudet University?s VL2 NSF Science of Learning Center, including a number of deaf students, plus a group from Korea that is attempting to emulate our efforts in interdisciplinary language science. In addition to student-led methods workshops and research planning groups, this year we added a number of professional development workshops, featuring discussions on academic and non-academic careers, such as a presentation by one recent graduate about finding a postdoc position, and one by another graduate who works in science policy at the National Academies.

Third achievement:
A new feature of our program in 2010-11 was an IGERT Apprentice Program, designed to help to recruit new students and to help them in developing the research, training, and outreach plans that we require of all applicants to the program. (Our IGERT only recruits students to the program after they are already in a PhD
program at the U of Maryland.) We identified prospective new students at the start of the academic year via Language Science Day?, a new university-wide event that brought together 120 people from 10 units. Students were encouraged to sign up as IGERT Apprentices and to start participating in all program activities. Apprentices were given much guidance on the development of the extensive program application/plan that we require of all students, including meeting with various faculty, and assigning each apprentice to an experienced IGERT student, who served in a mentor role for the application process, something that hopefully made it less daunting for the new students.

Award ID: 0801465
Trainee Achievements
PI: Phillips, Colin - Reporting Year: 2011

First achievement:
Two students in our program (Sunyoung Lee-Ellis and So-one Hwang) won NSF dissertation grants to support the completion of the research that they initiated while participating in the IGERT program. Both dissertation projects involve cross-department research with multiple advisors. Giovanna Morini also won an NSF EAPSI award that will allow her to spend the summer pursuing her research on bilingualism at the National University of Singapore.

Second achievement:
Students were recognized for their research accomplishment, including for presentations to broad interdisciplinary audiences. Sunyoung Lee-Ellis was a winner of the student poster competition at the IGERT Annual Meeting, and Yakov Kronrod won a Best Student Poster award at the AAAS meeting in Washington DC.

Third achievement:
Many students gave talks and other presentations at national and international, including a number of cases where students presented at meetings outside the normal area of their supervisor/home lab. This included a team of students who presented at the primary conference in Second Language Acquisition, and students in the psychology of memory who presented at the leading European conference in language processing.

Award ID: 0801465
Barriers to Implementation
PI: Phillips, Colin - Reporting Year: 2011

First Barrier
Issue/challenge:
In their second year of IGERT support trainees are expected to pursue their research projects in a non-home department for around half a year. The location of this 'advanced rotation' is usually identified at the time of the students' application to the program, and arrangements with host faculty are made in advance. The advanced rotation aims to prepare students for the real challenges of interdisciplinary research carried out outside of their comfort zone. In contrast to traditional lab rotation experiences that allow students to 'shop around' at the start of their PhDs, the later timing should allow students to pursue topics that will more directly impact their dissertation work. The rotations have been happening largely as scheduled, but the later timing means that it has proven harder than expected to get students to adjust their work habits to a new setting, and we feel that
students do not always reap the full benefits of this opportunity.

Response:
We aim to address this via two strategies. One is to consider beginning the rotation research earlier in a student's career, so that it is more a part of their work habits. Second, we will provide clearer expectations and monitoring. Students will be expected to provide more frequent updates on their progress, and it will be made clearer to the student that the rotation has a 'deliverable', in the form of a conference paper/presentation, or research results to be incorporated in the dissertation.

Second Barrier
Issue/challenge:
The success of our program hinges on our ability recruit a cohort of engaged students who later become full program participants. Our ability to attract these students depends in turn on a broad commitment and buy-in from faculty to the benefits of interdisciplinary language science. In our 2010 report we identified that awareness of the breadth of the community, its strengths, and its opportunities was not as broad as we had assumed, and that we needed to find more ways for students and faculty to get involved in the community at different levels of participation. This would lead to broader interest from students in participating at the highest level, i.e., as IGERT trainees.

Response:
In September 2010 a team of IGERT students organized the first Language Science Day at the University of Maryland. The event was co-sponsored by an on-campus government research center (Center for Advanced Study of Language). The event brought together 120 students, faculty, and researchers from 9 different departments. Interest was so great that we had to turn people away due to space limitations. The event heightened awareness of the broad strength in language across the university, and made many people aware of opportunities that they did not know about before. Special efforts were made to engage first year students who might be potential recruits to the IGERT program, and we then sought to attract these students into our new IGERT Apprentice program. The event was viewed as a great success, and there are plans to repeat it in 2011. It helped to move our IGERT efforts towards institutionalization.

Third Barrier
Issue/challenge:
Faculty and student focus group reports shed light on the fact that the central role that the Linguistics Department plays in the IGERT program can at times overshadow or even hinder other departments' involvement. The enthusiastic and sustained support from Linguistics, including its Dean, is a clear asset to the program but students perceived that faculty from other departments are less visibly involved compared to Linguistics faculty. Similarly, one student remarked during a focus group that she assumed other students that she was unfamiliar with were Linguistics students, even though in fact most of the focus group members were from other departments. Following advice from our External Advisory Board in 2010, we have taken a number of steps to begin moving the program's center of gravity from Linguistics to Language Science.

Response:
As a first step the program's PI and administration made a sustained effort to draw attention to the centrality of Language Science to the project (as opposed to Linguistics alone). Our website was adapted to highlight the contribution of all participating departments. Events are now deliberately organized in a variety of different locations across the university. At all events and all levels of program organization, efforts are made to showcase the contributions of students and faculty from multiple departments. This year's dramatic increase in student leadership and ownership in the program may have been the greatest catalyst to shift away from Linguistics-centrism. Students from Psychology and Hearing and Speech Sciences have led the organization of some of the program's most high-profile events: Winter Storm, the Northwood High School Outreach program and the satellite workshops organized for the Fall 2010 SLRF conference. This issue needs continued work, however.

Award ID: 0801465
Outreach Activities
PI: Phillips, Colin - Reporting Year: 2011

Outreach Activity 1
Title: AAAS Symposia and Presentations
Name of media outlet or organization for which outreach was done: American Association for the Advancement of Science
Date of activity: 02/20/2011
Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved:
Numerous presentations to a broad audience at AAAS, including a plenary talk by PI Colin Phillips, a language learning symposium by co-PI Amy Weinberg, and a symposium on stuttering research by Nan Bernstein-Ratner. Scores of media reports.

Outreach Activity 2
Title: Cross-disciplinary Training Workshops
Name of media outlet or organization for which outreach was done: Second Language Research Forum
Date of activity: 10/14/2010
Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved:
4 faculty and 12 students organized an all-day series of workshops on state-of-the-art methods in language research, as a satellite workshop for 200 participants in SLRF, the primary conference in Second Language Acquisition.

Outreach Activity 3
Title: Field Trip for 80 High School Students
Name of media outlet or organization for which outreach was done: Northwood High School, Silver Spring, MD
Date of activity: 02/25/2011
Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved:
15 IGERT participants led a morning-long series of hands-on activities for 80 AP-Psychology students from Northwood High School, a local school with a very diverse student population.
**Outreach Activity 4**

**Title:**
High School Visit

**Name of media outlet or organization for which outreach was done:**
Northwood High School, Silver Spring, MD

**Date of activity:**
11/18/2010

**Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved:**
IGERT program co-PI Jeff Lidz visited Northwood High School to speak to a group of 150 students from psychology and language classes about science of language research.

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**Outreach Activity 5**

**Title:**
Maryland Day Community Outreach

**Name of media outlet or organization for which outreach was done:**
General Public

**Date of activity:**
04/30/2011

**Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved:**
Students and faculty from the IGERT’s group on early language development had a tent and research display at UM’s annual Maryland Day, an event that brought 60,000 community members to the campus.

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**Outreach Activity 6**

**Title:**
Media Reports on Stuttering Research

**Name of media outlet or organization for which outreach was done:**
Many (NY Times, MSNBC, PBS, China Daily, etc. etc.)

**Date of activity:**
02/24/2011

**Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved:**
In the lead-up to the Academy Awards, interest in stuttering (The King's Speech) led to countless media interviews with IGERT faculty member Nan Bernstein-Ratner, commenting on the current science of stuttering research.

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**Outreach Activity 7**

**Title:**
Podcast on Bilingualism and Cognitive Abilities

**Name of media outlet or organization for which outreach was done:**
Date of activity: 02/18/2011

Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved:

IGERT co-PI was the focus of a podcast on the cognitive benefits of bilingualism, which was featured on the homepage of AAAS.

Outreach Activity 8

Title: University-wide presentation on interdisciplinarity

Name of media outlet or organization for which outreach was done: University of Maryland

Date of activity: 04/06/2011

Briefly describe this activity, including the type of the activity and the names of individuals within IGERT who were involved:

IGERT PI Colin Phillips & trainee Erika Hussey presented to a campus-wide group of faculty on lessons learned from our IGERT to-date.

Award ID: 0801465

NSF Highlights

PI: Phillips, Colin - Reporting Year: 2011

NSF Highlights 1

Title: Brain Training Research Reveals Plasticity of Language Processing and Comprehension

Primary Strategic Goal:
Discovery: Foster research that will advance the frontiers of knowledge, emphasizing areas of greatest opportunity and potential benefit and establishing the Nation as a global leader in fundamental transformational science and engineering.

Secondary Strategic Goal:
Learning: Cultivate a world-class, broadly inclusive science and engineering workforce and expand the scientific literacy of all citizens.

Describe the achievement / result that is the Highlight:
A recent wave of research has revealed that a variety of cognitive skills, including memory and attention, can be improved following extensive practice with "brain training" tasks. New research conducted by graduate students Erika Hussey and Susan Teubner-Rhodes, and their colleagues at the Center for Advanced Study of Language at
the University of Maryland, demonstrates that the benefits of brain training are not restricted to the cognitive tasks that people routinely practice. Interestingly, the benefits transfer to novel measures of language performance that are not part of the training regimen. Both students are trainees in Maryland’s "Biological and Computational Foundations of Language Diversity" program, which is supported by NSF’s Integrative Graduate Education and Research Traineeship (IGERT) program. Hussey and Teubner-Rhodes’ brain training research targets cognitive control, the ability to regulate thoughts and actions and override dominant biases when necessary. Cognitive control is important in language comprehension due to the sequential nature of language input: in reading this article, your eyes are make successive fixations across the page, and gradually build up sentence meanings as each new word arrives. However, efficient, incremental language processing can be costly when ambiguity arises. An initial commitment to one interpretation may eventually turn out to be wrong, when subsequent words suggest an entirely different meaning. This can lead to temporary confusion and the need to reinterpret what was just read. An example of this can be seen in the New York Times headline: ?Google’s computer might betters translation tool?. Hussey and Teubner-Rhodes propose that cognitive control is critical for this reinterpretation process, because the change of interpretation requires comprehenders to override an initial, dominant interpretation bias. By integrating theories and techniques that span the fields of psychology, neuroscience, and linguistics, Hussey and Teubner-Rhodes are the first to investigate whether training of cognitive control abilities generalizes to improvements in language reinterpretation, and hence reduces the number of errors in language understanding. The research team recruited healthy native-English speaking adults and assigned them to a training or no-training control group. All participants completed pre/post assessments involving reading sentences that are susceptible to misinterpretation, such as "While the thief hid the jewelry sparkled brightly." Eye movements were recorded to measure moment-by-moment comprehension difficulty. Each sentence was paired with a comprehension question that tested whether successful reinterpretation had occurred. For example: "Did the thief hide himself?", where an incorrect 'no' responses would reflect failure to reinterpret. In between assessments, trainees received an intensive 20-hour training regimen, which included a battery of tasks geared toward improving attention regulation abilities, but did not include any kind of reading practice. All training tasks adjusted difficulty to individual performance levels, keeping participants continually engaged. One training task required participants to practice overriding a dominant strategy by being forced to rely on task-relevant, non-dominant features. In the sentence comprehension task, trainees' accuracy to comprehension questions improved significantly following training, suggesting more successful reinterpretation. Eye movement patterns also revealed training-related improvements in reanalysis: trainees spent less time re-reading confusing sentence regions post-training. Untrained participants showed no such improvements. Importantly, individuals who improved the most during the training regimen showed the greatest gains in accuracy performance at posttest. These patterns suggest that trainees? gains were mediated by cognitive training. Hussey and Teubner-Rhodes argue that these performance improvements show that recovery from misinterpretation may be a plastic cognitive skill, adaptable by consistent cognitive control training. Together, these findings have important implications for patient populations with cognitive control impairments that affect language skills, including an inability to revise incorrect interpretations. The present study may also inform ways of determining how to offset the depletion of cognitive control in cases of cognitive-fatigue, stress, and performance-pressure.

How does this activity address the primary and secondary NSF Strategic Goals you indicated above?

This activity addresses NSF’s strategic goal of Discovery by uncovering previously unknown aspects of the plasticity of adult language comprehension abilities. This activity addresses NSF’s strategic goal of Learning by engaging two PhD students in cross-disciplinary research training that spans multiple fields, involves multiple supervisors, and multiple research paradigms.

Images Uploaded

Image 1 information

Image Title:

Eye fixation patterns are used to measure language comprehension difficulty

Does NSF have permission to use this image? Yes

Image credits:

Erika Hussey, Susan Teubner-Rhodes

Description of image:

Eye fixation patterns are used to measure language comprehension difficulty
Best Practice 1

Student leadership in program activities was already an important component of our program, but it has moved to a new level in 2010-11, through the network of student committees described elsewhere in this report, and through an additional student-led initiative that specifically bridges the Linguistics and Philosophy departments ('PHLING'). The more active that students are in creating their own educational opportunities, the more they benefit from them. The more engaged that students are in leading program activities and initiatives, the more they adopt a non-parochial perspective, and appreciate the challenges that must be overcome in order to do successful interdisciplinary work.

Measure 1

Student leadership/ownership has led to a number of highly successful events, and it has also helped to attract more students into the community. It is our impression that students now feel more connected to a cross-department community than they did one year ago. In the case of the PHLING group, which organizes reading/research groups, and research/professional development visits specifically by junior faculty from other institutions, the experience of student leadership is beginning to lead to a culture change in the Philosophy department, in areas beyond the reach of our IGERT. This is exactly the kind of institutional change that we hoped for.
Best Practice 2

This year we introduced a new participant status, the IGERT Apprenticeship. This was aimed at new students who were considering becoming full IGERT program participants. The program helped them to develop an innovative and feasible interdisciplinary research and training plan, to get to know faculty and experienced students from across the university, and to facilitate access to program resources. The IGERT Apprenticeship was introduced in Fall 2010, and subsequently ten student apprentices were paired with experienced IGERT students, who guided them through designing their research and the application process. The apprentices also were given guidance on relevant faculty to consult with when designing their proposals, and the PI and program coordinator kept in contact with the apprentices and/or their advisors to monitor the progress of their proposals.

Measure 2

All of the 10 apprentices in the program submitted full applications to the program. This number was higher than in the past year, and included two applicants from a department that is newly engaged in the program, Philosophy. In previous years we have seen more students express interest in applying to the program and then not complete the process. We also hope that the connections that these new students forced through the apprentice program will give them a head-start in pursuing their IGERT training.

Best Practice 3

One of the best ways to ensure that IGERT trainees are prepared to collaborate across disciplinary boundaries is to provide them with opportunities to teach their skills to members of a broad audience, from different disciplines, and having different levels of education (such as high school students, undergraduates, audiences from another field, etc). Most of our IGERT students led at least one session during the Winter Storm intensive workshop, the Northwood High School Outreach day, or the pre-conference methods workshops that we offered to 200 participants in the Second Language Research Forum (SLRF) conference.

Measure 3

Students report a high degree of satisfaction with their experience at the events where they engage with audiences from outside their discipline. Students also receive reviews after many of these experiences. This allows them to adjust the content, vocabulary and the style of their presentation in future activities. For example, the Language Diversity component incorporated into the 2010 Winter Storm workshop received less favorable reviews, as the information proved to be too basic for Linguistics students and too complex for some students from other fields. Students used these reviews in designing the 2011 Winter Storm, which turned out to be the largest and most successful to date.

### Mark the following components of multidisciplinary/interdisciplinary research preparation that apply to the majority of IGERT trainees involved in your project during this reporting period.

<table>
<thead>
<tr>
<th>Component</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainees undertook formal coursework/training in research methods, practices, and instrumentation in their primary discipline equivalent to traditional graduate students.</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees had practical, hands-on laboratory and/or field experience in conducting research across the breadth of disciplines in the IGERT program.</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees undertook formal coursework/training across the breadth of disciplines encompassed by the IGERT project.</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees undertook formal coursework/training in both the ethical conduct of research and ethical conduct related to the themes encompassed by your IGERT project.</td>
<td>Yes</td>
</tr>
<tr>
<td>Other preparation to conduct high-quality research. :</td>
<td>No</td>
</tr>
<tr>
<td>No components of Trainee Preparation in Multidisciplinary/Interdisciplinary Research applied during this reporting period.</td>
<td>No</td>
</tr>
</tbody>
</table>

Printed: May 01, 2011
**Award ID: 0801465**  
**IGERT Project Features - Trainee Preparation in Professional Skills**  
**PI: Phillips, Colin - Reporting Year: 2011**

Mark the following components of professional skills development that apply to the majority of IGERT trainees involved in your project during this reporting period.  

<table>
<thead>
<tr>
<th>Component</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainees undertook coursework/training that included regular faculty critique of and feedback on professional writing.</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees authored, submitted, or published research papers in refereed journals.</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees undertook coursework/training (e.g., brown bags, seminars) that included regular critique of and feedback on professional speaking/presentation skills.</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees made presentations at academic/scientific professional conferences or meetings.</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees presented results from their IGERT project to professional, nonacademic audiences (e.g., industry, government).</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees undertook coursework/training to develop media-based or information technology-based communication skills.</td>
<td>No</td>
</tr>
<tr>
<td>Trainees produced multimedia materials, Web sites, or other cyber-enabled tools to communicate the results of their IGERT activities to external audiences.</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees used multimedia materials, Web sites, or other cyber-enabled tools as part of their interdisciplinary scientific training and collaboration.</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees received training in team-building and project management skills.</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees received training in effective time and task management.</td>
<td>No</td>
</tr>
<tr>
<td>Trainees <strong>participated as members of teams</strong> engaged in joint research, education, and/or outreach efforts.</td>
<td>Yes</td>
</tr>
<tr>
<td>Trainees <strong>led teams</strong> engaged in research, education, and/or outreach efforts.</td>
<td>Yes</td>
</tr>
<tr>
<td>Other preparation in professional skills development. : Series of 4 career development workshops, including a presentation on non-academic careers in science policy.</td>
<td>Yes</td>
</tr>
<tr>
<td>No components of Trainee Preparation in Professional Skills applied during this reporting period.</td>
<td>No</td>
</tr>
</tbody>
</table>

Printed: May 01, 2011

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**Award ID: 0801465**  
**IGERT Project Features - Trainee Preparation for STEM Careers**  
**PI: Phillips, Colin - Reporting Year: 2011**

Mark the following components that apply to the majority of IGERT trainees involved in your project during this reporting period.  

<table>
<thead>
<tr>
<th>Component</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainees received training or instruction (e.g., courses, workshops) in effective teaching practices.</td>
<td>No</td>
</tr>
</tbody>
</table>
Trainees developed and presented course and/or curriculum materials. No
Trainees served as mentors to others (e.g., graduate students, undergraduates, laboratory technicians). Yes
Trainees received training/mentoring in grant proposal preparation. Yes
Trainees authored/coauthored and submitted grant proposals. Yes
Trainees received training/instruction on the interaction between academic research and industrial technical requirements. No
Trainees received training/instruction for applying their research to address public policy concerns or issues. No
Trainees had internships (off-campus, research, educational, and/or work experiences) in nonacademic settings (e.g., industry, government). No
Trainees had professional interactions other than internships with nonacademic employers (e.g. industry, government) in order to learn about career opportunities and requirements. Yes
Trainees communicated, worked, or collaborated with scientists of other nationalities. Yes
Other preparation for careers in academia. : Trainees took on active leadership roles in the program, learning and demonstrating skills that would help them in their future academic careers. Yes
Other preparation for nonacademic careers (e.g., industry, government). : Trainees had the opportunity to learn about working in a non-academic environment from a government employee, former UMD Linguistics Graduate. Yes
No components of Trainee Preparation for STEM Careers applied during this reporting period. No

Award ID: 0801465
IGERT Project Features - Tactics for Recruitment and Broadening Participation
PI: Phillips, Colin - Reporting Year: 2011

Do you have an overall, active plan with a specific set of goals and timelines for the recruitment and retention of trainees, including specifics for broadening participation of groups underrepresented in science and engineering?

No; We have clear development/mentoring practices. And we have discussed the specific needs of individual minority students. The component that we don?t have is a special program for recruitment, as we have found that the best strategies are (i) overall distinction, and (ii) involvement in the right language-related programs.

Best Practice 1
All of our successful IGERT applicants come from the cohorts of students who have been IGERT affiliates/apprentices for at least one semester prior to applying. This entails that focusing on increasing the number and diversity of students interested in the trying out IGERT program activities before committing to become a full participant improves our pool of applicants. Recruitment works best when students become interested very early in their graduate studies, before work-habits have become entrenched, and when efforts are made to keep them engaged. In 2010-11 we implemented two mechanisms to inform first year PhD students about program opportunities and to interest them in joining as affiliates/apprentices: 1) at the new Language Science Day event we targeted all first year language students from each of the departments in our network; 2) we ensured that after this first interaction students were kept informed through e-mail communication and invitations to all our other events.

Best Practice 2
Students are more confident about applying to a program if they believe there is a good chance that they will succeed. Over the three years of our IGERT program we have observed that the most successful students are those who are
supportive of each other as a network of peers that sets high but achievable standards. Our new IGERT Apprenticeship program was implemented in an effort to accelerate integration of students into a successful network. We hope that the contacts established through this process will help to ensure retention and timely completion of the program. The student committees have also made efforts to strengthen networks by extending groups formed during the Winter Storm workshops such that they meet throughout the year.

**Best Practice 3**

We believe that - in our field, at least - the recruitment and retention practices that are most effective for broadening participation are also most effective for students in general. The two main ingredients are: 1) the program's scientific reputation and visible success; 2) the existence of a vibrant, supportive community that helps all students to maximize their success. All students appreciate both of these, but recognition of the importance of the second component comes earlier for some students than others. A notable recruitment success for our program in 2010-2011 involves a minority student who we unsuccessfully recruited a couple of years ago. After a couple of years of graduate experience, the student better appreciates the importance of a broad mentoring structure from faculty and peers, and so has revisited the original decision.

**Please describe the extent to which each of the following practices have been productive for recruiting trainees overall to your IGERT project during this reporting period.**

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationships with NSF programs that can provide an undergraduate pool of potential IGERT trainees (e.g., REUs, NSF Centers)</td>
<td>NA</td>
</tr>
<tr>
<td>Relationships with faculty and programs at other academic institutions</td>
<td>Productive</td>
</tr>
<tr>
<td>Use of recruiting resources on your campus (e.g., career service office, graduate studies office)</td>
<td>Somewhat productive</td>
</tr>
<tr>
<td>Collaboration with other IGERT projects on recruitment</td>
<td>NA</td>
</tr>
<tr>
<td>Use of professional meetings, conferences, associations to communicate with, reach out to, and market to potential IGERT Trainees</td>
<td>Somewhat productive</td>
</tr>
<tr>
<td>Other: New students witnessing IGERT student leadership, and academic and professional success.</td>
<td>Productive</td>
</tr>
</tbody>
</table>

**Please describe the extent to which each of the following practices have been productive for recruiting underrepresented minority and women trainees to your IGERT project during this reporting period.**

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Underrepresented Minorities</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationships with NSF programs that specifically focus on broadening participation of underrepresented minorities or women in STEM (e.g., LSAMP, AGEP, TCUP, or ADVANCE)</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Use of resources on your campus (e.g., academic advancement programs, offices for campus diversity, or minority and women's student groups)</td>
<td>Not productive</td>
<td>Not productive</td>
</tr>
<tr>
<td>Interaction with professional associations, organizations, or committees serving underrepresented minority communities or women (e.g., National Action Council for Minorities in Engineering, Society of Women Engineers, committees in professional societies focused on minority communities and women)</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Bridge programs for entering graduate students</td>
<td>Productive</td>
<td>Productive</td>
</tr>
<tr>
<td>Mentoring or advising arrangements that take advantage of underrepresented minorities or women faculty or graduate students on campus</td>
<td>Somewhat productive</td>
<td>Somewhat productive</td>
</tr>
<tr>
<td>Relationships with faculty and programs at minority-serving academic institutions (e.g., historically black colleges and universities, Hispanic-serving institutions, or tribal colleges)</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Collaboration with other IGERT projects on recruitment</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Other: Student interactions with visiting faculty/speakers.</td>
<td>Productive</td>
<td>Productive</td>
</tr>
</tbody>
</table>
According to NSF records, this project does not have explicit funding for an international component.

**Training Experience/Component 1**
Sunyoung Lee-Ellis developed an NSF dissertation grant proposal to support her research in Korea. The proposal development process provided valuable experience in grant writing and research planning. The proposal was successful, so she was able to carry out the international research, and gained valuable experience from that in working in foreign institutions. More recently, Giovanna Morini has also developed an NSF proposal for international research (via the EAPSI program), which will allow her to gain research experience in Singapore in Summer 2011.

**Training Experience/Component 2**
Susan Teubner-Rhodes gained valuable experience in international collaboration through the research project on bilingual language processing that she developed in conjunction with researchers from the University of Barcelona, Spain.

**Training Experience/Component 3**
Brian Dillon spent a month at the University of Potsdam, Germany, learning computational modeling theory and tools. This experience was particularly productive, since his host group in Germany is the most active advocate of a theoretical view that Brian's dissertation work argues against. By having people on both sides of a debate engage closely with one another the debate has become more sophisticated.

**Research/Educational Achievement 1**
Annie Gagliardi completed one series of studies on language learning in Norwegian Children at the University of Tromsø (she will return for further studies later in 2011).

**Research/Educational Achievement 2**
Susan Teubner-Rhodes implemented studies on bilingual language processing (Spanish/Catalan) in collaboration with U of Barcelona faculty and researchers from the Center for Advanced Study of Language at the U of Maryland.

**Research/Educational Achievement 3**
Sunyoung Lee-Ellis completed the research for for a key component of her PhD dissertation during a research visit to Ewha Women's University in Seoul, Korea.

**Is international participation required for all trainees involved in your IGERT project?**
No

**Did one or more trainees from your IGERT project engage in an international experience through the project during this reporting period?**
Yes

**Specific International Experiences - Experience Detail 1**

<table>
<thead>
<tr>
<th>Country:</th>
<th>Korea, South</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainees involved:</td>
<td>Sunyoung Lee-Ellis</td>
</tr>
<tr>
<td>Which of the following international actions or work in this country involved trainees?</td>
<td>Response</td>
</tr>
<tr>
<td>Trainees attended conferences/workshops.</td>
<td>No</td>
</tr>
<tr>
<td>Trainees undertook coursework/training.</td>
<td>No</td>
</tr>
<tr>
<td>Trainees worked, conducted research/field work, or interned in industrial settings.</td>
<td>No</td>
</tr>
<tr>
<td>Trainees worked, conducted research/field work, or interned in academic settings.</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Trainees worked, conducted research/field work, or interned in other settings (e.g., national laboratories, nongovernmental organizations).  

Other international actions/work.  

<table>
<thead>
<tr>
<th>Specific International Experiences - Experience Detail 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country:</strong> Norway</td>
</tr>
<tr>
<td><strong>Trainees involved:</strong> Ann Gagliardi</td>
</tr>
<tr>
<td><strong>Which of the following international actions or work in this country involved trainees?</strong></td>
</tr>
<tr>
<td>Trainees attended conferences/workshops.</td>
</tr>
<tr>
<td>Trainees undertook coursework/training.</td>
</tr>
<tr>
<td>Trainees worked, conducted research/field work, or interned in industrial settings.</td>
</tr>
<tr>
<td>Trainees worked, conducted research/field work, or interned in academic settings.</td>
</tr>
<tr>
<td>Trainees worked, conducted research/field work, or interned in other settings (e.g., national laboratories, nongovernmental organizations).</td>
</tr>
<tr>
<td>Other international actions/work.</td>
</tr>
</tbody>
</table>

**Specific International Experiences - Experience Detail 3**

**Country:** Spain  
**Trainees involved:** Shannon Barrios  
Susan Teubner-Rhodes  

<table>
<thead>
<tr>
<th>Which of the following international actions or work in this country involved trainees?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainees attended conferences/workshops.</td>
</tr>
<tr>
<td>Trainees undertook coursework/training.</td>
</tr>
<tr>
<td>Trainees worked, conducted research/field work, or interned in industrial settings.</td>
</tr>
<tr>
<td>Trainees worked, conducted research/field work, or interned in academic settings.</td>
</tr>
<tr>
<td>Trainees worked, conducted research/field work, or interned in other settings (e.g., national laboratories, nongovernmental organizations).</td>
</tr>
<tr>
<td>Other international actions/work.</td>
</tr>
</tbody>
</table>

**Specific International Experiences - Experience Detail 4**

**Country:** United Kingdom  
**Trainees involved:** Erika Hussey  
Susan Teubner-Rhodes  

<table>
<thead>
<tr>
<th>Which of the following international actions or work in this country involved trainees?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainees attended conferences/workshops.</td>
</tr>
<tr>
<td>Trainees undertook coursework/training.</td>
</tr>
<tr>
<td>Trainees worked, conducted research/field work, or interned in industrial settings.</td>
</tr>
<tr>
<td>Trainees worked, conducted research/field work, or interned in academic settings.</td>
</tr>
<tr>
<td>Trainees worked, conducted research/field work, or interned in other settings (e.g., national laboratories, nongovernmental organizations).</td>
</tr>
<tr>
<td>Other international actions/work.</td>
</tr>
</tbody>
</table>
Trainees attended conferences/workshops. Yes
Trainees undertook coursework/training. No
Trainees worked, conducted research/field work, or interned in industrial settings. No
Trainees worked, conducted research/field work, or interned in academic settings. No
Trainees worked, conducted research/field work, or interned in other settings (e.g., national laboratories, nongovernmental organizations). No
Other international actions/work. No

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**Award ID: 0801465**

**IGERT Project Features - Partnerships/Collaborations**

**PI: Phillips, Colin - Reporting Year: 2011**

**Were there active partnerships/collaborations outside of your university through your IGERT project during this reporting period?**

Yes

**Academic Partner 1**

**Active Status**

Yes

**Partner Name**

Gallaudet University

**Type of partner**

Ph.D.-granting institution

Minority-serving institution

**Funding arrangement for this partner**

Partner provides funding to the IGERT project specifically for IGERT Trainees in any way (e.g., internships, travel, training).

Partner provides funding to the IGERT project for research, curriculum, or other project activities, but not directly for trainees.

**Activities for this partner/institution**

**Facilities:** IGERT trainees use a partner organization's facilities for project activities.

**Collaborative Research/Teaching:** Partner organization's personnel work with IGERT project staff on collaborative research/teaching.

**Personnel Exchange:** IGERT Trainees and/or partner organization personnel use each other's facilities or work at each other's sites on an ad hoc or as-needed basis.

**Activities for this partner/institution**

PhD students So-one Hwang and Clifton Langdon-Grigg, from Maryland and Gallaudet respectively, successfully increased cross-institutional ties through a number of initiatives. Students in Gallaudet's VL2 Center, an NSF Science of
Learning Center, with students normally distributed across the country) developed new partnerships through participation in our IGERT's Winter Storm workshops. Awareness of sign-language issues was increased through the participation of Gallaudet students in our IGERT's outreach program. Hwang's research, co-supervised by faculty from Maryland and Gallaudet, led to a successful NSF Dissertation improvement grant.

**Academic Partner 2**

**Active Status**
Yes

**Partner Name**
Northwood High School

**Type of partner**
K-12 institution

**Funding arrangement for this partner**
No funding/direct financial interaction is involved in this partnership.

**Activities for this partner/institution**

**Collaborative Research/Teaching:** Partner organization's personnel work with IGERT project staff on collaborative research/teaching.

Our program's partnership with Northwood High School continued to improve this year. NHS is a local school that has a 70% minority student population. IGERT co-PI Jeff Lidz has visited NHS to make a presentation to around 150 students. Around 80 NHS students visited the U of Maryland for a half-day series of interactive workshops. The outcome for the high school students is that they gain exposure to a college experience, which is new for many of them, and learn valuable lessons about the link between research data and research conclusions. The outcome for the IGERT students who led the 10 concurrent activities is that they gain a broader perspective on the science that they are already engaged in, and think about how to get non-experts excited about research. This year's event made a number of improvements upon last year's event, based on a formative assessment process, and it was uniformly perceived as more successful. Plans are underway to expand the outreach program.

**Academic Partner 3**

**Active Status**
No

**Partner Name**
IGERT programs at Johns Hopkins U & UPenn

**Type of partner**
Ph.D.-granting institution

**Funding arrangement for this partner**
No funding/direct financial interaction is involved in this partnership.

**Activities for this partner/institution**

**Collaborative Research/Teaching:** Partner organization's personnel work with IGERT project staff on collaborative research/teaching.

**Activities for this partner/institution**

**Academic Partner 4**

**Active Status**
Yes

**Partner Name**
Beijing Normal University
**Type of partner**
Ph.D.-granting institution
Foreign-based institution

**Funding arrangement for this partner**
Partner provides funding to the IGERT project for research, curriculum, or other project activities, but not directly for trainees.

**Activities for this partner/institution**
- **Facilities:** IGERT trainees use a partner organization's facilities for project activities.
- **Collaborative Research/Teaching:** Partner organization's personnel work with IGERT project staff on collaborative research/teaching.

**Activities for this partner/institution**
Research based on three IGERT students' projects at BNU has been presented at conferences and submitted to journals.

**Academic Partner 5**

**Active Status**
No

**Partner Name**
Federal University of Rio de Janeiro

**Type of partner**
Ph.D.-granting institution

**Funding arrangement for this partner**
No funding/direct financial interaction is involved in this partnership.

**Activities for this partner/institution**
- **Facilities:** IGERT trainees use a partner organization's facilities for project activities.

**Academic Partner 6**

**Active Status**
Yes

**Partner Name**
Hiroshima University

**Type of partner**
Ph.D.-granting institution
Foreign-based institution

**Funding arrangement for this partner**
No funding/direct financial interaction is involved in this partnership.

**Activities for this partner/institution**
- **Facilities:** IGERT trainees use a partner organization's facilities for project activities.
- **Personnel Exchange:** IGERT Trainees and/or partner organization personnel use each other's facilities or work at each other's sites on an ad hoc or as-needed basis.
Activities for this partner/institution
Results from research carried out with the Hiroshima University partners has been presented at leading conferences in language learning and developmental psychology.

Academic Partner 7

Active Status
Yes

Partner Name
University of Tromsø

Type of partner
Ph.D.-granting institution
Foreign-based institution

Funding arrangement for this partner
Other : Partial support from partnership between Norwegian Science Foundation and NSF’s Graduate Research Fellowship program

Activities for this partner/institution
Facilities: IGERT trainees use a partner organization's facilities for project activities.

Collaborative Research/Teaching: Partner organization's personnel work with IGERT project staff on collaborative research/teaching.

Personnel Exchange: IGERT Trainees and/or partner organization personnel use each other's facilities or work at each other's sites on an ad hoc or as-needed basis.

Activities for this partner/institution
Ann Gagliardi completed the first round of a series of studies on Norwegian children’s language learning. She will return to Tromsø for further studies later in 2011.

Academic Partner 8

Active Status
Yes

Partner Name
University of Potsdam

Type of partner
Ph.D.-granting institution

Funding arrangement for this partner
No funding/direct financial interaction is involved in this partnership.

Activities for this partner/institution
Facilities: IGERT trainees use a partner organization's facilities for project activities.

Personnel Exchange: IGERT Trainees and/or partner organization personnel use each other's facilities or work at each other's sites on an ad hoc or as-needed basis.

Activities for this partner/institution
Brian Dillon completed the computational modeling research for his dissertation through working with Prof. Shravan Vasishth and his students for a month.

Academic Partner 9

Active Status
Yes
Partner Name
University of Barcelona

Type of partner
Ph.D.-granting institution

Funding arrangement for this partner
No funding/direct financial interaction is involved in this partnership.

Activities for this partner/institution
Facilities: IGERT trainees use a partner organization's facilities for project activities.
Personnel Exchange: IGERT Trainees and/or partner organization personnel use each other's facilities or work at each other's sites on an ad hoc or as-needed basis.

Government Partner 1
Active Status
Yes
Partner Name
National Institutes of Health
Type of government agency
U.S. Federal laboratory or research facility
Funding arrangement for this partner
Partner provides funding to the IGERT project specifically for IGERT Trainees in any way (e.g., internships, travel, training).
Partner provides funding to the IGERT project for research, curriculum, or other project activities, but not directly for trainees.
Activities for this partner/institution
Facilities: IGERT trainees use a partner organization's facilities for project activities.
Collaborative Research/Teaching: Partner organization's personnel work with IGERT project staff on collaborative research/teaching.
Personnel Exchange: IGERT Trainees and/or partner organization personnel use each other's facilities or work at each other's sites on an ad hoc or as-needed basis.
Activities for this partner/institution
Joshua Riley completed a project on Foreign Accent Syndrome, jointly supervised by Allen Braun of NIH and Bill Idsardi of the U of Maryland. This work was presented at the Academy of Aphasia conference, and has been submitted to a journal.

Government Partner 2
Active Status
Yes
Partner Name
Center for Advanced Study of Language
Type of government agency
U.S. Federal laboratory or research facility
Funding arrangement for this partner

Partner provides funding to the IGERT project for research, curriculum, or other project activities, but not directly for trainees.

Other: CASL provides research supervision and financial support for projects involving IGERT trainees. It also provides partial funding and research supervision for some IGERT Associate students who are full participants in our program.

Activities for this partner/institution

Facilities: IGERT trainees use a partner organization's facilities for project activities.

Collaborative Research/Teaching: Partner organization's personnel work with IGERT project staff on collaborative research/teaching.

Personnel Exchange: IGERT Trainees and/or partner organization personnel use each other's facilities or work at each other's sites on an ad hoc or as-needed basis.

Internships: IGERT Trainees work in a partner's facilities specifically as interns.

CASL co-sponsored the Language Science Day event that took place in September 2010, through funding and 20 participants. IGERT co-PI Amy Weinberg assumed a key leadership position at CASL, which is strengthening ties between CASL researchers and university students and faculty.

Award ID: 0801465

IGERT Project Features - Project Evaluation

PI: Phillips, Colin - Reporting Year: 2011

Do you have an overall plan with milestones and timelines for measuring progress toward attaining key IGERT project goals?

Yes

If your IGERT project paid for professional evaluation services external to the IGERT institution or used expertise internal to your institution to aid in the evaluation process, please share contact information.

Organization/individual name

Sharon La Voy

Address

Office of Institutional Research, Planning and Assessment, 1101 Mitchell Building, College Park, MD 20742

E-mail address

slavoy@umd.edu

Phone

3014053828

Web site

www.irpa.umd.edu

Was this an external evaluation service provider?

No

Please describe a key insight, and your response to it (if any), that has been identified through
assessment and evaluation during this reporting period.

Insight/Learning

During the current reporting period we have carried out four assessment activities: three focus groups (for faculty, new students, and graduating students, respectively) and the yearly Winter Storm workshop assessment. The report from the faculty focus group revealed a potential disconnect between faculty participation and the students' perception of this participation. Faculty members believe they are quite involved in the program and supportive of the students they advise, but there is an impression among students that faculty members are not participating in program activities in a manner that is consistent and representative across departments.

Response

The IGERT Executive Committee, including one student representative, addressed the issue and came up with a list of actions that can improve both faculty participation and increase the visibility of existing faculty involvement. One action involves improving student awareness of who are the faculty outside their home department are (it's a large group, so this does not happen automatically). Our new website is one step in this direction, as is the Language Science Day event that we started in 2010. We have started to encourage more faculty mentoring of student research groups and student committees, and we will make efforts to publicize this involvement, both to participating students and faculty, and to the non-participating department chairs of those faculty, who are not consistently of their faculty's contributions.

Award ID: 0801465

IGERT Project Features - Institutional Impacts

PI: Phillips, Colin - Reporting Year: 2011

Please consider your responses to the following in light of changes/impacts that have occurred in your institution as a result of your IGERT project during this reporting period.

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>The institution(s) involved in your IGERT project has/have been successful in obtaining large-scale Federal grants (e.g., STC, ERC, MRSEC).</td>
<td>No</td>
</tr>
<tr>
<td>Interdisciplinary/multidisciplinary courses have been developed for IGERT Trainees and Associates.</td>
<td>Yes</td>
</tr>
<tr>
<td>Interdisciplinary/multidisciplinary courses are being delivered to IGERT Trainees and Associates.</td>
<td>Yes</td>
</tr>
<tr>
<td>Interdisciplinary/multidisciplinary courses that have been developed for IGERT are being delivered to non-IGERT students.</td>
<td>Yes</td>
</tr>
<tr>
<td>New certificate or degree programs have been developed and are available on the IGERT campus(es).</td>
<td>Yes</td>
</tr>
<tr>
<td>Department curriculum or policy changes took place to emphasize or require interdisciplinary/multidisciplinary preparation for all graduate students.</td>
<td>Yes</td>
</tr>
<tr>
<td>Institutional changes that support and encourage team multidisciplinary/interdisciplinary course development and teaching have occurred.</td>
<td>Yes</td>
</tr>
<tr>
<td>Institutional changes that support and encourage team-based graduate student learning and assessment have occurred.</td>
<td>No</td>
</tr>
<tr>
<td>Institutional changes that support and encourage graduate students to gain laboratory and research experiences across disciplines have occurred.</td>
<td>No</td>
</tr>
<tr>
<td>Institutional changes incorporating improved recruitment and retention policies and practices for underrepresented groups and women based on IGERT have occurred.</td>
<td>No</td>
</tr>
</tbody>
</table>
Please describe a demonstrable institutional change (if any) that has occurred during this reporting period due to IGERT

Several faculty groups who are preparing IGERT proposal submissions on the UMD campus have consulted with our team leaders on best practices and achievements, in order to craft a successful program/proposal. The university climate has changed to accommodate interdisciplinary programs like IGERT, and this has led to a more competitive UMD-internal competition to select the team whose proposal will advance to the NSF competition.

**Journal Articles in Non-Refereed Publications**


**Books**


**Book Chapters**


**Conference Presentations**


DeKeyser, R. M. (2010, October). The trajectory of research on aptitude in SLA. Second Language Research Forum, University of Maryland, MD.


*Gagliardi, A., & Lidz, J. (2010, August). The necessity of class internal regularities in the acquisition of Tsez noun classes. Poster presented at GALANA.

Gagnon, M. & Wellwood, A. (2011, May). Distributivity and modality: where "each" may go, "every" can't follow. Semantics and Linguistic Theory (SALT) 21, New Brunswick, NJ.


Kim, S. Y., & Bolger, D. J. (November, 2010). The role of sub-syllabic units in visual word processing of Korean monosyllabic words: A masked priming study. Poster presented at the 51st Annual Meeting of the Psychonomic Society, St. Louis, MO.


Kronrod, Yakov. (2011, April). Translating with Monolinguals: Crowdsourcing and Human Computation. GRID, University of Maryland, College Park, MD.


Booth, J.R. (June, 2010). Developmental divergence in Brain

Poster session presented at the 24th Annual CUNY Conference on Human Sentence Processing, Stanford, CA.

Distributional Evidence. Paper presented at 24th annual CUNY Human Sentence Processing Conference; Stanford, CA.


Phillips, C. (2011, February). Linguistic illusions: Where you see them, where you don’t. Invited talk (1 of 10 ‘topical lectures’ at conference), American Association for the Advancement of Science (AAAS) annual meeting, Washington DC.


Ratner, N. (2011, February). From Freud to fMRI: Untangling the Mystery of Stuttering. Symposium Conducted at the American Association for the Advancement of Science (AAAS) annual meeting, Washington DC.


Missile Defense Sensors, Environment and Algorithms, Orlando, FL.


