

# PIRE 2014

## Information Session

Dr. Judith Kroll

# Undergraduate Research Opportunities

Fall, 2014

## Cognition and Language Lab

Lab Location: Moore Building Basement

Judith Kroll: [jfk7@psu.edu](mailto:jfk7@psu.edu)

### Graduate Students:

Kinsey Bice: [kinseybice@me.com](mailto:kinseybice@me.com)

Jason Gullifer: [jwg20@psu.edu](mailto:jwg20@psu.edu) (with Dussias Lab)

Rhonda McClain: [rhondam1@gmail.com](mailto:rhondam1@gmail.com)

Christian Navarro-Torres: [navarro.torresc@gmail.com](mailto:navarro.torresc@gmail.com) (with Dussias Lab)

Haoyun Zhang: [haoyunzhang89@gmail.com](mailto:haoyunzhang89@gmail.com) (with Diaz Lab)

### Postdoctoral Fellows:

Melinda Fricke: [mdf18@psu.edu](mailto:mdf18@psu.edu) (with Dussias Lab)

Megan Zirnstein: [zirnstein@gmail.com](mailto:zirnstein@gmail.com) (with Van Hell Lab)

### Research Coordinators:

Fengyang Ma: [mafengyang@gmail.com](mailto:mafengyang@gmail.com)

Gabriela Terrazas: [gterrazas2@gmail.com](mailto:gterrazas2@gmail.com)

### Visiting Scholars:

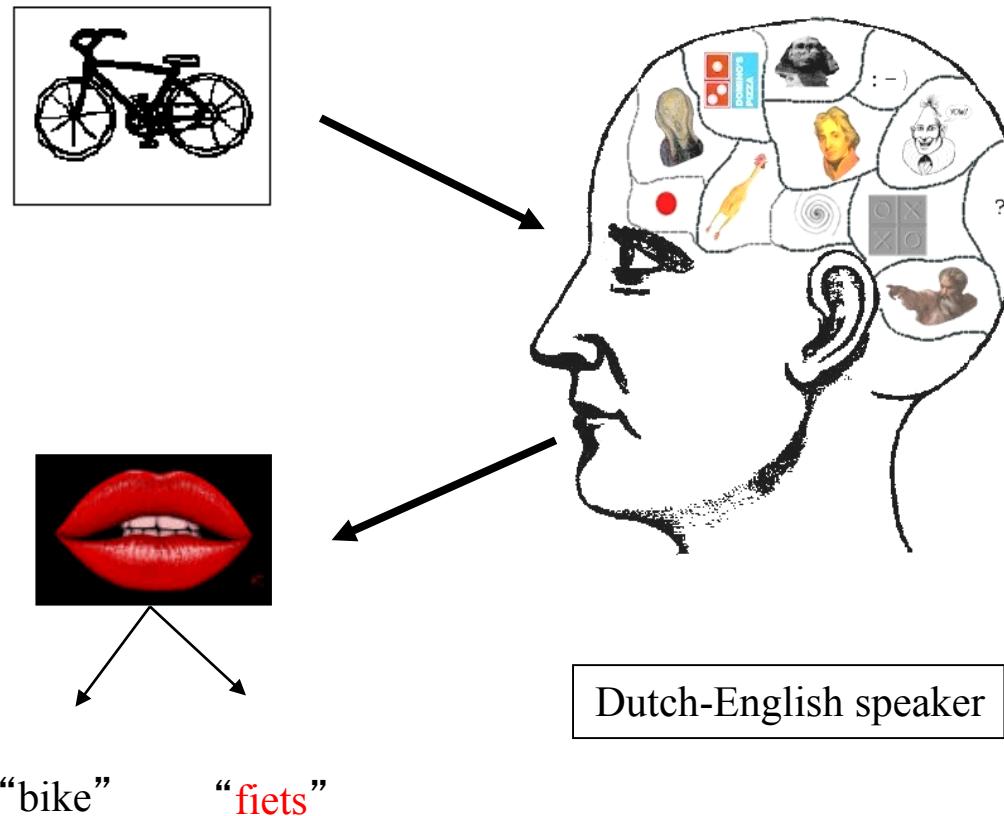
Emilia Ezrina: [ezrina@yandex.ru](mailto:ezrina@yandex.ru) (Fulbright graduate student from Russia)

Noriko Hoshino: [Noriko.Hoshino@gmail.com](mailto:Noriko.Hoshino@gmail.com) (Visiting faculty from Japan)

Zofia Wodniecka: [zwodniecka@gmail.com](mailto:zwodniecka@gmail.com) (Visiting faculty from Poland)

Center for Language Science Laboratories

**The bilingual is a mental juggler:** Both languages appear to be active regardless of the requirement to use one language alone:



It is not possible to simply switch off one language!

What is the consequence of parallel activity and competition across the bilingual's two languages?



Juggling may tune brain networks that enable control and build cognitive reserve.

# Los Angeles Times

## Bilingualism good for the brain, researchers say

The skill helps improve multitasking and prioritizing, and helps ward off early symptoms of Alzheimer's disease, experts say.

## Mail & Guardian online

### On the tip of the tongue

ALOK JHA Mar 18 2011 16:37

 0 comments | Post your comment

"Being bilingual has certain cognitive benefits and boosts the performance of the brain, especially one of the most important areas known as the executive control system," said York University psychology professor Ellen Bialystok at the annual meeting of the American Association for the Advancement of Science being held in Washington, DC.

**Bilingualism Is Like A Mental Gymnasium For The Brain**

**Juggling languages can build better brains**

The focus of our research is on language processing in bilinguals and second language learners:

- ❖ How do bilinguals control the language not in use?
- ❖ What are the consequences of learning to control the two languages for cognition and the brain?
- ❖ What enables some adults to learn a second language easily while others struggle?

One hypothesis about second language learning: Some adults can simply not control their native language!



*Contact me if you are interested: [jfk7@psu.edu](mailto:jfk7@psu.edu)*

Dr. Daniel Weiss

# Statistical Learning in Language

- ❖ Infants can track rudimentary statistical properties in speech
- ❖ Helps discover the fundamental properties and units of speech. E.g., What sounds are important in my language? Where are the words in that stream of speech?



# The Comparative Communication Laboratory



# Statistical learning – beyond the basics

- ⊕ How do language learners know when they are collecting data from the same source or from multiple sources?
  - ⊕ Different Speakers
  - ⊕ Different Dialects
  - ⊕ Different Languages

Dr. Karen Miller

# Language Acquisition Lab

- Research Focus
  - First language acquisition
  - Sociolinguistic Variation
  - Spanish-speaking children 3 – 8 years of age
- Data Collection
  - Naturalistic speech data between caregivers and their children
  - Experimental studies (PMT, Elicited Production Tasks, etc.)







# Language Acquisition Lab

- Lab Activities – Fall 2014
  - Transcribing and coding conversations between children and their caregivers
  - Helping to create experimental materials
  - Attending lab meetings, reading papers, commenting on research proposals
- Contact: Karen Miller ([kxm80@psu.edu](mailto:kxm80@psu.edu))

Dr. Carol Miller

# Child Language Development Laboratory

Carol Miller

Dept. of Communication Sciences  
and Disorders

- Past PIRE students have conducted research on Theory of Mind in preschoolers
  - Monolingual Mandarin speakers in Beijing
  - Bilingual Mandarin-Cantonese speakers in Hong Kong
- ERP research on auditory processing and language
- Bilingual children with SLI (school-age)

Dr. Marianna  
Nadeu  
[nadeu@psu.edu](mailto:nadeu@psu.edu)

# Phonetic variation

- Linguistic factors (e.g., prosody, phonological context, word class, lexical frequency)
- Extralinguistic factors (e.g., gender, age, geographical region, emotional state).
  - Detailed acoustic and articulatory analysis



# Phonetic variation and bilingualism

- Do highly proficient Catalan-Spanish speakers with different degrees of dominance in the two languages transfer phonetic features from their dominant language into the less dominant one?
- Do Spanish-dominant bilinguals exhibit norms that differ from those of monolingual Spanish speakers?

Dr. Matthew  
Carlson

# Matt Carlson

## Spanish, Italian, and Portuguese

- How does grammar shape cognition?
- How does cognition shape grammar?
- How does this relationship evolve dynamically?
  - Longer-term: becoming bilingual
  - Real-time: changing communicative environment/demands (e.g. mixed-language environments)

# Hallucinating vowels

- Grammar can “fill in” missing phonological material, e.g. in a noisy environment.
  - In Spanish, [spesjal] -> /esp̚esjal/
- But languages differ:
  - Spanish: *\*special*; English: *special*
- How malleable are these effects of experience on perception?
  - Do they emerge in second language learning?
  - Do they vary with real-time linguistic conditions?

# Morphologically complex words (e.g. garden+er, ration+al+ist)

- *aliento* + *oso* => *alentoso* OR *alientoso*
  - Which is better?
  - Do they mean the same thing?
  - Why?
- What is the role of morphological structure in representation and processing?
- How does this interact with structural properties (phonology, phonetics) or semantics?
- Does this play out differently for monolinguals and bilinguals?

## Other interests

- network models of the lexicon, language acquisition, language mixing, cognitive consequences of bilingualism

Dr. John Lipski

- Afro-Colombian village of **San Basilio de Palenque**, where the Spanish-derived creole language **Palenquero** is spoken in bilingual contact with Spanish.
- Recent language revitalization efforts have led young (native speakers of Spanish) community members who were not raised speaking the previously shunned creole language to learn this language in school.
- **Palenquero** shares numerous lexical cognates with Spanish but is grammatically quite different; although some constructions can be understood, in general Spanish and **Palenquero** are not mutually intelligible.
- The grammar of **Palenquero** is a “proper subset” of Spanish: no grammatical gender, subject-verb agreement or other inflection attributable to functional categories.
- Young learners’ **Palenquero** provides a unique vantage point from which to evaluate theories of second language acquisition, particularly in terms of the development of **functional categories** such as gender and number.
- In the case of Spanish speakers learning **Palenquero**, previously acquired Spanish grammatical inflection, including noun and adjective gender and number marking must be “un-learned,” potentially allowing for the separation of research variables based exclusively on the learning of new material.
- This research complements studies on ultimate attainment of adult L2 learners (often couched in terms of acquiring new functional categories), as well as inhibitory control in bilinguals, by examining the little-studied concept of “turning off” L1 syntactic structures.



[jlipski@psu.edu](mailto:jlipski@psu.edu)

[jlipski](#)

# Dr. Mike Putman

Hyoun-A and Lara

## WHAT WE ARE INTERESTED IN:

1. HOW DO LANGUAGES (IN PARTICULAR, GERMAN) CHANGE OVER TIME?
2. ARE THERE PARTICULAR ASPECTS OF GRAMMAR THAT ARE MORE SUSCEPTIBLE TO CHANGE?
3. WHAT ROLE DOES AGE OF ACQUISITION AND AMOUNT OF DAILY USAGE PLAY IN THE MAINTENANCE AND DECAY OF GRAMMARS?



## POSSIBLE OPPORTUNITIES:

1. FIELD WORK AND EXPERIMENT DESIGN WORKING WITH L1 HERITAGE SPEAKERS OR NATURAL L2 LEARNERS OF GERMAN (OR POSSIBLY OTHER LANGUAGES).
2. OPPORTUNITIES TO LEARN MORE ABOUT HOW TO STORE LINGUISTIC DATA AND CODIFY IT.

# German in contact

Prof. Mike Putnam, GSLL & Linguistics

[mike.putnam@psu.edu](mailto:mike.putnam@psu.edu)

Dr. Lisa Reed

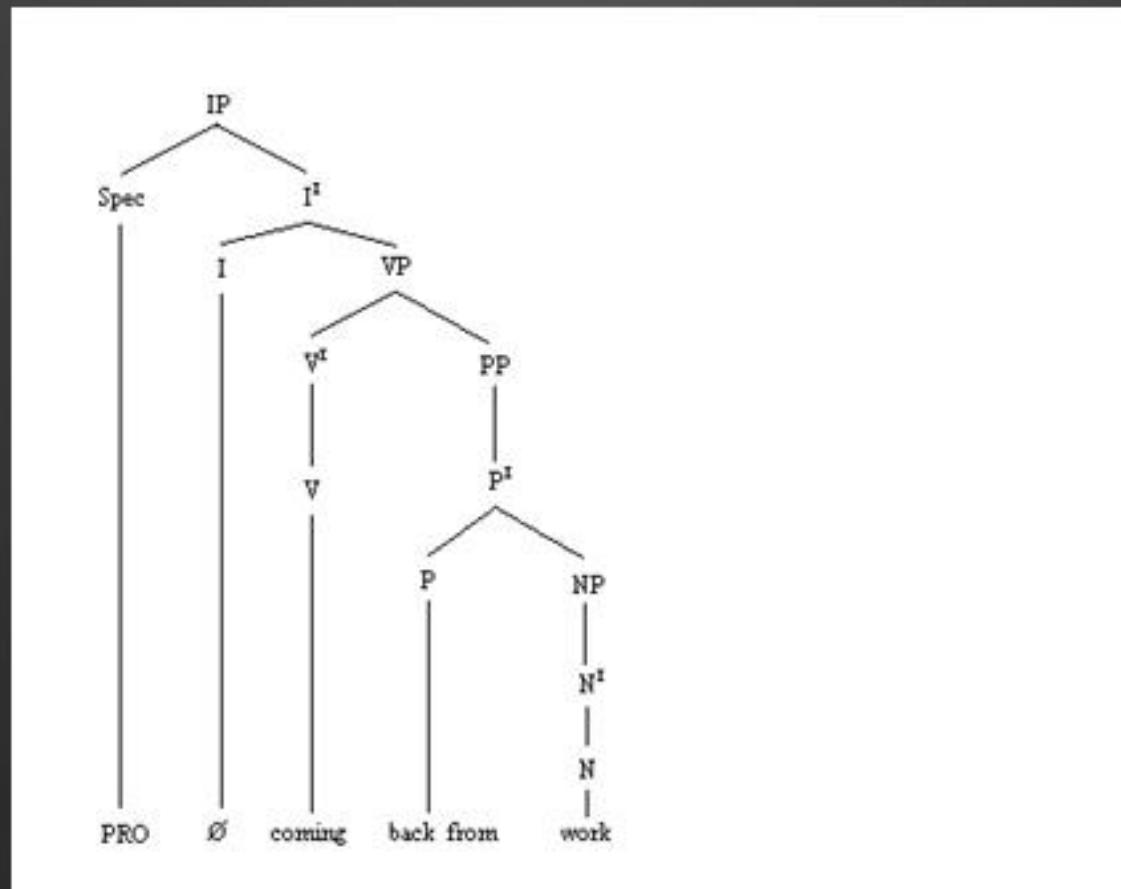
# Lisa A. Reed

Associate Professor of French & Linguistics



# Research & Teaching Interests: Syntax

Formal Study of Rules of Sentence Structure



# Research & Teaching Interests: Semantics

The Formal Study of Rules of Interpretation

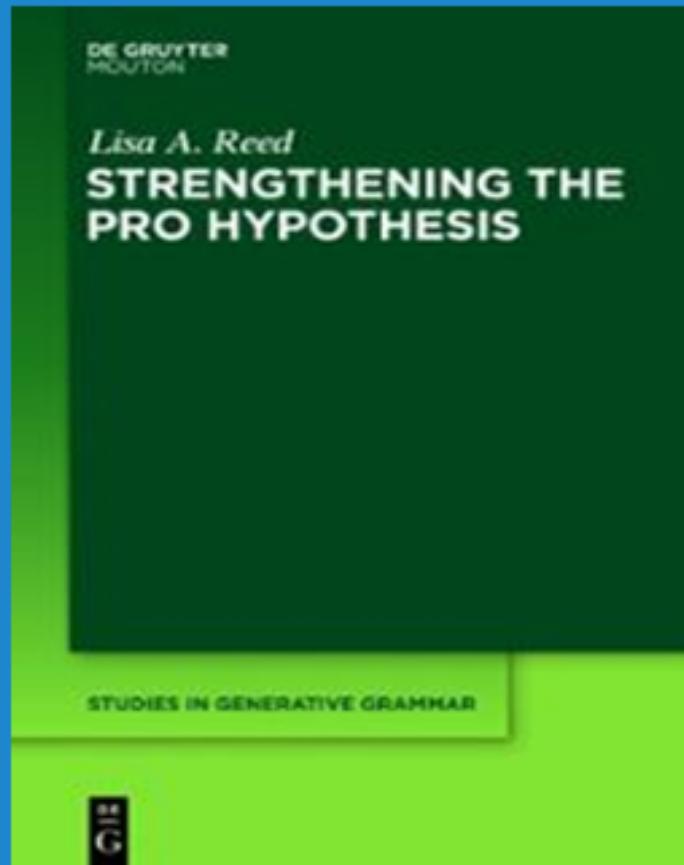
**“I’m sorry” and “my bad”  
mean the same thing...**



**Unless you are at  
a funeral.**

# Some Recent Publications

*Most recent book publication...*



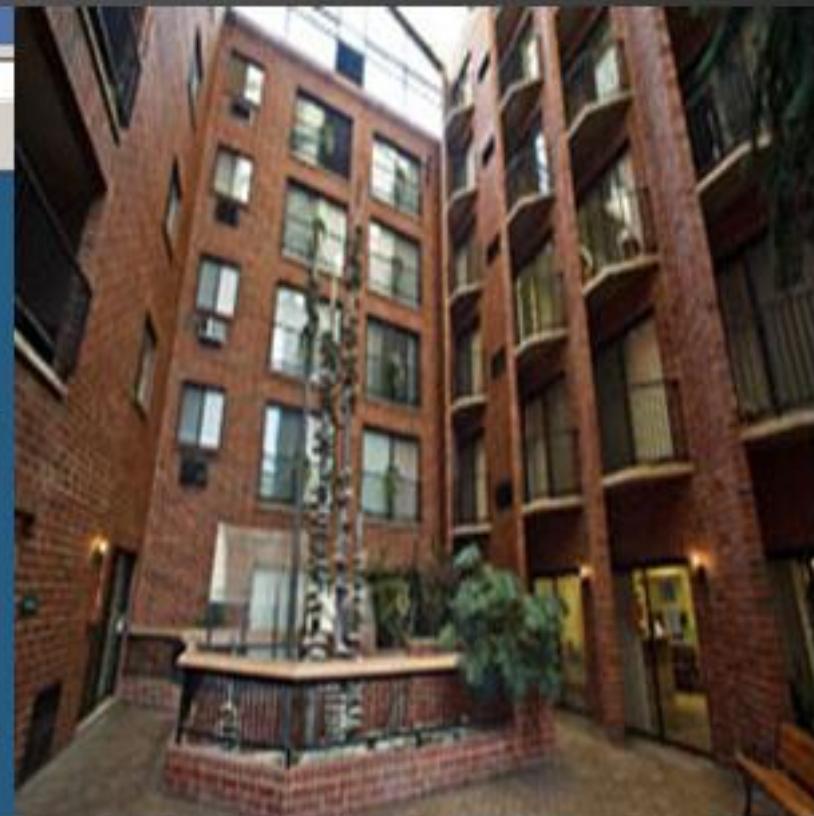
*Some recent journal publications...*

1. Reed, Lisa, A Semantic Constraint on Tenseless Clausal Complementation. *Studia Linguistica*, 66.3, 2012, 286-321.
2. Reed, Lisa, *Get-Passives*. *The Linguistic Review* 28.1, 2011, 41-78.
3. Authier, J.-Marc and Lisa Reed, Clausal Complementation and the Status of French à/ de ce que, *Lingua* 120.9, 2010, 2193-2210.

# Contact Information

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Room 117, Suite G



Dr. Giuli Dussias



Volunteers needed to help torture survivors

Open Issues  
...  
**the guardian**  
News / Sport / Comment / Culture / Business / Money / Life & style /  
News / UK news / Diana, Princess of Wales  
Princess Diana dresses to be auctioned  
Ten dresses, including gowns designed by Catherine Walker, Br...  
Oldfield and Zandra Rhodes, to go under the hammer

Lauren Cochrane

NEWS | LOCAL BEAT

## Boy Chases Away Man Who Shot His Dad with Kitchen Knife

Police seek shooter, person of interest in Plantation shooting

By ERIN HANACHEN and TODD WRIGHT

Updated 2:00 PM EDT, Thu, Jul 21, 2011

PRINT SHARE



PHOTO: AP

Locals Are...

43%  
LAUGHING

26%  
FURIOUS

12%  
THRILLED

7%  
SAD

7%  
INTRIGUED

6%  
BORED

NEWS KENT

Home World UK England N. Ireland Scotland Wales Business Politics Health Education Sci/Enviro

17 September 2013 Last updated at 06:54

## More time granted to murder police



Police are granted extra time by magistrates to question four men arrested after the body of a woman was discovered in a shop basement in Kent. Murder probe over shop basement body



### Moped death driver denies cover-up

A driver who admitted causing the death of a has gone on trial accused of perverting the course of justice.

Moped death driver 'repairs car'

Death from the dead has never been...



## Students Cook & Serve Grandparents

On Thursday, September 24, 2009, the University of Florida hosted the first annual All Grandparents Day.

McDonald's Fries the Holy Grail for Potato Farmers

Wednesday, September 23, 2009  
Associated Press



KIMBERLY, Idaho — From the fields of Idaho to tasting rooms in suburban Chicago, potato farmers, researchers and industry representatives are in the midst of an elusive hunt: finding a new spud for McDonald's french fries.

FOX

TOP



Who  
Oad  
his w  
head

us

**Someone shot the son of the actress who was  
on the balcony?**

**Who was on the balcony?**

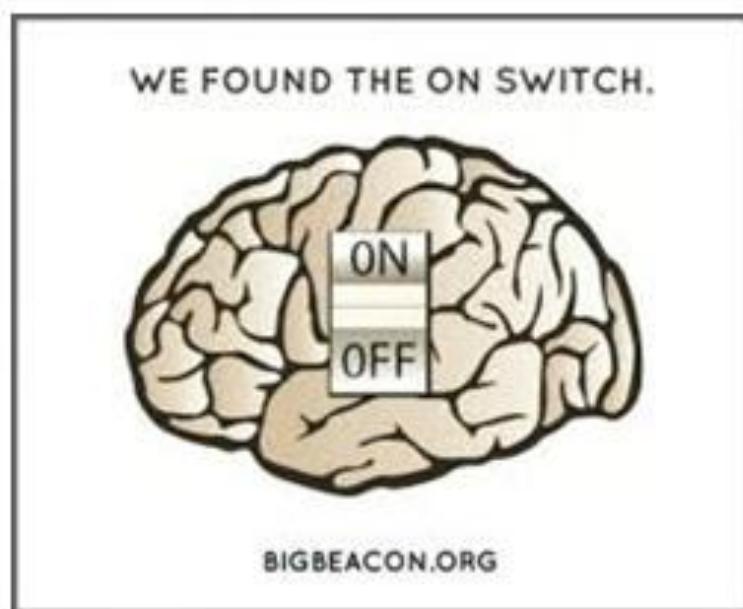
Someone shot the son of the actress who was on the balcony

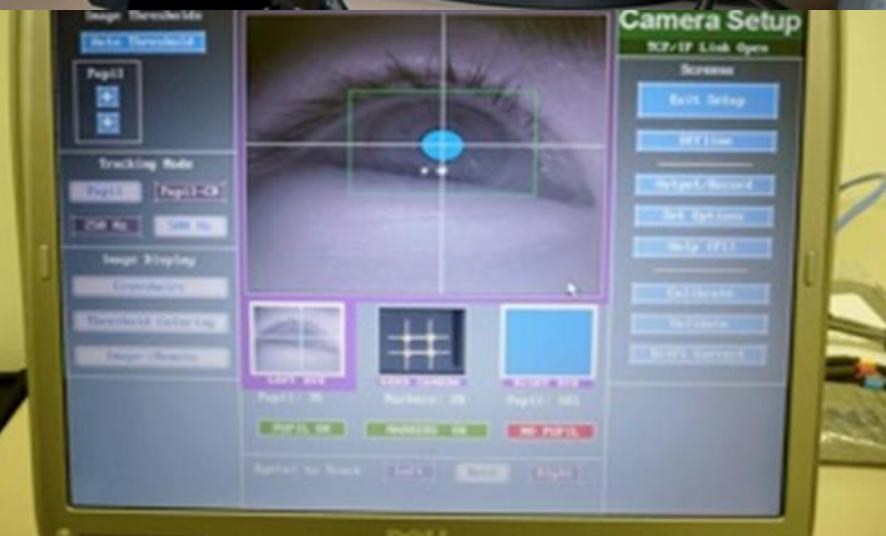
Who was on the balcony?

- English speakers: actress
- Spanish speakers: son

What about people who speak both Spanish and English?

Becoming proficient in Spanish can affect the way you interpret this sentence in English!





Please write!

Giuli Dussias

[pdussias@psu.edu](mailto:pdussias@psu.edu)

207 Ritenour

Dr. Eleonora Rossi



## Eleonora Rossi

Visiting assistant professor in Linguistics

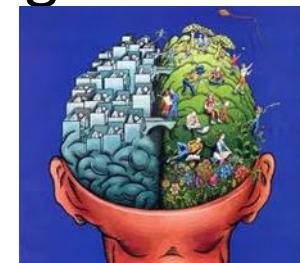
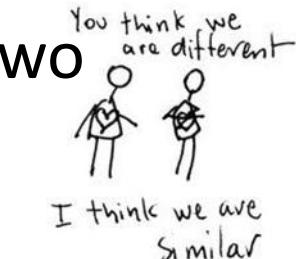
426 Moore building

[exr22@psu.edu](mailto:exr22@psu.edu)

# The questions I am interested in



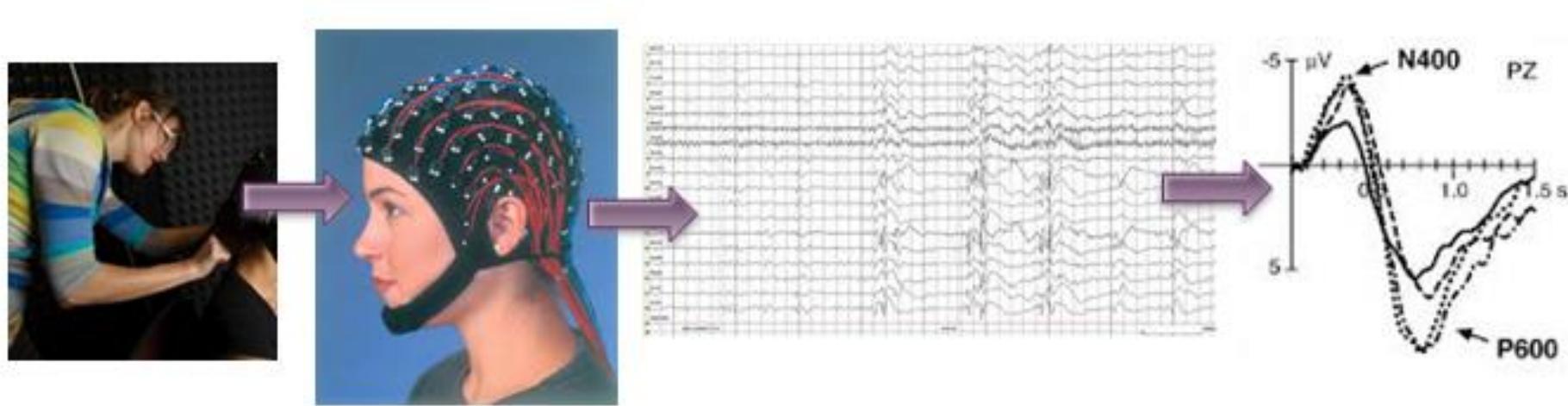
- How do bilingual speakers juggle between their two languages?
- Is a second language learned later in life always processed differently than a native language? Or can we observe similarities between the two processes?
- What are the cognitive and brain mechanisms that are at the base of bilingual language processing?
- What role does memory play while learning a second language, and how does learning a second language impact the native one?



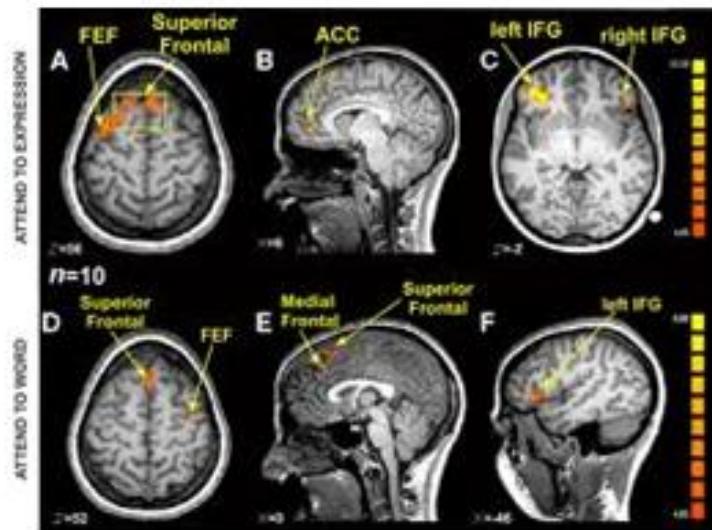


# How do I investigate these questions

- To understand how they do it.. I look at the real-time brain activity while speakers are processing linguistic information using Event-related potentials (ERPs)



- And to understand which parts of the brain are used while a bilingual speakers speaks or understands her/his native or second language.....and how she/he juggles between the two....





# Current PIRE students

The role of discourse context in  
pronoun resolution



■ Granada, Spain

Effect of L1 orthography on L2  
phonological acquisition



■ Beijing, China

Dr. Carrie Jackson

# **Second Language Acquisition Lab**

**Carrie Jackson  
Associate Professor of German and  
Linguistics**

# Questions we ask. . .

- How do adult second language learners process grammatical and semantic information in the L2 in real time?
- What factors can have an impact on the ultimate success of adult L2 learning (e.g., study abroad; type of input and instruction; individual differences)?
- How can experimental studies (and the results from such studies) inform and improve foreign language instruction?

# Some recent and ongoing studies

- How L1 and L2 speakers use different types of semantic and grammatical information to compute subject-verb agreement in the L1 and L2 (Beth Mermel, PIRE undergrad 2012; Kaylee Roupas, PIRE undergrad 2013; ongoing collaborations)
- How priming activities can improve fluency and increase the use of more native-like word order in L2 speech (ongoing project with PSU undergrads and other collaborators)
- Whether cognates facilitate the production of more difficult syntactic structures in L2 speech (Abby Massaro, PIRE undergrad 2014)
- What can we do to facilitate the acquisition and processing of grammatical gender in L2 learners (Courtney Fowler Johnson, PhD student and PIRE graduate fellow 2012; Patricia Schempp, PhD student; Leah Pappas, PIRE undergrad 2013; Julia Hotchner, PIRE undergrad 2014)

Dr. Janet van Hell



# Bilingualism and Language Development Lab

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Janet van Hell

Professor of Psychology and Linguistics

Graduate students:

[Fatemeh Abdollahi](#)

Carla Fernandez

[Kaitlyn Litcofsky](#)

[Caitin Ting](#)

Postdocs:

Katharine Donnelly Adams

Sarah Grey

[Megan Zirnstein](#)

International visitors:

[Antje Stöhr](#)

[Xu Weihua](#)

Current Lab affiliates (grad student breadth projects):

[Chris Champi](#), [Angela Grant](#), [Patricia Schempp](#)

<http://bild.la.psu.edu/>





# Bilingualism and Language Development Lab

A search bar with placeholder text "Type To Search..." and a magnifying glass icon.

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The Bilingualism and Language Development (BiLD) Lab studies the cognitive and neural processes related to language development, second language learning, and bilinguals' use of two languages.

Fall 2014-Spring 2015 research projects include:

- \* Are children better in learning a second language than adults?
- \* Does foreign-accented speech influence listeners' comprehension of speech?  
Different for child vs. adults listeners, bilingual vs. monolingual listeners?
- \* Does foreign-accented speech influence comprehension of code-switched sentences?
- \* Music and language: how does the brain process linguistic and musical syntax?  
Differences between bilingual and monolingual musicians vs. non-musicians?



Dr. Patricia Román

# Memory and Language Research Group



CIMCYC- University of Granada

# Human Resources

Teresa Bajo



Executive Control in  
Memory

A. Ortega  
C. Ferreira  
A. Pérez



Executive Control in  
Bilingualism

D. Paolieri  
P. Macizo  
L. Morales  
L. Hansen



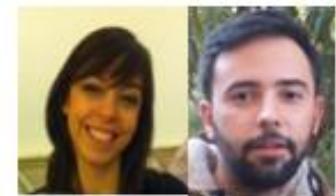
Expertise in translation  
professionals

G. Togato  
J. Morales



Training effects in memory  
and attention

V. Lozano



# Technical Resources



- Scanner 3T Siemens Trio
- ERP equipment Synaps2 Neuroscan 64 & 32 channels
- Eye tracker Eyelink II
- Single and multiple testing behavioral chambers
- Recruitment:
  - Students subject pool (better from Oct to May)
  - Faculty of Translation and Interpretation

# Networking



Laboratorio de Neurociencia  
Cognitiva - Desarrollo.

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Bienvenido al **Laboratorio de Neurociencia Cognitiva del Desarrollo**  
de la Universidad de Granada

Inscríbete a tu hij@/a

Grupo Neurociencia Cognitiva

Universidad de Granada

Curiosidades: Neurociencia y  
niños

Otros



Hallan@ Moreno

Marcial Rodríguez Buján  
Félix González Reyes  
Laura Martínez Escudero  
María Gil Nájera

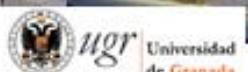
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Universidad  
de Granada

## COGNITIVE NEUROSCIENCE

Research group - University of Granada, Spain

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Synesthesia [LNCD](#) Popular science

Google

Versión en español

### MEMBERS

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Eduardo Madrid Cañadas  
Charo Rueda Cuerva  
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Pom Chamaz  
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Ana Navarro Cebrán  
Panadero  
Pacheco Unguetti  
Toja Puetas



Left to right: Eduardina Madrid, María Espinosa, María Ruiz, Juan López-Castillo, Joaquín Martínez, Pío Tudela, Ángel Cores, Conchi Castellanos, Ana Belén Chica, Alicia Callejas and Carolina Pérez.



## Learning Emotion Decisions Group

### About us

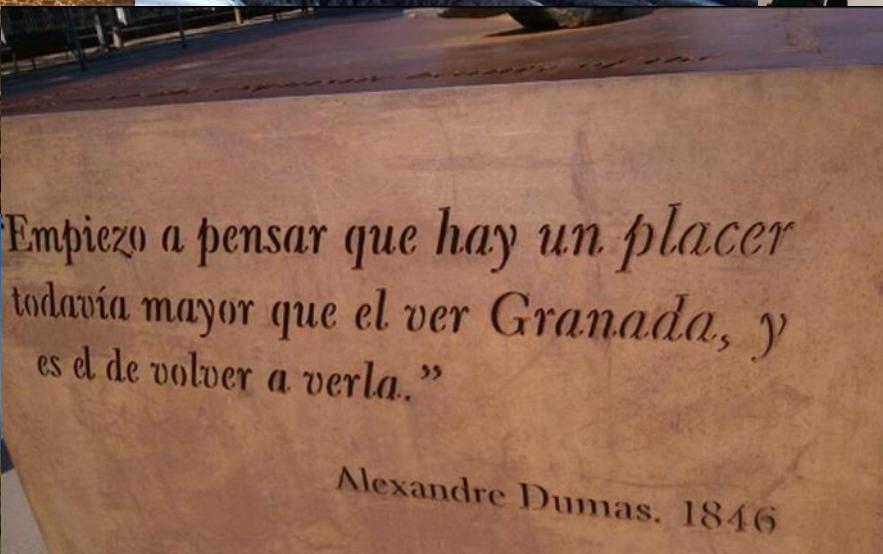
Welcome to the website of the research group Learning, Emotions, Behavior based on the Department of Psychology, Faculty of Psychology, and Research Center of the University of Granada, Spain.



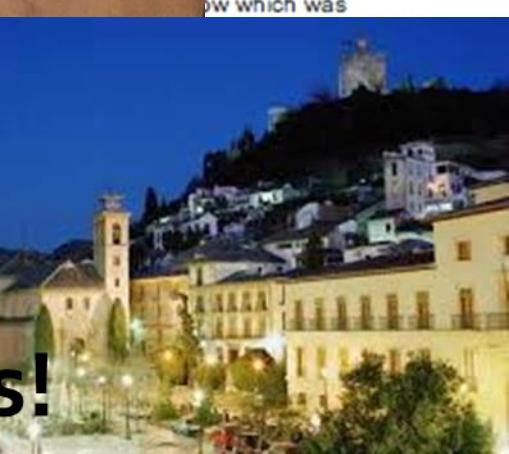


# Granada, someday we will

Monachil, Paragliding, and Flamenco



We went back and h  
liding. Paragliding



# ¡Muchas gracias!

Rhonda McClain

# What's great about PIRE: Becoming a member of a new research team!



- Dr. Guillaume Thierry's lab was a small group of students and postdocs and had very family-like work atmosphere
- Being present in Guillaume's lab exposed me to a highly creative and fluid style of work
- Guillaume was a great mentor, and has inspired me to consider the many different styles that I could use to serve as a mentor in the future

Nicole Benevento

# Spring 2014: PIRE



UNIVERSITY OF  
CAMBRIDGE



**King's College**  
Cambridge, England

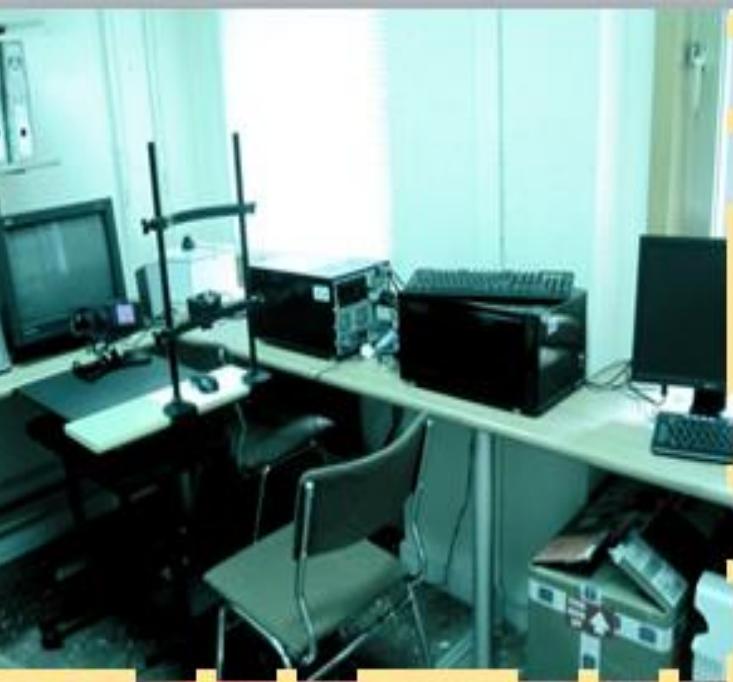


**BAAP 2014**  
British Association of Academic Phoneticians  
Oxford, England



**PIRE Partner: Margaret Deuchar**  
Bilingual Welsh-English, Spanish-English and  
Spanish-Welsh code-switching

Lauren Perroti



# PIRE

2011

# Lauren Perrotti

## Universidad de Granada



Pablo Requena

Pablo E. Requena

Graduate Student – PIRE Spring 2014

1. Unique Opportunity



2. The PIRE Spirit:

- Research oriented
- International
- Educational/Formative



3. Life-changing experience

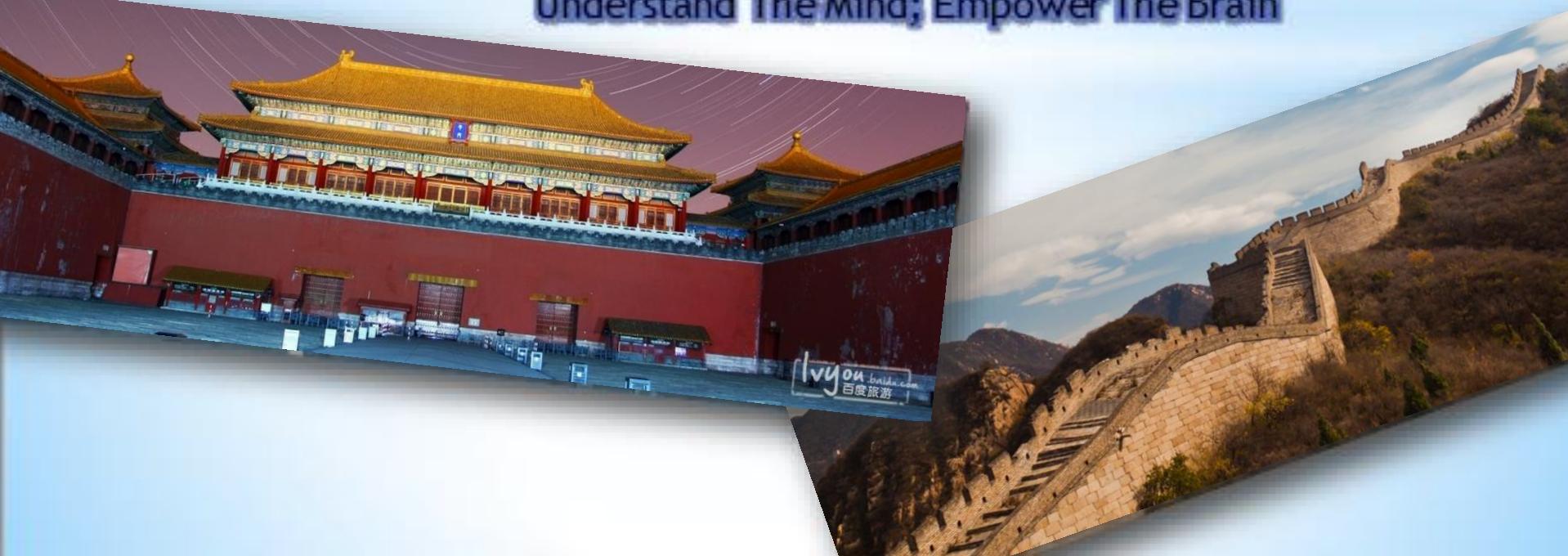


Haoyun Zhang



National Key Laboratory of Cognitive Neuroscience and Learning,  
Beijing Normal University, China.

Understand The Mind; Empower The Brain



Paige Elinsky

# Sentential Codeswitching in Non-Habitual Spanish-English Codeswitchers

Paige N. Elinsky, Kaitlyn A. Litcofsky, Maria Teresa Bajo, & Janet G. van Hell



| Language | Codeswitch? | Example  |
|----------|-------------|--|
| English  | Yes         | Every year, the shopkeeper makes his own juguetes para los niños pequeños. |
| English  | No          | Every year, the shopkeeper makes his own toys for the young children.      |
| Spanish  | Yes         | Cada año, el tendero hace sus propios toys for the young children.         |
| Spanish  | No          | Cada año, el tendero hace sus propios juguetes para los niños pequeños.    |

## Granada, Spain

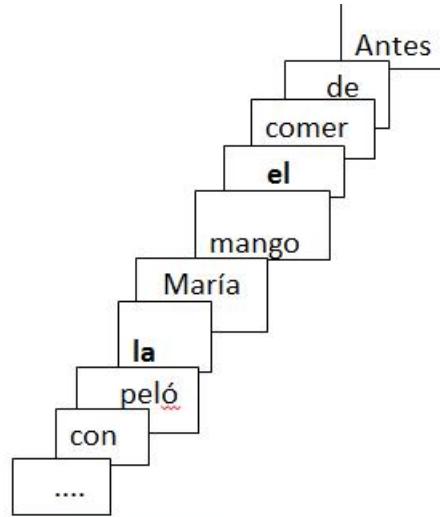
A veces, I forget what language I should be speaking, y entonces, it comes out así.



Kyra Krass

# KYRA KRASS

- Destination: Granada, Spain
- Advisor: Eleonora Rossi
- Project: The role of discourse context in pronoun resolution
- Methods: EEG and behavioral tasks



Nick Anderegg

- Research in Beijing, China
- Investigated effects of L1 orthography on L2 phonological acquisition
- How someone's native writing system affects how they learn speech sounds they've never heard before
- Behavioral experiment



# Thank You

=)