

Michelle L. Gravier

Curriculum Vitae

Speech, Language, and Hearing Sciences Department
California State University, East Bay
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EDUCATION

- 2015 *Ph.D. in Language and Communicative Disorders*
San Diego State University/ University of California, San Diego
- 2006 *M. A. in Speech, Language, and Hearing Sciences*
San Diego State University
- 2004 *B. A. in Communication Sciences and Disorders*
California State University, Chico

PROFESSIONAL APPOINTMENTS/EMPLOYMENT

- 2019- *Assistant Professor*
California State East Bay
Speech, Language, and Hearing Sciences Department
- 2015-19 *Post-Doctoral Fellow / Speech-Language Pathologist*
VA Pittsburgh Healthcare System
Geriatric Research Education and Clinical Center (GRECC)
- 2009-13 *Per-Diem Senior Speech-Language Pathologist*
UCLA Santa Monica Medical Center and Orthopaedic Hospital
- 2009-13 *Project Manager*
San Diego State University
Cognitive Neuroscience Laboratory
Director: Dr. Tracy Love
- 2006-09 *Medical Speech-Language Pathologist*
Henry Mayo Newhall Memorial Hospital

PUBLICATIONS (PEER REVIEWED)

Hula, W. D., Panesar, S., **Gravier, M.**, Fang-Cheng, Y., Dresang, H., Dickey, M.W. & Fernandez-Miranda, J.C. (submitted). Structural white matter connectometry of word production in aphasia: An observational study. *Brain*.

Evans, W., Cavanaugh, R. B., **Gravier, M.**, Autenreith, A., Doyle, P. J., Hula, W. D., & Dickey, M. W. (in revision). Effects of Semantic Feature Type, Diversity, and Quantity on Semantic Feature Analysis Treatment Outcomes in Aphasia. *American Journal of Speech-Language Pathology*.

Gravier, M., Dickey, M., Hula, W., Evans, W., Owens, R., Winans-Mitrik, R. & Doyle, P. (2018). What matters in SFA: practice-related predictors of treatment response in aphasia. *American Journal of Speech-Language Pathology*, 27, 438-453. PMID: 29497754.

Hickok, G., Rogalsky, C., Matchin, W., Basilakos, A., Cai, J., Pillay, S., **Ferrill, M.**, Mickelsen, S., Anderson, S.W., Love, T. & Binder, J. (2018). Neural networks supporting audiovisual integration for speech: A large-scale lesion study. *Cortex*, 103, 360-371. PMID: PMC6223621.

Ferrill, M., Love, T., Walenski, M., Shapiro, L. (2012). The time course of lexical activation during sentence comprehension in people with aphasia. *American Journal of Speech-Language Pathology*, 21, S179-189. PMID: PMC3395430.

Wright, H.H., Downey, R. A., **Gravier, M.**, Love, T., Shapiro, L.P. (2007). Processing distinct information Types in working memory in aphasia. *Aphasiology*. 21(6), 802-813. PMID: PMC2701214.

MANUSCRIPTS IN PREPARATION:

Gravier, M., Dickey, M. W., Fergadiotis, G., Swiderski, A., & Hula, W. (in prep). Use of PNT-Derived Naming Ability Estimates to Facilitate Individualized Treatment Item Selection in Aphasia.

Gravier, M., Love, T., Dickey, M. W. & Shapiro, L. P. (in prep). The use of local anticipatory processing cues during sentence comprehension in aphasia.

Dickey, M., **Gravier, M.**, Hula, W. & Doyle, P. (in prep). Psycholinguistic predictors of treatment response in semantic feature analysis.

AWARDS AND HONORS

2016	Veterans Research Foundation of Pittsburgh Annual Young Investigator Award
2013	American Speech-Language Hearing Foundation New Century Scholars Doctoral Scholarship
2011	NIDCD Student Travel Fellowship Invited Junior Mentor for the Clinical Aphasiology Conference Steering Committee Mentorship Luncheon
2010	SDSU Graduate Student Travel Fund Award
2006	NIDCD Student Travel Fellowship
2004	Outstanding Communication Sciences and Disorders Undergraduate Student, CSU Chico

GRANTS AND FELLOWSHIPS

2020-22 (submitted)	NSF Major Research Instrumentation Grant "MRI: Acquisition of Neuromodulation and Electroencephalography Equipment for Investigating Neuroplasticity of Language and Cognition" (Higby, G, PI;
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- Gravier, M., Ramanathan, P. Co-PIs, Total requested budget: \$354,996)
- 2020 CSU East Bay Center for Student Research Student-Researcher Training Program Award “Development of a Quality and Informativeness Rating Scale of Online Aphasia Videos for Clinical Teaching and Learning” (**Gravier, M.** PI. Total budget: \$4800)
- 2019-20 CSU East Bay Faculty Support Grant “Non-intensive tDCS and Speech-Language Treatment for Aphasia” (**Gravier, M.** PI. Total budget: \$6927)
- 2019-24 NIH-NIDCD R01 “Optimizing and understanding semantic feature analysis treatment for aphasia: A randomized controlled comparative-effectiveness trial.” (Hula, W., PI; Dickey, M., Doyle, P., **Gravier, M.**, Sandberg, C. Co-Is. Total budget: \$2,444,315)
- 2018-19 GRECC Educational and Clinical Innovation Activities Expansion RFP “Pittsburgh Aphasia Rehabilitation Training Network and Residency (PARTNeR) Program.” (Doyle, P. PI; Dickey, M. W., Doyle, P., **Gravier, M.**, Hula, W., Evans, W., Co-Is. Total budget: \$124,999)
- 2017-19 VA Competitive Pilot Project Fund “Cortisol and Response to Intensive Speech-Language Intervention in Chronic Aphasia.” (**Gravier, M.**, PI; Dickey, M. W., Hula, W., Doyle, P., Co-Is. Total budget: \$74, 866)
- 2017-18 VA Stars & Stripes Healthcare Network (VISN 4) GRECC Pilot Project Fund, “Semantic Feature Analysis Treatment for Aphasia: Predictors of Generalization to Connected Speech.” (**Gravier, M.**, PI; Dickey, M. W., Hula, W., Doyle, P., Co-Is. Total budget: \$25,000)
- 2017-19 VA SPiRE “Immediate and Cumulative Effects of rTMS on Brain Activation in Chronic Aphasia.” (**Gravier, M.**, PI; Forman, S., Dickey, M. W., Hula, W., and Doyle P. J. Co-Is. Total budget: \$198,218)
- 2017-18 VA Stars & Stripes Healthcare Network (VISN 4) GRECC Pilot Project Fund, “Feature-type effects on naming treatment response: Analysis of acquisition and generalization outcomes for Semantic Feature Analysis treatment.” (Evans, W., PI; Dickey, M. W., Doyle, P., **Gravier, M.**, Hula, W., Co-Is. Total budget: \$25,000)
- 2016-17 VA Stars & Stripes Healthcare Network (VISN 4) GRECC Pilot Project Fund, “The neurobiological basis of the effect of low frequency inhibitory and excitatory primed repetitive transcranial magnetic stimulation (rTMS) on naming performance in chronic aphasia.” (**Gravier, M.**, Forman, S. Co-PIs. Total budget: \$25,000)
- 2014-15 William Orr Dingwall Neurolinguistics Dissertation Fellowship
- 2011-14 NIH Predoctoral Training Grant
Neurocognitive Approaches to Communication Disorders
NIH/NIDCD T3DC007361

PROFESSIONAL CERTIFICATIONS/MEMBERSHIPS

Certificate of Clinical Competence (CCC)
ASHA Account #12094451 Exp. 12/31/20

California State Licensure in Speech-Language Pathology
SLPAB License #16010 Exp. 12/31/20

ASHA SIG 2: Neurophysiology and Neurogenic Speech and Language Disorders, Member

INVITED TALKS

- 2019 California State University, East Bay
Topic: *Understanding Treatment Response Variability in Aphasia*
- 2017 VA Geriatric Research Education and Clinical Center (GRECC)/Mental Illness Research and Education Clinical Center (MIRECC) Friday Conference
Topic: *The Application of Repetitive Transcranial Magnetic Stimulation (rTMS) for Aphasia Rehabilitation*
- 2017 University of Pittsburgh, Department of Communication Science and Disorders
Topic: *Variability in Aphasia: Obstacle or Opportunity*
- 2016 Monthly Veteran's Administration Geriatric Research and Education Clinical Center (GRECC) Associate Director for Research call
Topic: *The Effect of Repetitive Transcranial Magnetic Stimulation (rTMS) on Picture Naming in Chronic Aphasia*

CONFERENCE PRESENTATIONS

- Gravier, M.**, Dickey, M. W., Hula, W. D., Johnson, J., Autenreith, A., Doyle, P. J., Forman, S. (submitted). Excitatory-primed inhibitory rTMS is more effective than inhibitory rTMS alone. Paper submitted to the 50th Clinical Aphasiology Conference, Hawaii, HI.
- Gravier, M.** Hula, W. D., Dickey, M. W., Grzybowski, A., Autenreith, A., Doyle, P. J. (submitted). Is cortisol a biomarker of treatment response in aphasia? Paper submitted to the 50th Clinical Aphasiology Conference, Hawaii, HI.
- Cavanaugh, R., Evans, W., **Gravier, M.**, Autenreith, A., Ashmore, E., Doyle, P. J., Hula, W. D., & Dickey, M. W. (2019). *Do the kinds of features that patients generate during Semantic Feature Analysis affect treatment outcomes?* Paper presented to the 49th Clinical Aphasiology Conference, Whitefish, MT.
- Wargo, M., Kennedy, M., Campron, N., **Gravier, M.**, & Nixon, L. (2019, February 5). *Speech-in-noise performance for Veteran cochlear implant recipients.* Paper presented at the 2019 Joint Defense Veterans Audiology Conference, Dallas, TX.
- Hula, W., Fernandez-Miranda, J., Chen-Yeh, F., **Gravier, M.** Panesar, S., Dickey, M. W., Fernandez-Cabral, D., Dresang, H., & Doyle, P. (2018, May 23). *White matter connectivity, lexical access, and naming treatment in aphasia.* RSCA Invited platform presentation, 48th Clinical Aphasiology Conference, Austin, TX.
- Swiderski, A., **Gravier, M.**, Dickey, M. W., Fergadiotis, G., & Hula, W. (2018, May 26). *Predicting Confrontation Naming Performance Using Item Response Theory.* Paper presented at the 48th Clinical Aphasiology Conference, Austin, TX.
- Wargo, M., Nixon, L., Wright, A. & **Gravier, M.** (2018, March 26). *Using NU-6 Word Recognition Scores to Determine Referral for Cochlear Implant Candidacy.* Paper presented at Joint Defense Veterans Audiology Conference (JDVAC), Atlanta GA.

- Gravier, M.**, Forman, S., Dickey, M. W., Hula, W., & Doyle, P (2017, November 10). *Effect of rTMS on Brain Activation and Naming Performance in Chronic Aphasia: Results from a Pilot Participant*. Paper presented at the Society for the Neurobiology of Language Conference, Baltimore, MD.
- Hula, W., Fernandez-Miranda, J., Fernandes-Cabral, D., **Gravier, M.**, Dickey, M. W., Yeh, F., Panesar, S., Rowthu, V., Pathak, S., & Doyle, P. (2017, November 8). *White Matter Correlates of Lexical Access in Aphasia*. Paper presented at the Society for the Neurobiology of Language Conference, Baltimore, MD.
- Gravier, M.**, Dickey, M. W., Hula, W., & Doyle, P. (2017, November 8). *Lesion predictors of response to semantically-based naming treatment in chronic aphasia*. Paper presented at the Society for the Neurobiology of Language Conference, Baltimore, MD.
- Gravier, M.**, Dickey, M. W., Hula, W., & Doyle, P. (2017, November 5). *Cognitive predictors of response to semantically-based naming treatment in chronic aphasia*. Paper presented at the Academy of Aphasia Conference, Baltimore, MD.
- Hula, W., Fernandez-Miranda, J., Yeh, F., Fernandes-Cabral, D., Dickey, M. W., **Gravier, M.**, Panesar, S., Rowthu, V., Pathak, S., & Doyle, P. (2017, November 5). *Left Ventral Stream White Matter Connectivity Predicts Response to Semantic Feature Analysis Treatment in Chronic Aphasia*. Paper presented at the Academy of Aphasia Conference, Baltimore, MD.
- Gravier, M.**, Forman, S., Dickey, M. W., Hula, W., & Doyle, P. (2017, May 17). *Effect of rTMS on brain activation in chronic aphasia: Results from a pilot subject*. Paper presented to the VAPHS Office of Academic Affairs Advanced Fellows Conference, Pittsburgh, PA.
- Gravier, M.**, Dickey, M., Hula, W., Evans, W., & Doyle, P. (2016, May 26). *What matters in SFA: practice-related predictors of treatment response in aphasia*. Paper presented to the 46th annual Clinical Aphasiology Conference, Charlottesville, VA.
- Dickey, M., **Gravier, M.**, Hula, W. & Doyle, P. (2016, May 27). *Psycholinguistic predictors of treatment response in semantic feature analysis*. Paper presented to the 46th annual Clinical Aphasiology Conference, Charlottesville, VA.
- Hula, W., Fergadiotis, G., **Gravier, M.**, & Evans, W. (2016, May 28). *The impact of multidimensionality on the reliability of overall and subscale scores in aphasia assessment*. Paper presented to the 46th annual Clinical Aphasiology Conference, Charlottesville, VA.
- Ferrill, M.**, Love, T., Sullivan, N., MacKenzie, S., and Shapiro, L. (2014, October 5). *The Effect of Syntactic and Semantic Cues on Lexical Access in Broca's Aphasia*. Paper presented to the 52nd annual meeting of the Academy of Aphasia, Miami, FL.
- Sullivan, N., Walenski, M., MacKenzie, S., **Ferrill, M.**, Love, T., and Shapiro, L. (2014, October 5). *The Time-course of Lexical Reactivation of Unaccusative Verbs in Broca's Aphasia*. Paper presented to the 52nd annual meeting of the Academy of Aphasia, Miami, FL.
- Mackenzie, S., Walenski, M., Love, T., **Ferrill, M.**, Engel, S., Sullivan, N., Harris-Wright, H., and Shapiro, L.P. (2014, October 6). *The Impact of Similarity-Based Interference in Processing Wh-Questions in Aphasia*. Paper presented to the 52nd annual meeting of the Academy of Aphasia, Miami, FL.
- Ferrill, M.**, Walenski, M., Love, T., Pieperhoff, P., Amunts, K., Grodzinsky, Y., Sullivan, N., MacKenzie, S., and Shapiro, L. (2014, August 27). *Structure-behavior Correspondences*

- for *Canonical Sentence Comprehension in Broca's Aphasia*. Paper presented to the 6th annual meeting of the Society for the Neurobiology of Language, Amsterdam, The Netherlands.
- Ferrill, M.**, Walenski, M., Rogalski, C., & Love, T. (2013, November 7). *An investigation of the neural correlates of the effect of speech rate on lexical access and dependency construction in aphasia*. Paper presented to the 5th annual meeting of the Society for the Neurobiology of Language, San Diego, CA.
- Walenski, M., Heldreth, A., **Ferrill, M.**, Shapiro, L., & Love, T. (2013, March 21). *Idiom comprehension during sentence processing in children with autism*. Paper presented to the 11th International Symposium of Psycholinguistics, Tenerife, Spain.
- Grodzinsky, Y., Love, T., **Ferrill, M.**, Gutierrez, R., Deschamps, I., Pieperhoff, P., et al. (2012, October). *Broca's region and aspects of negation: A new selectivity pattern in Broca's Aphasia, and a model*. Paper presented at the Neurobiology of Language conference, San Sebastian, Spain.
- Walenski, M., Love, T., **Ferrill, M.**, Deschamps, I., Pieperhoff, P., Amuts, K. A., Grodzinsky, Y., Shapiro, L. P. (2012, May). *Structure-function correspondences in Broca's aphasia: Evidence from MRI and comprehension of verb phrase ellipsis constructions*. Paper presented to the 42nd Annual Clinical Aphasiology Conference, Tahoe, CA.
- Ferrill, M.**, Walenski, M., Shapiro, L., & Love, T. (2012, March 2). *Canonical Processing in Aphasia: A Dissociation between Real-Time and Metalinguistic Performance*. Paper presented to the 2nd Annual Southern California Cognitive Neuroscience Meeting, San Diego, CA.
- Ferrill, M.**, Karinen, C., Walenski, M., Love, T., & Shapiro, L. (2011, October 16). *Atypical lexical access during sentence comprehension in agrammatic aphasia*. Paper presented to the 49th annual Academy of Aphasia Conference, Montreal, QC, Canada.
- Ferrill, M.**, Love-Geffen, T., & Shapiro, T. (2011, June 1). *The time-course of lexical activation during sentence comprehension in aphasia*. Paper presented to the 41st Clinical Aphasiology Conference, Ft. Lauderdale, FL.
- Ferrill, M.**, Love, T., Shapiro, L. (2011). *Patterns of Lexical Activation and Decay During Sentence Processing*. Paper presented to the 4th annual SDSU Student Research Symposium. San Diego, CA.
- Matchin, W., Love, T., **Ferrill, M.**, Hickok, G. (2011). *Role of the Motor System in Audio-Visual Speech Integration: Evidence from the McGurk Effect in Broca's Aphasia*. Paper presented to the 18th Annual Cognitive Neuroscience Society Meeting. San Francisco, CA.
- Love, T., Brumm, K., **Gravier, M.**, & Shapiro, L. P. (2010). *Chronic Hypoperfusion in Aphasia: A Possible Relationship to Behavioral Variability*. Paper presented to the 2nd Annual Neurobiology of Language Conference. San Diego, CA.
- Brumm K., **Gravier M.**, Shapiro L., Love T. (2010). *Variability in Aphasia: A Neurophysiological Perspective*. Paper presented to the 48th Annual Academy of Aphasia Conference. Athens, Greece.
- Brockman-Hawe, J.D., **Gravier, M.**, Brumm, K. & Love, T. (2010). *Aging Effects on the Real-Time Processing of Idiomatic Phrases During Auditory Sentence Comprehension*. Paper presented to the 3rd annual SDSU Student Research Symposium, San Diego, CA.

Gravier, M. L., Downey, R. A., Wright, H. H., Love, T. & Shapiro, L. P. (2006). *Processing Distinct Linguistic Information Types in Working Memory in Aphasia*. Paper presented to 36th annual Clinical Aphasiology Conference, Ghent, Belgium.

TEACHING EXPERIENCE

California State University, East Bay

Adult Neurocognitive Disorders,
Undergraduate Level (SLHS 406: Spring, 2020)
Adult Neurogenic Disorders of Language,
Graduate Level (SLHS 602: Fall, 2019)
Practicum: Intro to Treatment/Treatment,
Graduate Level (SLHS 694/695: Fall 2019, Spring 2020)
Practicum: Assessment,
Graduate Level (SLHS 696: Fall 2019, Spring 2020)

California University of Pennsylvania

Language Disorders in Adults,
Graduate Level (CMD 701: Spring 2019)
Neurology,
Graduate Level (CMD 708: Fall 2018)

San Diego State University

Acquired Neurogenic Language and Cognitive Disorders II,
Graduate Level (SLHS 609B: Spring 2014)
Introduction to Language Science,
Undergraduate Level (SLHS 300: Spring 2012)
Graduate Assistant
Anatomy, Neurology, and Physiology of Speech,
Undergraduate Level (SLHS 321: Spring 2012)
Graduate Assistant

INVITED GUEST LECTURES

Aphasia, 2020

Undergraduate level, Introduction to Communication Disorders (SLHS 304), CSU East Bay. Course Instructor: Eve Higby, Ph.D.

Neurolinguistics and Aphasia, 2016, 2017, 2018

Undergraduate level, Language and the Mind (PSY/LING 1580), University of Pittsburgh. Course Instructor: Tessa Warren, Ph.D.

Voxel-based Lesion Symptom Mapping, 2015

Graduate level, Research Seminar in Speech-Language Pathology, Topic: Neurolinguistics (CSD 3479), University of Pittsburgh. Course Instructor: Michael Dickey, Ph.D.

Speech and Language Assessment in Aphasia, 2014

Undergraduate level, Language and the Brain (PSYC 224), Whittier College. Course Instructor: Kayoko Okada, Ph.D.

Speech and Language Therapy for People Post Stroke, 2013
Graduate level, Neurophysiologic Therapy I (DPT 834), San Diego State University.
Course Instructor: Laila Alibiglou, DPT

Language and the Brain: The Basics, 2013
Undergraduate level, Introduction to Language Science (SLHS 300), San Diego State University. Course Instructor: Lewis Shapiro, Ph.D.

Pediatric Traumatic Brain Injury, 2013
Graduate level, Acquired Neurogenic Language and Cognitive Disorders II (SLHS 609B), San Diego State University. Course Instructor: Tracy Love, Ph.D.

Motor Speech Disorders, 2011 & 2012
Undergraduate level, Introduction to Communication Disorders in Children and Adults (COGS 154), University of California, San Diego. Course Instructor: Marisa Sizemore, M.A.

Careers in Speech-Language Pathology, 2012
Introduction to Psychology course for Academic Connections (a pre-college summer academic experience), University of California, San Diego. Course Instructor: Shannon MacKenzie, B.A.

Dysarthria and AAC, 2011
Undergraduate level, Orientation to Communicative Disorders (SLHS 106), San Diego State University Invited guest lecture. Course Instructor: Henrike Blumenfeld, Ph.D.

Therapy in Early Stages of TBI Recovery, 2011
Graduate level, course on Acquired Neurogenic Disorders (SLHS 609B), San Diego State University. Course Instructor: Tracy Love, Ph.D.

Dysarthria, 2010
Undergraduate level, Orientation to Communicative Disorders (SLHS 106), San Diego State University. Course Instructor: Lewis Shapiro, Ph.D.

Aphasia Typologies, 2010
Undergraduate level, course on Communication and Aging (SLHS 580), San Diego State University. Course Instructor: Henrike Blumenfeld, Ph.D., 2010

STUDENT MENTORING/SUPERVISION

CSU East Bay
Master's Thesis Committee Member (2019, 3 students)

VA Pittsburgh
Speech-Language Pathology Clinical Fellowship Supervision (2016-18, 2 clinicians)

San Diego State University
Student Research Assistant Supervision (2009-15, 12 students)

Henry Mayo Newhall Memorial Hospital
Speech-Language Pathology Clinical Fellowship Supervision (2007-09, 4 clinicians)
Student Speech-Language Pathology Externship Supervision (2007-09, 2 students)

RESEARCH EXPERIENCE

- 2010-15 *Doctoral Student*
San Diego State University
Language and Neuroscience Group
Director: Dr. Tracy Love
- 2013 *Research Trainee*
University of California, Irvine
Auditory and Language Neuroscience Laboratory
Director: Dr. Gregory Hickok
- 2004-06 *Research Assistant*
San Diego State University
Language Processes Laboratory
Director: Dr. Lewis Shapiro

PROFESSIONAL TRAINING

- 2019 *Advanced Functional Near Infra-red Spectroscopy (fNIRS) Data Analysis Workshop*
University of Pittsburgh
- 2019 *Diffusion MRI Workshop*
Carnegie Mellon University
- 2017 *Transcranial Direct Current Stimulation (tDCS) for Rehabilitation Workshop*
National Center of Neuromodulation for Rehabilitation (NC NM4R),
Medical University of South Carolina
- 2016 *Neuromodulation for Rehabilitation Basic Skills Workshop*
National Center of Neuromodulation for Rehabilitation (NC NM4R),
Medical University of South Carolina
- 2015 *SAS Programming I*
UCSD Extension
- 2013 *Analysis of Functional NeuroImages (AFNI) Training*
National Institutes of Health (NIH); Bethesda, MD
- 2012 *E-Prime Training*
Psychology Software Tools; Philadelphia, PA
- 2010 *Functional Magnetic Resonance Imaging Operator Training*
UCSD Center for Functional Magnetic Resonance Imaging

OTHER ACTIVITIES

- Invited Ad-hoc Reviewer
Journal of Neurology, Neurosurgery, and Psychiatry
Brain and Language
The Clinical Neuropsychologist
Journal of Speech, Language, and Hearing Research
American Journal of Speech-Language Pathology
- Volunteer, "All About Me" Dementia Program, Hope Hospice

Advisory Board, “Neurocognitive Approaches to Communication Disorders” NIH Training Grant
(2017-2022)

Volunteer Tutor, Student Disability Services, San Diego State University (2012-13)

Organizing Committee Co-Chair, 2015 San Diego Stroke Awareness and Information Day

Organizing Committee, Member, 2nd Annual Southern California Cognitive Neuroscience
Meeting (2012)