

CURRICULUM VITAE

I. General Biographical Information

A. Personal

1. Full Name: Michael Stephen Beauchamp
2. Citizenship: U.S.A.
3. Education:
 - a. Undergraduate Harvard University, Cambridge, MA. A.B. *cum laude* in Biology, September 1988 - June 1992. *Advisors*: John Dowling and Richard Masland.
 - b. Graduate Education University of California, San Diego, CA. Ph.D. in Neurosciences. August 1992 – June 1997. *Thesis title*: FMRI of Attention in the Human Motion Processing System. *Advisors*: Edgar DeYoe and Thomas Albright. *Source of Support*: Howard Hughes Medical Institute Predoctoral Fellowship.
 - c. Postgraduate Training

Section on Functional Brain Imaging, Laboratory of Brain and Cognition, National Institute of Mental Health Intramural Research Program (NIMH-IRP), Bethesda, MD. July 1997 – June 2000. *Advisor*: James Haxby. *Source of Support*: Intramural Research Training Award.

Section on Cognitive Neuropsychology, Laboratory of Brain and Cognition, National Institute of Mental Health Intramural Research Program (NIMH-IRP), Bethesda, MD. June 2000 – June 2005. *Advisor*: Alex Martin. *Source of Support*: Intramural Research Training Award

B. Academic Appointments

1. Current faculty position Professor, tenured
Department of Neurosurgery
Vice Chair for Research, Department of Neurosurgery
January 2021 – present.
2. Previous faculty positions Professor, tenured
Department of Neurosurgery
Vice Chair for Neuroscience Research, Department of Neurosurgery
Academic Director, Core for Advanced MRI (CAMRI)
Baylor College of Medicine
March 2015 – December 2020.

Associate Professor, tenured (2011 – 2015)
Assistant Professor, tenure-track (2005 – 2011)
Department of Neurobiology and Anatomy
University of Texas Medical School at Houston

3. Courtesy appointments Adjunct Professor, Department of Neurobiology and
 Anatomy, University of Texas John P. and Katherine G.
 McGovern Medical School at Houston
 Adjunct Professor, Department of Psychological Sciences,
 Rice University
 Adjunct Professor, Department of Electrical and Computer
 Engineering, Rice University

C. Other advanced training/experience

Cold Spring Harbor Course in Functional Neuroimaging (1993)
McDonnell Summer Institute in Cognitive Neuroscience (1996)
Burroughs Welcome Fund Course in Scientific Management (2002)
Gulf Coast Consortium Research Mentoring workshop (2012)
The University of Texas M.D. Anderson Cancer Center Faculty Supervisory and Management
Program (2014)
NINDS Mentoring Institute for Neuroscience Diversity Scholars R25 Mentor (2016)

D. Other information

1. Honors and Awards
Ford Foundation Fellowship for Undergraduate Research (1990 - 1992)
Howard Hughes Medical Institute Predoctoral Fellowship (1992 - 1997)
NIH Fellows Award for Research Excellence (1999, 2000)
Best Lecturer in Neuroscience, University of Texas Medical School (2010)
Highest commendation for service to graduate education, UTHealth/MD Anderson Graduate
School of Biomedical Sciences (2013)

II. Research Information

A. Research Support

Pending

Agency: Brockman Foundation
Title: NEXT UP: Novel Experimental Technology to Transform the Understanding of Perception
Role: co-Principal Investigator (with Daniel Yoshor, MD)
Dates: July 1, 2020 – June, 2024
Annual direct cost: \$992,724 (gift)

Active

Agency: National Institutes of Health, National Institute of Neurological Diseases and Stroke

Title: Dynamic Neural Mechanisms of Audiovisual Speech Perception

Grant Number: U01NS113339

Role: Contact Principal Investigator (with Sujit Prabhu, MD Anderson Comprehensive Cancer Center and Charles Schroeder, Columbia University)

Dates: September 15, 2019 – May 31, 2024

Annual direct cost: \$748,005 (grant)

Percent Effort: 20%

Agency: National Institutes of Health, National Institute of Neurological Diseases and Stroke

Title: Dynamic Neural Mechanisms of Audiovisual Speech Perception

Grant Number: U01NS098976

Role: Principal Investigator (with Charles Schroeder, Columbia University, and Ash Mehta, Northwell Health)

Dates: September 15, 2015 – June 30, 2021 (in No-Cost Extension)

Annual direct cost: \$748,005 (grant)

Agency: National Institutes of Health, National Institute of Neurological Diseases and Stroke

Title: Neural Mechanisms of Optimal Multisensory Integration

Grant Number: R01NS065395

Role: Principal Investigator

Dates: February 1, 2010 – December 31, 2020 (renewal effective Jan 31, 2016)

Annual direct cost: \$210,000 (grant)

Percent Effort: 39%

Agency: National Institutes of Health

Title: RAVE: A New Open Software Tool for Analysis and Visualization of Electrographic Data

Grant Number: 1 R24 MH117529-01

Role: Principal Investigator

Dates: September 1, 2018 – May 31, 2021

Annual direct cost: \$181,891 (grant)

Percent Effort: 10%

Agency: Veterans Administration Clinical Science Research and Development Merit Award

Title: Multisensory Processing of Human Speech Measured with msec and mm Resolution

Grant Number 1I01CX000325-01A1

Role: Co-investigator (PI: Daniel Yoshor, MD)

Dates: April 1, 2015 – July 31, 2022

Annual direct cost: \$200,000 (grant)

Percent Effort: 5%

Agency: National Institutes of Health, National Eye Institute

Title: Visual Form Perception Produced by Electrically Stimulating Human Visual Cortex

Grant Number: R01EY023336

Role: Co-investigator (PI: Daniel Yoshor, MD)

Dates: September 1, 2013 – 31 January 2024

Annual direct cost: \$220,500 (grant)
Percent Effort: 24%

Agency: National Institutes of Health, National Institute of Neurological Diseases and Stroke
Title: Baylor Research Education Program in Neurosurgery
Grant Number: R25NS070694
Role: Co-investigator (PI: Daniel Yoshor, MD)
Dates: July 1, 2015 – June 30, 2020
Annual direct cost: \$72,136 (grant)
Percent Effort: 0%

B. National Scientific Participation: (include dates and titles)

1. Journal editorial boards, etc.

Journal of Neuroscience (Associate Editor, Behavioral/Cognitive section, 2014 - present)

2. Review panels

NIH Center for Scientific Review Panels

Standing Member, Mechanisms of Sensory, Perceptual, and Cognitive Processes (SPC), 7/01/2013 - 6/30/2019.

Ad hoc member, Biomedical Imaging Technology (BMIT), 2008

Ad hoc member, ZRG1 IFCN-E (04) M, 2010

Ad hoc member, SPC, 2011, 2012

Ad hoc member, ZRG1 IFCN-Q (2), 2013

Ad hoc member and Chair, ZGM1 PPBC-0 (AN)

Ad hoc member, 2020/05 ZRG1 BCMB-A (51) R

Ad hoc member, 2021/05 ZRG1 ETTN-C (10) B

Other Review Panels

Department of Veteran's Affairs Neurodegenerative Diseases and Aging panel (RRD6) and Sensory Systems panel (RRD3), 2009

United Kingdom Medical Research Council, 2005

National Science Foundation, 2003, 2004, 2009

Research Grant Panel of Hong Kong, 2011, 2012, 2013, 2014

European Research Council, 2010, 2012

Human Frontier Science Program, 2012

Dunn Collaborative Research Award, 2012, 2013

European Science Foundation College of Expert Reviewers (2019 - 2021)

3. Professional societies

Society for Neuroscience (1992 – present)

Organization for Human Brain Mapping (1996-present)

2010: Chair-Elect, Education Committee

2011: Chair, Education Committee

2012: Past Chair, Education Committee
2014: Member, Scientific Advisory Board

4. Invited lectures, presentations, research seminars

- 2001 Georgetown University Institute for Cognitive and Computational Sciences Seminar
- 2002 Montreal Neurological Institute Research Seminar
 Medical College of Wisconsin Biophysics Research Institute Symposium
- 2003 Integrative Neuroscience Interest Group, N.I.H.
 West Virginia University Center for Advanced Imaging Seminar
 Centre National De La Recherche Scientifique (Caen, France) Seminar
 Washington University in St. Louis Neuroimaging Laboratory Seminar
 Georgetown University Department of Neurology Conference
 University of Minnesota Department of Psychology Seminar
 University of Illinois, Urbana-Champaign Psychology Seminar
- 2004 University of California, Irvine, Cognitive Science Colloquium
 Indiana University Psychology Department Seminar
 Rutgers University—Newark Department of Psychology
 West Virginia University Department of Neurobiology and Anatomy
 Dalhousie University Brain Repair Centre Lecture
 University of Texas at San Antonio Biology Department Seminar
 University of Iowa Medical Center Department of Neurology
 University of Texas Houston Health Science Center Lecture
- 2005 RIKEN Brain Science Institute Invited Seminar. Tokyo, Japan.
 Washington V.A. Hospital Neurology Grand Rounds
 Rice University Cognitive Neuroscience Tea Lecture Series
 University of Houston School of Optometry Periopsia Seminar Series
- 2006 Research Seminar, University of Texas School of Health Information Sciences at
 Houston
 Neurosurgery Grand Rounds, University of Texas Medical School
 Neuroscience Seminar Series, Baylor College of Medicine
 Department of Ophthalmology Seminar, University of Texas Medical School
- 2007 Texas A&M University Neuroscience Lecture Series
 Research Seminar, University of Texas School of Health Information Sciences at
 Houston
 Neurosurgery Grand Rounds, University of Texas Medical School
 Neuroscience Seminar Series, Baylor College of Medicine
 Department of Ophthalmology Seminar, University of Texas Medical School
- 2008 UCSF/Integra Neurosciences Workshop on Electrocoricography

McGill University Neuroscience Program Lecture Series
Department of Neurobiology and Anatomy Colloquium, University of Texas Medical School at Houston
Rice University Department of Psychology Cognitive Tea
Invited Speaker, Houston Society of Engineering in Medicine and Biology Vision Symposium
Invited Speaker, 18th Annual TENNET Meeting on Theoretical & Experimental Neuropsychology (Waterloo, Ontario, Canada).

- 2009 Association for Research in Memory (ARMADILLO), Rice University
Department of Psychiatry and Behavioral Sciences Grand Rounds, University of Texas Medical School
Colloquium Speaker, Center for Brain Health, University of Texas Southwestern Medical Center and University of Texas at Dallas
Department of Psychiatry Grand Rounds, Michael E. DeBakey Veteran's Administration Medical Center
Texas Children's Hospital Neuroimaging Special Interest Group
- 2010 Brown Family Foundation Institute of Molecular Medicine Seminar Series, Houston, TX
University of Minnesota Department of Psychology Colloquium
University of Missouri Department of Psychology Colloquium
Department of Neurobiology and Anatomy Colloquium, University of Texas Medical School at Houston
Department of Biology Seminar Series, University of Texas at San Antonio
Psychology Department Colloquium, Rice University, Houston, TX
- 2011 York University (Toronto, Ontario, Canada) Department of Psychology Colloquium
Vanderbilt University Department of Hearing and Speech Sciences Seminar
Rice University (Houston, TX) B.R.A.I.N. Undergraduate Neuroscience Symposium
Keynote Lecturer
Houston Brain Behavior and Imaging Group (BBIG)
- 2012 Rotman Institute Research Rounds (Toronto, Ontario, Canada)
University of Texas at Austin Neurobiology Seminar Series, Austin, TX
University of Southern California Department of Psychology Seminar, Los Angeles, CA
University of California, Los Angeles, Special Cognitive Forum, Los Angeles, CA
Institute of Psychology Special Forum, Chinese Academy of Sciences, Beijing, China
Department of Neuroscience, Virginia Tech Carillion Research Institute, Roanoke, VA
Rice University Department of Psychology Cog Tea, Houston, TX
Department of Neurosurgery Grand Rounds, Baylor College of Medicine, Houston, TX
City University of New York Psychology Department Seminar, New York, NY
- 2013 University of Washington fMRI Seminar Series (Seattle, TX)
- 2014

Gordon Research Conference on the Neurobiology of Cognition (Newry, ME)

2015

University of Houston Health and Human Performance Seminar Series (Houston, TX)
National Institute of Mental Health Seminar Series (Bethesda, MD)
University of Oldenburg Hearing4All Center of Excellence Seminar Series (Oldenburg, Germany)

2016

10th Annual Workshop on Concepts, Actions and Objects (Rovereto, Italy)

2017

Massachusetts General Hospital Martinos Imaging Center BrainMap Seminar (Boston, MA)
University of California, Davis Center for Neuroscience Seminar Series (Davis, CA)
International Multisensory Research Forum Workshop on Reproducibility (Nashville, TN)
NSF Partnerships for International Research and Education (PIRE) Workshop on Hierarchical Multisensory Integration: Theory and Experiments (Girona, Spain)

2018

Alpine Brain Imaging Meeting (Champéry, Switzerland)
Baylor College of Medicine Department of Neurology Grand Rounds (Houston, TX)
Texas Children's Hospital Child Neurology Grand Rounds (Houston, TX)

2019

Manipulating Brain States – Invasive Mapping and Neuromodulation in Human Neurological Disease (University of Rochester Medical Center, Rochester, NY)
Graduate Center of the City University of New York Psychology Seminar (New York, NY)

2020

University of Memphis Department of Psychology Colloquium (Memphis, TN)

C. Publications

1. Full papers published in peer review journals

1. Beauchamp, M.S., Cox, R.W., and DeYoe, E.A.: Graded effects of spatial and featural attention on human area MT and associated motion processing areas. *J Neurophysiol* 77: 516-520, 1997.
2. Beauchamp, M.S., Haxby, J.V., Jennings, J.E., and DeYoe, E.A.: An fMRI version of the Farnsworth-Munsell 100-Hue test reveals multiple color-selective areas in human ventral occipitotemporal cortex. *Cereb Cortex* 9: 257-263, 1999.
3. Beauchamp, M.S., Haxby, J.V., Rosen, A.C., and DeYoe, E.A.: A functional MRI case study of acquired cerebral dyschromatopsia. *Neuropsychologia* 38: 1170-1179, 2000.

4. Lewis, J.W., Beauchamp, M.S., and DeYoe, E.A.: A comparison of visual and auditory motion processing in human cerebral cortex. *Cereb Cortex* 10: 873-888, 2000.
5. Beauchamp, M.S., Petit, L., Ellmore, T.M., Ingeholm, J., and Haxby, J.V.: A parametric fMRI study of overt and covert shifts of visuospatial attention. *Neuroimage* 14: 310-321, 2001.
6. Beauchamp, M.S., Lee, K.E., Haxby, J.V., and Martin, A.: Parallel visual motion processing streams for manipulable objects and human movements. *Neuron* 34: 149-159, 2002.
7. Beauchamp, M.S.: Detection of eye movements from fMRI data. *Magn Reson Med* 49: 376-380, 2003.
8. Beauchamp, M.S., Lee, K.E., Haxby, J.V., and Martin, A.: FMRI responses to video and point-light displays of moving humans and manipulable objects. *J Cogn Neurosci* 15: 991-1001, 2003.
9. Petit, L., and Beauchamp, M.S.: Neural basis of visually guided head movements studied with fMRI. *J Neurophysiol* 89: 2516-2527, 2003.
10. Beauchamp, M.S., Lee, K.E., Argall, B.D., and Martin, A.: Integration of auditory and visual information about objects in superior temporal sulcus. *Neuron* 41: 809-823, 2004.
11. Beauchamp, M.S., Argall, B.D., Bodurka, J., Duyn, J.H., and Martin, A.: Unraveling multisensory integration: patchy organization within human STS multisensory cortex. *Nat Neurosci* 7: 1190-1192, 2004.
12. Beauchamp, M.S.: Statistical criteria in FMRI studies of multisensory integration. *Neuroinformatics* 3: 93-114, 2005.
13. Van Boven, R.W., Ingeholm, J.E., Beauchamp, M.S., Bickle, P.C., and Ungerleider, L.G.: Tactile form and location processing in the human brain. *Proc Natl Acad Sci U S A* 102: 12601-12605, 2005.
14. Amedi, A., von Kriegstein, K., van Atteveldt, N.M., Beauchamp, M.S., and Naumer, M.J.: Functional imaging of human crossmodal identification and object recognition. *Exp Brain Res* 166: 559-571, 2005.
15. Wheatley, T., Weisberg, J., Beauchamp, M.S., and Martin, A.: Automatic priming of semantically related words reduces activity in the fusiform gyrus. *J Cognit Neurosci* 17: 1871-1885, 2005.
16. Furey, M.L., Tanskanen, T., Beauchamp, M.S., Avikainen, S., Uutela, K., Hari, R., and Haxby, J.V.: Dissociation of face-selective cortical responses by attention. *Proc Natl Acad Sci U S A* 103: 1065-1070, 2006.
17. Argall, B. D., Saad, Z. S., and Beauchamp, M. S.: Simplified intersubject averaging on the cortical surface using SUMA. *Hum Brain Mapp* 27:14-27, 2006.

18. Beauchamp, M. S., and Martin, A.: Grounding object concepts in perception and action: evidence from fMRI studies of tools. *Cortex* 43:461-468, 2007.
19. Simmons, W. K., Ramjee, V., Beauchamp, M. S., McRae, K., Martin, A., and Barsalou, L. W.: A common neural substrate for perceiving and knowing about color. *Neuropsychologia* 45:2802-2810, 2007.
20. Beauchamp, M. S., Yasar, N. E., Kishan, N., and Ro, T.: Human MST but not MT responds to tactile stimulation. *J Neurosci* 27:8261-8267, 2007.
21. Ro, T., Farne, A., Johnson, R., Wedeen, V., Chu, Z., Want, Z., Hunter, J., and Beauchamp, M.S.: Feeling sounds after a thalamic lesion. *Annals of Neurology* 62:433-441, 2007.
22. Murphey, D., Yoshor, D., and Beauchamp, M.S.: Perception Matches Selectivity in the Human Anterior Color Center. *Current Biology* 18:216-220, 2008.
23. Beauchamp, M.S., Yasar, N.E., Frye, R.E., and Ro, T.: Touch, sound and vision in human superior temporal sulcus. *Neuroimage* 14:1011-1020, 2008.
24. Dulay, M. F., Murphey, D.K., Sun, P., David, Y.B., Maunsell, J.H., Beauchamp, M.S., Yoshor, D. Computer-controlled electrical stimulation for quantitative mapping of human cortical function. *J Neurosurg*. 2009 Jun;110(6):1300-3.
25. Beauchamp, M. S. and Ro, T. Neural substrates of sound-touch synesthesia after a thalamic lesion. *J Neurosci*, 28(50):13696-702, 2008.
26. Frye, R.E., and Beauchamp, M.S. Receptive language organization in high-functioning autism. *Journal of Child Neurology*, Feb; 24(2) 231-236, 2009.
27. Saad, Z.S., Glen, D.R., Chen, G., Beauchamp, M.S., Desai, R., Cox, R.W. A new method for improving functional-to-structural MRI alignment using local Pearson correlation. *Neuroimage*, Feb 1; 44(3):839-848, 2009.
28. Beauchamp, M.S., LaConte S., Yasar, N. Distributed representation of single touches in somatosensory and visual cortex. *Human Brain Mapping*, 2009 Oct; 30(10):3163-71.
29. Murphey, D., Maunsell, J.H.R., Beauchamp, M.S.*, Yoshor, D.* Perceiving electrical stimulation of identified human visual areas. *Proceedings of the National Academies of Sciences*, 106(13):5389-93, 2009. (* these two authors contributed equally to this work)
30. Ro, T., Hsu J., Yasar, N., Elmore C.L., Beauchamp, M.S. Sound enhances touch perception. *Experimental Brain Research* 195:135-143, 2009.
31. Ellmore, T.M., Beauchamp, M.S., O'Neill T.J., Dreyer, S., Tandon, N. Relationships between essential cortical language sites and subcortical pathways. *Journal of Neurosurgery*, 2009 Oct;111(4):755-66..

32. Ellmore TM, Beauchamp MS, Breier JI, Slater JD, Kalamangalam GP, O'Neill TJ, Disano MA, Tandon N. Temporal lobe white matter asymmetry and language laterality in epilepsy patients. *Neuroimage*. 2010 Feb 1; 49(3):2033-44.
33. Beauchamp, M.S., Nath, A., Pasalar, S. fMRI-Guided transcranial magnetic stimulation reveals that the superior temporal sulcus is a cortical locus of the McGurk effect. *J Neurosci*. 2010 Feb 17;30(7):2414-7. *Featured at SFN Annual Meeting Press Conference and in SFN publication "Neuroscience Quarterly", Winter 2011.*
34. Frye, R.E., Liederman, J., Malmberg, B., McLean, J., Strickland, D., Beauchamp, M.S. Surface Area Accounts for the Relation of Gray Matter Volume to Reading-Related Skills and History of Dyslexia. *Cerebral Cortex*, 2010 Feb 12.
35. Pasalar, S., Ro, T., Beauchamp, M.S. TMS of Posterior Parietal Cortex Disrupts Visual Tactile Multisensory Integration. *European Journal of Neuroscience*, 31: 1783-90, 2010. *Special Issue on Multisensory Integration.*
36. Beauchamp, M.S., Pasalar, S., Ro, T. Neural substrates of reliability-weighted visual-tactile multisensory integration. *Frontiers in Systems Neuroscience*, 4(25): 1-11, 2010. *Special issue on Connectivity and Brain Disorders.*
37. Sevy, A.B.G., Bortfeld, H, Huppert, T.J., Beauchamp, M.S., Tonini, R.E., Oghalai, J.S. Neuroimaging with Near-Infrared Spectroscopy Demonstrates Speech-Evoked Activity in the Auditory Cortex of Deaf Children Following Cochlear Implantation. *Hearing Research*, 2010 Dec; 270: 39-47.
38. Nath, AR and Beauchamp, MS. Dynamic Changes in Superior Temporal Sulcus Connectivity During Perception of Noisy Audiovisual Speech. *Journal of Neuroscience*, 2011 Feb 2;31(5):1704-1714.
39. Nath, AR and Beauchamp, MS. A Neural Basis for Interindividual Differences in the McGurk Effect, a Multisensory Speech Illusion. *Neuroimage*, 59(1): 781-787, 2012 [epub Jul 20, 2011].
40. Nath, AR, Fava EE and Beauchamp, MS. Neural Correlates of Interindividual Differences in Children's Audiovisual Speech Perception. *Journal of Neuroscience*, 31(39): 13963-71, 2011 Sep 28.
41. Beauchamp MS, Beurlot MR, Fava EE, Nath AR, Parikh NA, Saad ZS, Bortfeld H, Oghalai JS. The Developmental Trajectory of Brain-Scalp Distance from Birth through Childhood: Implications for Functional Neuroimaging. *PLoS One*, 6(7):e24981, 2011 Sep 21.
42. Chen, G, Saad, ZS, Nath, AR, Beauchamp, MS and Cox, RW. FMRI Group Analysis Combining Effect Estimates and Their Variances. *Neuroimage* 60(1):747-65, 2012.
43. Beauchamp, MS, Sun, P, Baum, S, Tolia, A, Yashor, D. Electrooculography Links Human Temporoparietal Junction to Visual Perception. *Nature Neuroscience* 15(7):957-9, 2012.

44. Baum, SH, Martin, RC, Hamilton, AC, Beauchamp, MS. Multisensory speech perception without the left superior temporal sulcus. *Neuroimage* 62(3):1825-32, 2012.
45. Ro, T, Ellmore, TM, Beauchamp, MS. A neural link between hearing and feeling. *Cerebral Cortex* July 2013; 23(7):1724 - 30.
46. Weisberg, J, Milleville SC, Kenworthy, L, Wallace, GL, Gotts SJ, Beauchamp MS, Martin A. Social Perception in Autism Spectrum Disorders: Impaired Category Selectivity for Dynamic but not Static Images in Ventral Temporal Cortex. *Cerebral Cortex* 24(1):37-48, 2014.
47. Magnotti, JF, Ma, W, Beauchamp MS. Causal inference of asynchronous audiovisual speech. *Frontiers in Psychology*, 13 November 2013; 4:798.
48. Pollonini, L, Bortfeld, H, Abaya, H, Beauchamp, MS, Tonini, RE, Oghalai, JS. Auditory cortex activation to natural speech and simulated cochlear implant speech measured with functional near-infrared spectroscopy. *Hearing Research*. March 2014; 309:84-93.
49. Schepers, IM, Yoshor, D, Beauchamp, MS. Electrocoricography Reveals Enhanced Visual Cortex Responses to Visual Speech. *Cerebral Cortex* (Epub 5 June 2014).
50. Magnotti, JF, Beauchamp, MS. The Noisy Encoding of Disparity Model of the McGurk Effect. *Psychonomic Bulletin and Review* (Epub 23 Sept 2014).
51. Baum, SH, Beauchamp MS. Greater BOLD Variability in Older Compared with Younger Adults during Audiovisual Speech Perception. *PLoS One*. 2014 Oct 22;9(10):e111121.
52. Magnotti, JF, Basu Mallick, D, Feng, G, Zhou, B, Zhou, W, Beauchamp, MS. Similar frequency of the McGurk effect in large samples of native Mandarin Chinese and American English speakers. *Experimental Brain Research* (Epub 4 June 2015).
53. Jiang, F, Beauchamp, MS, Fine, I. Re-examining overlap between tactile and visual motion responses within hMT+ and STS. *Neuroimage* (Epub 2015 June 26).
54. Olds, C, Pollonini, L, Abaya, H, Larky, J, Loy, M, Bortfeld, H, Beauchamp, MS, Oghalai, JS. Cortical Activation Patterns Correlate With Speech Understanding After Cochlear Implantation. *Ear & Hearing* 2016 May-Jun;37(3):e160-72.
55. Magnotti JF, Beauchamp MS. A Causal Inference Model Explains Perception of the McGurk Effect and Other Incongruent Audiovisual Speech. *PLoS Computational Biology* 2017 Feb 16;13(2):e1005229.
56. Zhu LL, Beauchamp MS. Mouth and Voice: A Relationship between Visual and Auditory Preference in the Human Superior Temporal Sulcus. *Journal of Neuroscience* 8 March 2017, 37 (10) 2697-2708.
57. Ozker M, Schepers IM, Magnotti JF, Yoshor D, Beauchamp MS. A Double Dissociation between Anterior and Posterior Superior Temporal Gyrus for Processing Audiovisual Speech

Demonstrated by Electrocorticography. *Journal of Cognitive Neuroscience*. June 2017, 29:6, pp. 1044–1060. doi:10.1162/jocn_a_01110.

58. Bosking WH, Sun P, Ozker M, Pei X, Foster B, Beauchamp MS, Yoshor D. Saturation in phosphene size with increasing current levels delivered to human visual cortex. *Journal of Neuroscience*. July 26, 2017, 37(30):7188 –7197.
59. Magnotti JF, Basu Mallick D, Beauchamp MS. Reducing playback rate of audiovisual speech leads to a surprising decrease in the McGurk effect. *Multisensory Research* 31 (2018). doi: 10.1163/22134808-00002586
60. Bosking WH, Beauchamp MS, Yoshor D. Electrical Stimulation of Visual Cortex: Relevance for the Development of Visual Cortical Prosthetics. *Annual Review of Vision* 2017.3:141-166.
61. Beauchamp MS. Forty Years of the McGurk Effect. *Multisensory Research* 31 (2018) 1–6.
62. Ozker M, Yoshor D, Beauchamp MS. Frontal Cortex Selects Representations of the Talker's Mouth to Aid in Speech Perception. *eLife* 2018;7:e30387.
63. Ozker M, Yoshor D, Beauchamp MS. Converging Evidence from Electrocorticography and BOLD fMRI for a Sharp Functional Boundary in Superior Temporal Gyrus Related to Multisensory Speech Processing. *Frontiers in Human Neuroscience*, 24 April 2018 doi: 10.3389/fnhum.2018.00141
64. Lazaro-Munoz G, Yoshor D, Beauchamp MS, Goodman W, McGuire A. Continued Access to Investigational Brain Implants. *Nature Reviews Neuroscience* June 2018, Vol.19(6), pp.317-318.
65. Micheli, C, Schepers IM, Ozker M, Yoshor D, Beauchamp MS, Rieger JW. Electrocorticography reveals continuous auditory and visual speech tracking in temporal and occipital cortex. *European Journal of Neuroscience* 2018 Jun 11. doi: 10.1111/ejn.13992.
66. Magnotti, JF, Beauchamp MS. Published estimates of group differences in multisensory integration are inflated. *PLOS ONE* September 19, 2018 doi: 10.1371/journal.pone.0202908
67. Rennig, J, Beauchamp MS. Free viewing of talking faces reveals mouth and eye preferring regions of the human superior temporal sulcus. *NeuroImage* 2018 Dec;183:25-36 doi: 10.1016/j.neuroimage.2018.08.008.
68. Magnotti, JF, Smith, KB, Salinas, M, Mays, J, Zhu, LL, Beauchamp MS. A causal inference explanation for enhancement of multisensory integration by co-articulation. *Scientific Reports* 2018 Dec 21;8(1):18032. doi: 10.1038/s41598-018-36772-8.
69. Kishida, K, De Asis-Cruz J, Liebenow, B, Treadwell-Deering, D, Beauchamp, MS, Montague, PR. Diminished single-stimulus response in vmPFC to favorite people in children diagnosed with Autism Spectrum Disorder. *Biological Psychology* (2019).

70. Karas, PJ, Magnotti, JF, Metzger, BA, Zhu, LL, Smith, KB, Yoshor D, Beauchamp MS. The visual speech head start improves perception and reduces superior temporal cortex responses to auditory speech. *eLife* 2019;8:e48116 DOI: 10.7554/eLife.48116.
71. Sierra-Mercado D, Zuk P, Beauchamp MS, Sheth SA, Yoshor D, Goodman WK, McGuire AL, Lazaro-Munoz G. Device Removal Following Brain Implant Research. *Neuron* 2019 103(5), pp. 759-761.
72. Feng G, Zhou B, Zhou W, Beauchamp MS, Magnotti JF. A Laboratory Study of the McGurk Effect in 324 Monozygotic and Dizygotic Twins. *Frontiers in Auditory Cognitive Neuroscience*, 4 Oct 2019.
73. Wegner-Clemens K, Rennig J, Magnotti JF, Beauchamp MS. Using principal components analysis to characterize eye movement fixation patterns during face viewing. *Journal of Vision*, November 2019, Vol.19, 2. doi:10.1167/19.13.2.
74. Bartoli, E, Bosking, W, Li, Y, Beauchamp, MS, Yoshor, D, Foster, B. Distinct Narrow and Broadband Gamma Responses in Human Visual Cortex. *Current Biology*, 3 Oct 2019.
75. Rennig, J, Wegner-Clemens, K, Beauchamp MS. Face Viewing Behavior Predicts Multisensory Gain During Speech Perception. *Psychonomic Bulletin and Review* (2020), 27(1), 70-77. doi:10.3758/s13423-019-01665-y.
76. Ro, T, Beauchamp, MS. Ipsilesional Perceptual Deficits in Hemispatial Neglect: Case Reports. *Cortex* 122 (2020) 277-287.
77. Beauchamp MS, Bosking W, Sun P, Foster B, Niketeghad S, Pouratian N, Yoshor D. Dynamic Electrical Stimulation of Sites in Visual Cortex Produces Form Vision in Sighted and Blind Humans. *Cell* May 14, 2020; Vol 181, pp 774–783.
78. Metzger, BA, Magnotti, JF, Wang, Z, Nesbitt, E, Karas, PJ, Yoshor D, Beauchamp MS. Responses to Visual Speech in Human Posterior Superior Temporal Gyrus Examined with iEEG Deconvolution. *Journal of Neuroscience* (in press).
79. Wegner-Clemens K, Rennig J, Beauchamp MS. A relationship between Autism-Spectrum Quotient and face viewing behavior in 98 participants. *PLoS ONE* 15(4): e0230866. Published April 30, 2020.

2. Other full papers

1. Beauchamp, MS. Functional MRI for beginners. *Nature Neuroscience* 5: 397-398, 2002.
2. Beauchamp, MS. See me, hear me, touch me: multisensory integration in lateral occipital-temporal cortex. *Curr Opin Neurobiol* 15: 145-153, 2005.
3. Martin, A, Simmons W, Beauchamp, MS, Gotts SJ. Is a single 'hub', with lots of spokes, an accurate description of the neural architecture of action semantics?: Comment on "Action semantics: A unifying conceptual framework for the selective use of multimodal and

modality-specific object knowledge" by van Elk, van Schie and Bekkering. *Phys Life Rev.* 2014 Jun;11(2):261-2.

4. Beauchamp, MS. The social mysteries of the superior temporal sulcus. *Trends in Cognitive Science* 2015 Sep;19(9):489-90. doi: 10.1016/j.tics.2015.07.002.

4. Books

Book chapters written

1. Beauchamp, M.S. Functional MRI for Cerebral Localization: Principles and Methodology. *Clinical Brain Mapping*, eds. Yoshor, D. and Mizrahi, E. New York: McGraw-Hill Medical (2012).
2. Beauchamp, M.S. Biological Motion and Multisensory Integration: The Role of the Superior Temporal Sulcus. *The Science of Social Vision*, eds. Adams, R., Ambady, N., Nakayama, K., and Shimojo, S. New York: Oxford University Press (2010).
3. Beauchamp, M.S. The anatomical organization of multisensory integration in the human brain. In *The New Handbook of Multisensory Processes (2nd edition)*, ed. Barry Stein. Cambridge: MIT Press (2012).
4. Yoshor, D. and Beauchamp, M.S. Studies of Human Visual Perception Using Cortical Electrical Stimulation. In *The Cognitive Neurosciences, Fifth Edition* ed. Michael S. Gazzaniga and George R. Mangun. Cambridge: MIT Press (2014).
5. Beauchamp, M.S., Audiovisual Speech Integration, in *Neurobiology of Language*, eds. Hickok, G. and Small, S.L. New York: Elsevier (2015).
6. Beauchamp, M.S., Using Multisensory Integration to Understand Human Auditory Cortex, in *Springer Handbook of Auditory Research Volume 68*, eds. Wallace, M. and Lee, K. C. New York: Springer (2019).

D. Innovation and Commercialization

1. Patents

SYSTEMS AND COMPUTER-IMPLEMENTED METHODS OF CONVEYING A VISUAL IMAGE TO A BLIND SUBJECT FITTED WITH A VISUAL PROSTHESIS

with William Bosking and Daniel Yoshor.

International Application Number PCT/US19/20649, EFS ID 35324047

III. Teaching Information

A. Didactic course work

1. Courses taught at current institution: (include number of hours)

BCM Graduate School courses

Together with Dr. David Ress, I teach a two course series on neuroimaging. The first course, Fundamentals of Human Neuroimaging, is a didactic course. The second course, Advanced Functional Magnetic Imaging Laboratory is a combination of didactics and practical experience in collecting and analyzing fMRI data.

I served as a faculty group leader in the GSBS Ethics Course (Carolyn Smith, course director)

Guest Lectures:

Rice University Statistics 640/400 (Statistical Learning). Course Director: Genevera Allen.

The Neuroscience of Speech Perception. September 2016.

University of Texas Graduate School of Biomedical Sciences, Introduction to Cognitive Neuroscience. Course Director: Anthony Wright. *Introduction to fMRI*, September 2016.

2. Courses taught at other institutions (include number of hours)

University of Texas Medical school courses:

Medical Neuroscience for 1st Year Medical Students (12 hours)

Medical Neuroanatomy for 1st Year Medical Students (6 hours)

University of Texas Graduate school courses:

Neuroanatomy (20 hours)

Introduction to fMRI (45 hours)

Introduction to Cognitive Neuroscience (4 hours)

Postdoctoral Certificate Program

Responsible Conduct of Research (2 hours)

Rice University Courses:

Neuroscience 308: Systems Neuroscience, David Dickman, course director (2 hours)

Psychology 203: Introduction to Cognitive Psychology. Tatiana Schnur, course director (2 hours)

B. Non-didactic teaching

1. Research fellow training:

Siavash Pasalar, Ph.D. (2008 – 2011). Current position: Epidemiology specialist, Harris County Hospital District.

Inga Schepers, Ph.D. (2012 – 2013). Current position: Postdoctoral researcher, University of Oldenburg

Demet Gurler, Ph.D. (2013 – 2014). Current position: Postdoctoral research associate, University of Alabama at Birmingham.

John Magnotti, Ph.D. (2012 – 2017). Current position: Assistant Professor, Baylor College of Medicine.

Johannes Rennig, Ph.D. (2015 – 2019).

Brian Metzger, Ph.D. (2018 – 2020).

Yue Zhang, Ph.D. (2019 – 2020).

2. Graduate student training

- i) Major advisor to the following graduate students (graduate program in parentheses).
Nafi Yasar, 2005 – 2009 (Rice Bioengineering). Current position: Director of Project Development and Marketing, Ripple LLC.
Dona Murphey, 2006 – 2009 (BCM MSTP). Director of Medical and Scientific Affairs, Corticare, Inc.
Audrey Nath, 2008 – 2011 (UT MSTP). Assistant Professor, Texas Children's Hospital.

Sarah Baum, 2010 – 2014 (UT GSBS). Data scientist, Google Corp.
Debshila Basu Mallick, 2011 – 2016 (Rice Psychology). Scientist, OpenStax Inc.
Muge Ozker, 2013 – 2018. Postdoctoral Fellow, New York University.
Lin Zhu, 2014 – 2018 (BCM MSTP).
Zhengjia Wang, 2017 – present (Rice Statistics).

- ii) Committee member (primary mentor for the student and institution in parentheses)

Diego Gutnisky, 2008 (Valentin Dragoi, UT)
Manivannan Subramaniyan, 2008 – 2013 (Andreas Tolias, BCM)
Wen Zhou, 2009 – 2011 (Denise Chen, Rice)
Sara Haber Holcomb, 2009 – 2012 (Tatiana Schnur, Rice)
Lauren (Caitlin) Elmore, 2009 – 2011 (Anthony Wright, UT)
Sheshali Wanchoo, 2009 (Nachum Dafny, UT)
Anthony Passaro, 2009 (Anthony Wright, UT)
Chad Bircher, 2009 – 2011 (Yiping Shao, M.D. Anderson)
Mingbo Cai 2010 – 2015 (David Eagleman, BCM)
Josephine De Asis-Cruz 2010 – 2015 (Read Montague, BCM/VT)
Catherine Claussen, 2011 – 2012 (Nachum Dafny, UT)
Jonathan Flynn 2011 – 2015 (Harel Shouval, UT)
Hongsup Shin 2012 – 2016 (Weiji Ma, BCM & NYU)
Edgar Walker, 2013 – 2019 (Andreas Tolias & Weiji Ma, BCM & NYU)
Jasdeep Sabharwal, 2013 – 2017 (Samuel Wu, BCM)
Christopher P Walker, 2015 – 2019 (Raymond Cho, UT)
Lexi Crommett, 2015 – 2019 (Jeff Yau, BCM)
Jaclyn Smith, 2014 – present (Dora Angelaki, BCM)
Courtney Garcia, 2014 – 2019 (Dora Angelaki, BCM)
Liz Halfen, 2016 – present (Jeff Yau, BCM)
Ye Li, 2018 – present (Brett Foster, BCM)
Lindsay Aponik, 2018 – present (Brett Foster, BCM)
Elise Mangin (2019 – present (Nuo Li, BCM)

3. Other Student training

I have served as a research mentor to undergraduates and medical students. These students typically work part-time during the school year and full-time in the summer.

Eszter Zavodsky, University of Michigan. UT-Houston Summer Research Program, 2005
Neel Kishan, Rice University. Rice University Undergraduate Research Program, 2006
Nancy Lin, Rice University. Rice University Undergraduate Research Program, 2006

Molly Bryan, Rice University. Rice University Century Scholars Undergraduate Excellence Program.

John Westley Ohman, UT Houston Medical Student. UT-Houston Summer Research Program, 2009.

Adam Burch, Carnegie Mellon University. Research Experience for Undergraduate program, 2010.

Shizuka Kano, University of Kobe. UT-Houston Summer Research Program, 2012.

Nathan Doyle, UT Houston Medical Student. UT-Houston Summer Research Program and NIH T32 training grant awardee, 2013-2014.

Kristen Smith, Rice University. Howard Hughes Medical Institute Sustaining Excellence in Research Program. Academic year 2015-2016, Academic year 2016-2017. Baylor College of Medicine SMART Program, Summer 2016.

Marcelo Salinas, Rice University. Howard Hughes Medical Institute Sustaining Excellence in Research Program. Academic Year 2016-2017.

4. Faculty mentoring

I serve as a research mentor to junior faculty in the Department of Neurosurgery and to outside faculty.

Leslie Kwakye, Oberlin College. Mentored through the MINDS (Mentoring Institute for Neuroscience Diversity Scholars) program, funded by an NINDS R-25 (Gonzalo Torres, PI)

C. Lectures: (include location, title of presentation, dates)

See section B4, above.

IV. Medical & Service Information

D. Administrative assignments

1. Department administration, committees, etc.

Vice-Chair for Neuroscience Research, Department of Neurosurgery

Reporting Committee, Neuroscience Graduate Program

Postdoctoral Committee, Department of Neuroscience

Seminar Series, Department of Neuroscience

Faculty Affairs and Promotions Committee, Department of Neuroscience

Faculty Affairs and Promotions Committee, Department of Neurosurgery

2. College, School or University administration, committees, etc.

Director, Core for Advanced Magnetic Resonance Imaging (CAMRI), one of the BCM Advanced Technology Cores (ATCs).

Steering Committee, Gulf Coast Consortium Center for NeuroEngineering (2015 - 2019)

Member, Baylor College of Medicine Student Appeals and Grievances Committee

Previous service at University of Texas:

Medical School Information Technology committee (2006 - 2015)

Chair, Department of Neurobiology and Anatomy Seminar Committee (2011 – 2015)

Department of Neurobiology and Anatomy Finance Committee (2009 - 2015)

University of Texas/M.D. Anderson Graduate School of Biological Sciences Curriculum
Committee (2012 - 2015)

Core Course Advisory Committee (2014 - 2015)

Co-director of Systems and Cognitive Neuroscience Track, Neuroscience Graduate Program (2011
- 2015)