



**6th Annual Eleanor M. Saffran
Cognitive Neuroscience Conference**

***Cognitive and Neural Aspects of Learning in
the Normal and Damaged Brain***

Sponsored by the Eleanor M. Saffran Center for Cognitive Neuroscience

**Department of Communication Sciences and Disorders
College of Health Professions and Social Work
Temple University**

Philadelphia Neuropsychology Society

Date: Friday, September 23rd, 2011

Time: Registration begins at 8:15am
Conference from 9:00am to 4:00pm
Reception from 4:00pm to 5:30pm

Location: Howard Gittis Student Center- South, Room 200
13th Street between Cecil B. Moore & Montgomery Ave.

6th Annual Eleanor M. Saffran Cognitive Neuroscience Conference

Cognitive and Neural Aspects of Learning in the Normal and Damaged Brain

The Temple University Department of Communication Sciences and Disorders and the Eleanor M. Saffran Center for Cognitive Neuroscience are pleased to present the 6th Annual Eleanor M. Saffran Cognitive Neuroscience Conference. Dr. Eleanor M. Saffran was one of the pioneers of Cognitive Neuropsychology with a career spanning some 35 years. Two remarkable features of Eleanor's career were the diversity of topics she researched and her extraordinary ability to focus on the most intriguing aspects of a problem. Eleanor's research led to important developments in our understanding and treatment of agrammatism, deep dyslexia, word deafness, short-term memory deficits, word production, sentence processing, semantics, and visual cognition.

This year's conference focuses on studies of learning abilities in normal and damaged brains. Both cognitive and neural aspects are addressed. Verbal and nonverbal learning abilities of children, adults and bilingual speakers are considered. Topics will include the relationship of intellectual and perceptual-motor learning, spatial learning in development, mechanisms underlying second language learning, learning abilities in children with specific language impairment, and the role of sequential learning in language processing. The speakers in this year's program have contributed much to our understanding of theories of learning and how brain damage can affect learning abilities. Their research reflects the foundation of current and future efforts to develop better diagnostic and treatment approaches for children and adults with verbal or non-verbal learning disorders.

American Speech-Language-Hearing Association

	<p>Temple University is approved by the Continuing Education Board of the American Speech-Language-Hearing Association (ASHA) to provide continuing education activities in speech-language pathology</p>
<p>and audiology. See course information for number of ASHA CEUs, instructional level and content area. ASHA CE Provider approval does not imply endorsement of course content, specific products or clinical procedures.</p>	

This course is offered for 0.55 ASHA CEUs (Advanced level, Professional Area).

Philadelphia Neuropsychology Society

	<p>Continuing Education The Philadelphia Neuropsychology Society (PNS) is approved by the American Psychological Association to sponsor continuing education for psychologists. PNS maintains responsibility for this program and its content</p>
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This course is offered for 5.0 credits. Partial CE credit for this conference is not available.

Conference Proceedings

Morning Session

Behavioral and neural bases of verbal and nonverbal learning

8:45 – 9:00 Welcome and Opening Remarks

9:00 – 9:45 *Acquisition of intellectual and perceptual-motor skills*

David Rosenbaum, Ph.D. Distinguished Professor of Psychology, Department of Psychology, The Pennsylvania State University-University Park, State College, USA

1. Participants will be able to summarize the major features of the acquisition of intellectual skills.
2. Participants will be able to summarize the major features of the acquisition of perceptual-motor skills.
3. Participants will be able to assess the extent to which difficulties in speech and other kinds of performance reflect intellectual or perceptual-motor difficulties.

9:45 – 10:30 *Neurophysiological mechanisms of language learning in adults*

Antoni Rodriguez-Fornells, Ph.D. ICREA Research Professor, Cognition and Brain Plasticity Unit, Department of Basic Psychology & IDIBELL, University of Barcelona, Barcelona, Spain

1. Participants will be able to describe the major brain regions involved in word learning.
2. Participants will be able to describe possible word learning paradigms that could be used to evaluate different neurophysiological learning routes.
3. Participants will be able to evaluate the extent to which learning a second language is possible in adults and its comparison with the word learning process in infants.

10:30 – 11:45 Morning Break

10:45 – 11:30 *Spatial learning in development*

Nora Newcombe, Ph.D. Professor of Psychology, PI of the Spatial Intelligence and Learning Center (SILC), Temple University, Philadelphia, USA

1. Participants will be able to understand models of mature spatial functioning and the similarities and differences among them.
2. Participants will be able to understand models of development towards the mature state, and the similarities and differences among them.
3. Participants will be able to understand how spatial language is related to spatial development and mature functioning.

11:30 – 12:00 Discussion

Laurel J. Buxbaum, Psy.D. Director of Cognition and Action Laboratory, Moss Rehabilitation Research Institute; Associate Professor of Rehabilitation Medicine, Thomas Jefferson University, Philadelphia, USA

12:00 – 1:00 Lunch (optional box lunch)

Afternoon Session

Language learning in children and adults with language impairment

1:00 – 1:45 *Implicit learning in children with specific language impairment*
Julia L. Evans, Ph.D. Professor, Speech and Language; Director, Child Language & Cognitive Processes Lab, San Diego State University; Research Scientist, University of California-San Diego, San Diego, USA

1. Participants will be able to describe the differences between implicit and explicit learning and memory.
2. Participants will be able to demonstrate understanding of the role that implicit learning and memory plays in lexical-semantic acquisition and use.
3. Participants will be able to demonstrate understanding of how the nature of implicit learning deficits in children with SLI directly translates into alternative models of intervention.

1:45 – 2:30 *Sequential learning in children and adults with language impairment*
Morten H. Christiansen, Ph.D. Professor, Department of Psychology, Co-Director of Cornell Cognitive Science Program, Cornell University, Ithaca, USA; External Professor, Santa Fe Institute, Santa Fe, USA

1. Participants will be able to articulate the relation between sequential learning and language processing.
2. Participants will be able to list alternative explanations for some grammatical deficits in children and adults with language impairment.
3. Participants will be able to demonstrate understanding of how sequential learning can be investigated with different methods.

2:30 – 2:45 Afternoon Break

2:45 – 3:30 *New word learning in people with aphasia*
Matti Laine, Ph.D. Professor, Department of Psychology and Logopedics, Åbo Akademi University, Turku, Finland

1. Participants will be able to understand the current knowledge of neural underpinnings of new word learning.
2. Participants will be able to describe different ways to tap novel language learning in aphasia.
3. Participants will be able to understand how learning and re-learning differ from each other and why this distinction is important for aphasiology.

3:30 – 4:00 Discussion
Elizabeth Rochon, Ph.D. Associate Professor, Speech-Language Pathology Faculty of Medicine, University of Toronto, Toronto, Canada

4:00 – 5:30 Reception

PRESENTERS

David A. Rosenbaum is a cognitive psychologist interested in the planning and control of voluntary movements, especially those related to reaching and grasping. He attended Swarthmore College (B.A., 1970-1973) and Stanford University (Ph.D., 1973-1977). He then worked at Bell Laboratories (1977-1981), Hampshire College (1981-1987), and the University of Massachusetts, Amherst (1987-1994). Since 1994 he has been at the Pennsylvania State University, where he is Distinguished Professor of Psychology.

Rosenbaum was a recipient of a National Science Foundation Graduate Fellowship (1973-1976), a National Institutes of Health Research Career Development Award (1985-1990), and a National Institutes of Health Research Scientist Development Award (1992-1997). His work has been supported by grants from the National Science Foundation and the National Institutes of Health.

Rosenbaum is a Fellow of the American Association for the Advancement of Science, the American Psychological Association, the American Psychological Society, and the Society of Experimental Psychologists. He was a Fellow of the Netherlands Institute for Advanced Study in the Humanities and Social Sciences from 1989 to 1990, and served as Editor of *Journal of Experimental Psychology: Human Perception and Performance* (a publication of the American Psychological Association) from 2000 to 2005.

Antoni Rodriguez-Fornells, Ph.D., received his Ph.D. in Psychology from the University of Barcelona in 1996. Afterwards he joined the University of Magdeburg (Center for Advanced Imaging and Neuropsychology department) as Post-doctoral researcher. In 2002, he was awarded by the Ramon y Cajal research program in Spain and in 2004 he joined ICREA as a Research Professor (Catalan Institution for Research and Advanced Studies). During these years he has created an interdisciplinary group on Cognition and Brain Plasticity (www.brainvitge.org) grounded in between the University of Barcelona and the IDIBELL (Bellvitge Biomedical Research Institute). Currently, his research focuses on the investigation of the neural mechanisms involved in language learning in adults by using behavioural and neuroimaging methods. Recent studies in his lab point out the need to better investigate the detailed relationship between individual differences in brain structure/function and those observed at the cognitive level. Finally, he has been recently investigating the effects of learning specific skills on brain plasticity and reorganization in stroke patients.

Nora S. Newcombe, Ph.D., is a Professor of Psychology at Temple University and PI of the Spatial Intelligence and Learning Center (SILC), headquartered at Temple and involving Northwestern, the University of Chicago and the University of Pennsylvania as primary partners. Dr. Newcombe was educated at Antioch College, where she graduated with a major in psychology in 1972; and at Harvard University, where she received her Ph.D. in Psychology and Social Relations in 1976. She taught previously at Penn State University.

A nationally recognized expert on cognitive development, Dr. Newcombe's research has focused on spatial development and the development of episodic and autobiographical memory. Her work has been federally funded by NICHD and the National Science Foundation for over 30 years. She is the author of numerous scholarly chapters and articles on aspects of cognitive development, and the author or editor of five books, including *Making Space: The Development of Spatial Representation and Reasoning* (with Janellen Huttenlocher) published by the MIT Press in 2000.

Dr. Newcombe has served as Editor of the *Journal of Experimental Psychology, General* and as Associate Editor of *Psychological Bulletin*, as well as on numerous editorial boards and grant review panels. She is currently an Associate Editor for *Cognitive Psychology* and for *WIREs in Cognitive Science*. Honors include the George Miller Award and the G. Stanley Hall Awards from APA, the Award for Distinguished Service to Psychological Science, also from APA, and the Women in Cognitive Science Mentor Award. She is a fellow of four divisions of the American Psychological Association (General, Experimental, Developmental, and Psychology of Women), of the American Psychological Society, and of the American Association for the Advancement of Science, and has been a Visiting Professor at the University of Pennsylvania, Princeton, and the Wissenschaftskolleg in Berlin. She is a member of the American Academy of Arts and Sciences and the Society of Experimental Psychologists.

Laurel Buxbaum, Psy.D., received her B.A. in Biological Bases of Behavior from the University of Pennsylvania in 1982, and her Psy.D. in Clinical Psychology with a Neuropsychology specialization from Hahnemann University in 1988. She is currently an Institute Scientist at Moss Rehabilitation Research Institute, where she directs the Cognition and Action Laboratory and the Right Hemisphere Stroke Center, and an Associate Research Professor of Rehabilitation Medicine at Thomas Jefferson University. Dr. Buxbaum is an Associate Editor of the Journal of Neuropsychology and is the recipient of the Widener University Graduate Award for Excellence in Professional Psychology. She also serves on the Advisory Board of the Eleanor M. Saffran Center for Cognitive Neuroscience. Her research, supported in part by the NIH and James S. McDonnell Foundation, focuses on understanding the functional neuroanatomic and cognitive bases for representations of the body, space, and objects, the disruption of these representations in apraxia and hemispatial neglect, and the development of theory-based treatments for these disorders.

Julia L. Evans, Ph.D., received her B.S. from the University of Colorado, her M.S. from Teacher's College Columbia, and her Ph.D. from the University of Michigan. Following a postdoctoral fellowship, and Research Scientist positions in the Department of Cognitive Psychology at Carnegie Mellon, she moved to the University of Wisconsin where she was on the faculty in the Department of Communicative Disorders and a Research Scientist at the Waisman Center. She currently is a Professor in the School of Speech and Hearing Sciences at San Diego State University and a Senior Research Scientist with the Center for Language at the University of California, San Diego. Her work adheres to principles of Dynamic Systems Theory and focuses on the relationship between language, memory and cognitive processing in children with Specific Language Impairment, the acquisition of phonological, lexical and semantic representations in infants and children, the nature conceptual knowledge as revealed through individual's gestures, and the role of implicit and explicit learning and memory in language acquisition.

Morten H. Christiansen received his Ph.D. in Cognitive Science from the University of Edinburgh in 1995. He is Professor in the Department of Psychology and Co-Director of the Cognitive Science Program at Cornell University as well External Professor at the Santa Fe Institute. His research focuses on the interaction of biological and environmental constraints in the processing, acquisition, and evolution of language, which he approaches using a variety of methodologies, including computational modeling, corpus analyses, psycholinguistic experiments, neuroimaging, and molecular genetics. Christiansen is the author of more than 125 scientific papers and has edited volumes on Connectionist Psycholinguistics, Language Evolution, and Language Universals. His honors include the 2009 Nijmegen Lectures at the Max Planck Institute for Psycholinguistics in The Netherlands, and an Ida Cordelia Beam Distinguished Visiting Professorship in 2010 at the University of Iowa.

Matti Laine, Ph.D., received his M.A. (1980) and Ph.D. (1990) in psychology from the Turku University, Turku, Finland. His interest in language and language disorders arose in early 1980s when he worked as a research assistant for the late Harold Goodglass at the Aphasia Research Center, Boston VA Hospital for a year. Throughout the 1980s and 1990s he worked as a clinical neuropsychologist at the Turku University Central Hospital. Since 2001, Dr. Laine has been a professor of psychology at the Swedish-speaking university of Finland, Abo Akademi, in Turku. He has conducted research on both normal and deficient language processing and their neural correlates over the last two decades.

Elizabeth Rochon, Ph.D. received her Master's and Ph.D. degrees in Speech-Language Pathology from McGill University in Montreal, Canada. She is currently Associate Professor and Associate Chair in the Department of Speech-Language Pathology at the University of Toronto. Dr. Rochon is also Senior Scientist and Communication Research Team Leader at Toronto Rehabilitation Institute. Her research interests lie in understanding language processing, particularly as it relates to the impairments found in patients with aphasia, primary progressive aphasia (PPA), and Alzheimer's disease (AD). Current research projects focus on aphasia treatment studies, functional neuroimaging studies, longitudinal analyses of language and neural changes in PPA and communication interventions for caregivers of individuals with AD. Dr. Rochon's research is currently funded by federal agencies (Canadian Institutes of Health Research) and national foundations (The Heart and Stroke Foundation of Canada).

Directions to Temple University's Main Campus & Parking*

To Temple University's Main Campus

From the Pennsylvania Turnpike:

Take Exit 326 (Philadelphia/Valley Forge). Follow I-76 East (Schuylkill Expy.) approx. 18 miles to Exit 344 (Central Philadelphia/I-676) *Note:* Exit is on left. Follow I-676 approximately 1 mile to Central Phila./Broad Street exit. Take Broad Street exit (stay to left). In one block go left onto Broad Street. Follow Broad Street to Oxford Street (approx. 2 miles). Turn left onto Oxford Street. Stay on Oxford for 1 ½ blocks and turn right onto Sydenham Street. The Liacouras Center Visitors Parking Garage* entrance is about 1 ½ blocks down on your right.

From the Northeast Extension Pennsylvania Turnpike:

Take Exit 20 to I-476 South to I-76. Exit at I-76 East (approx. 5 miles). Take I-76 East approx. 15 miles to Exit 344 (Central Philadelphia/I-676) *Note:* Exit is on left. Follow directions from I-676 above.

From I-95 North:

Take Exit 22 (Central Philadelphia/I-676). Follow Central Philadelphia signs to Broad Street exit. At next intersection (Vine Street) turn left. In one block, turn left onto Broad Street. Follow Broad Street to Oxford Street (approx. 2 miles). Turn left onto Oxford Street. Stay on Oxford for 1 ½ blocks and turn right onto Sydenham Street. The Liacouras Center Visitors Parking Garage* entrance is about 1 ½ blocks down on your right.

From I-95 South:

Take Exit 22 (Central Philadelphia/I-676). *Note:* Exit from left lane. I-676 West to Broad Street exit. See above directions from Broad Street exit.

From the New Jersey Turnpike:

Take Exit 4 to route 73 North. Approx. 1 mile to Route 38 West. Follow for 5 1/2 miles to Benjamin Franklin Bridge. Take I-676 West to Broad Street exit. Follow above directions from Broad Street exit.

Public Transportation to Temple's Main Campus

SEPTA Regional High Speed Lines:

All lines stop at Temple University Station, 10th and Berks Streets. Walk up Berks until 13th Street and turn left on 13th. Stay on 13th street for 1 ½ blocks.

Broad Street Subway: All local trains stop at Cecil B. Moore Station (Broad Street and Cecil B. Moore Avenue).

“C” Bus: Stops on Broad Street at Cecil B. Moore Avenue, Montgomery Avenue, Berks Mall, and Norris Street.

“3” Bus: Stops on Cecil B. Moore Avenue from 11th Street to Broad Street.

“23” Bus: Stops on 12th Street (southbound) and 11th Street (northbound) at Berks Mall, Montgomery Avenue, and Cecil B. Moore Avenue.

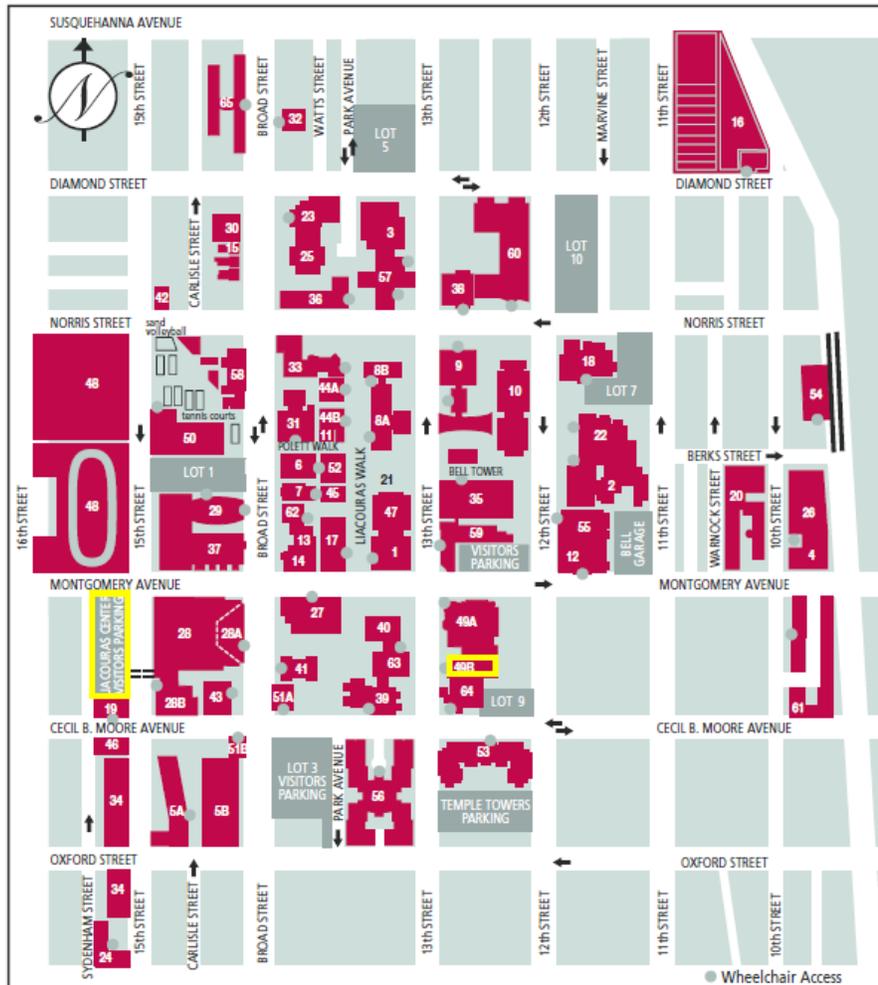
*Visitor Parking - \$12

Main Campus

TEMPLE UNIVERSITY

Buildings and Departments

1. Alter Hall (The Fox School of Business)
2. Anderson Hall (AB, AC, AL)
3. Annenberg Hall (AH)
4. Atlantic Terminal (privately developed housing)
5. Avenue North Complex
 - 5A. The Edge (privately developed student housing)
 - 5B. Shops
6. Baptist Temple
7. Barrack Hall
8. Barton Hall (Physical Science)
 - 8A. Barton A
 - 8B. Barton B
9. Beury Hall (BE)
10. Biology-Life Sciences Building (BL)
11. Campus Police Sub-Station
12. Campus Safety Services
13. Carnell Hall
14. Conwell Hall (CW)
15. Conwell House
16. Edberg-Olson Football Practice Facility
17. 1810 Liacouras Walk (student services)
18. Engineering and Architecture (EA)
19. Entertainment and Community Education Center and retail shops (WRTI)
20. Facilities Management Office
21. Founder's Garden
22. Gladfelter Hall (GH)
23. Hardwick Hall (student housing)
24. Elmira Jeffries (student housing)
25. Johnson Hall (student housing)
26. Kardon Building (privately developed housing)
27. Klein Law Building (James E. Beasley School of Law)
28. The Liacouras Center
 - 29A. Esther Boyer Theater
 - 29B. Independence Blue Cross Recreation Center
29. McGonigle Hall (MG)
30. Messiah College
31. Mitten Hall (Diamond Club)
32. Newman Center
33. "1940" (student housing)
34. Oxford Village (privately developed housing)
35. Paley Library (PL)
36. Peabody Hall (student housing)
37. Pearson Hall (PH)
38. Presser Hall (PR)
39. Ritter Hall Annex (RA)/ Kiva Auditorium
40. Ritter Hall (RH)
41. Rock Hall (RC)
42. Edward H. Rosen Hillel Center for Jewish Life
43. 1700 N. Broad Street
44. The Shops on Liacouras Walk 44A. and 44B.
45. Shusterman Hall
46. Small Business Development Center (1510 Cecil B. Moore Ave.)
47. Speakman Hall (SP) (School of Tourism and Hospitality Management)
48. Sports and Recreation Fields
49. Student Center Complex
 - 49A. Howard Gittis Student Center/Bookstore
 - 49B. Student Center (south)
50. Student Pavilion
51. Subway Station and Plaza (SEPTA)
 - 51A. Northbound
 - 51B. Southbound
52. Sullivan Hall (SN)
53. Temple Towers (student housing)
54. Temple U. Regional Rail Station (SEPTA)
55. Temple University TECH Center & Welcome Center
56. "1300" (student housing)
57. Tomlinson Theater (TT)/ Randall Theater
58. Triangle Apartments (student housing)
59. Tuttleman Learning Center
60. Tyler School of Art
61. University Village (privately developed housing)
62. Wachman Hall (Computer/Mathematics)
63. Walk Auditorium
64. Weiss Hall (WH)
65. James S. White Hall (student housing)



DR. ELEANOR M. SAFFRAN COGNITIVE NEUROSCIENCE CONFERENCE ENDOWMENT

In 2005, the Dr. Eleanor M. Saffran Cognitive Neuroscience Conference Fund was established through generous gifts from Dr. Saffran's family, friends and colleagues. Over \$7,000 was raised in that initial effort. Additionally, in 2007, her daughter, Dr. Jenny Saffran, and her husband, Dr. Seth Pollak, made a generous contribution to ensure the fund was permanently endowed, which will provide support to help sustain the conference in perpetuity.

We would like to invite you to be part of this effort by making a contribution of any amount to be added to the endowment. As the endowment grows, so does the funding available to sustain our conference year to year.

You may make your gift online by visiting www.myowlspace.com and clicking on "Make a Gift" (please be sure to indicate that you wish for your gift to be applied toward the Eleanor M. Saffran Endowment), or by contacting Sean Marsh, Assistant Director of Development for the College of Health Professions, at the phone number or address below. Your contribution is fully tax-deductible to the extent provided by law.

Donors of \$1,000 or more are afforded membership in the Russell H. Conwell Society at Temple University, a philanthropic leadership group comprised of alumni, friends, parents and institutional partners. Conwell members are recognized annually for their support in the Temple University Honor Roll, the CHP Annual Report, and are also invited to a special Conwell Society event each fall. Please keep in mind that you may make your gift as a pledge to be paid over the course of a year on a monthly, quarterly or bi-annual basis. Gifts or pledges over \$1,000 may be paid over five years.

Thank you in advance for your support of the Dr. Eleanor M. Saffran Cognitive Neuroscience Conference Endowment. Should you have any questions, or would like to make a gift, please contact:

*Sean Marsh, Associate Director of Development, College of Health Professions
Temple University, 3307 N. Broad Street
Jones Hall 315 Philadelphia, PA 19140
Tel: 215.707.9780 Fax: 215.707.9828
Email: sean.marsh@temple.edu*

Registration Form

Registration may be completed via **fax** (215-204-6334), **email** (fpkohen@temple.edu),
or by **mailing** the registration form to the address below.

This conference, which includes morning refreshments, is presented free of charge. Lunch is available for a fee (see below). If you would like to order lunch, you must do so by **September 6th**. You may include your lunch selection on this registration form *only* if you register by **September 6th**. You also may let us know your lunch selection by email or phone. **All lunch orders must be received by September 6th**. Registration forms are **due no later than September 16th**. We will also accept payments for lunch and CEUs during morning registration. Please **note** payments for registration and lunch must be made separately (see below).

(Please print clearly & complete all information)

Name _____

Address _____

Phone (W) _____ (H) _____

Email _____

Employer _____

Title or Position _____

CEU Fee (please \surd your choice)

If you would like to receive CEU credits for ASHA and /or APA please note:

ASHA CEU fee (for 0.55 credits): \$30

APA CE fee (for 5.0 credits): \$50

ASHA - Make check payable to Temple University

APA - Make check payable to Philadelphia Neuropsychology Society

Check Enclosed

Checks will be accepted during the morning registration.

Lunch Selection (please \surd your choice)

Turkey and Cheese Wrap Grilled Chicken Wrap Grilled Vegetable Wrap

Lunch Fee Enclosed **\$12.50**

Please make check payable to Temple University.

We must have your **lunch selection** by ***September 6th, 2011***

Payment can be made with initial registration form if submitted by September 6th or during morning registration at the conference.

Please remit registration form to:

Nadine Martin, Ph.D.

Department of Communication Sciences and Disorders

Temple University – Weiss Hall, Room 110

1701 N. 13th Street

Philadelphia, PA 19122-6085

Fax: 215-204-6334

Registration must be received by *September 16th, 2011*

Need additional information or have questions? Call Nadine Martin at 215-204-1870