CURRICULUM VITAE

I. General Biographical Information

A. Personal

1. Full Name: Michael Stephen Beauchamp

2. Citizenship: U.S.A. and Canada

3. Education:

a. Undergraduate *1988-1992*: Harvard University, Cambridge, MA. A.B. *cum laude* in Biology, *Advisors*: John Dowling and Richard Masland.

b. Graduate Education *1992-1997*: University of California, San Diego, CA. Ph.D. in Neurosciences. *Thesis title*: FMRI of Attention in the Human Motion Processing System. *Advisors*: Edgar DeYoe and Thomas Albright. *Source of Support*: Howard Hughes Medical Institute Fellowship.

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

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

B. Academic Appointments

1. Current faculty position
2021 - present
Professor, tenured
Vice Chair for Research, Department of Neurosurgery
Perelman School of Medicine at the University of Pennsylvania
Primary appointment: Department of Neurosurgery
Secondary appointment: Department of Neuroscience
Member, Bioengineering Graduate Group and Neuroscience G. G.

2. Previous faculty positions

2015 - 2020
Professor, tenured
Vice Chair for Research, Department of Neurosurgery
Academic Director, Core for Advanced MRI (CAMRI)
Baylor College of Medicine, Houston, Texas

2011 - 2015
Associate Professor, tenured

2005 - 2011
Assistant Professor, tenure-track
Department of Neurobiology and Anatomy

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

Active

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 – June 30, 2028
Annual direct cost: $358,104 (grant)

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)

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 Charles Schroeder, Columbia University)
Dates: September 15, 2019 – May 31, 2024
Annual direct cost: $748,005 (grant)

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: January 1, 2020 – 31 January 2024 (renewal pending)
Annual direct cost: $250,000 (grant)

Recently Completed

Agency: National Institutes of Health
Title: RAVE: A New Open Software Tool for Analysis and Visualization of Electrocorticography 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 I01CX001122-04A1
Role: Co-investigator (PI: Sameer Sheth, MD)
Dates: April 1, 2015 – Dec, 2022
Annual direct cost: $200,000 (grant)
Percent Effort: 5%

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
Reviewer, ZRG1 IFCN-E (04) M, 2010
Ad hoc member, SPC, 2011, 2012
Reviewer, ZRG1 IFCN-Q (2), 2013
Reviewer and Chair, ZGM1 PPBC-0 (AN), 2019
Reviewer, 2020/05 ZRG1 BCMB-A (51) R, 2020
Reviewer, 2021/05 ZRG1 ETTN-C (10) B, 2021
Reviewer, 2022/01 ZDC1 SRB-Z (43) 1, 2021
Ad hoc member, Human Complex Mental Function (HCMF), 2022
Ad hoc member, Language and Communication (LCOM), 2023

Reviewer, 2024/05 ZNS1 SRB-P (14) R, 2024

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 Opthalmology 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 Opthalmology Seminar, University of Texas Medical School

2008 UCSF/Integra Neurosciences Workshop on Electrocorticography
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 (Champery, 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)
2021
World Wide Multisensory Seminar Series (hosted by Tufts University)
University of Pennsylvania Department of Neurology Grand Rounds
2022
George Washington University Psychology Colloquium (Washington, DC)
2023
Johns Hopkins University Bodian Seminar (Baltimore, MD)
Third Penn Conference on Big Data in Biomedical and Population Health Sciences

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., Bikle, 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 Neuroscienc*e, 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, Tolias, A, Yoshor, D. Electrocorticography 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. Electrocorticography 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 2 September 2020, 40 (36) 6938-6948.

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.

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84. Li Y, Bosking W, Beauchamp MS, Sheth S, Yoshor D, Bartoli E, Foster B. Biased Orientation and Color Tuning of the Human Visual Gamma Rhythm. Journal of Neuroscience 28 December 2021.

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86. Rennig J, Beauchamp MS. Intelligibility of Audiovisual Sentences Drives Multivoxel Response Patterns in Human Superior Temporal Cortex. Neuroimage (2022) 247:118796.

87. Wang Z, Magnotti JF, Beauchamp MS, Li M. Functional Group Bridge for Simultaneous Regression and Support Estimation. Biometrics 79(2):1226-1238. June 2023.

88. Bosking WH, Oswalt DN, Foster NL, Sun P, Beauchamp MS, Yoshor D. Percepts evoked by multi-electrode stimulation of human visual cortex. Brain Stimulation (Sept - Oct 2022) 15(5):1163-1177.

89. Averbeck SR, Xu D, Murphy BB, Shevchuk K, Shankar S, Anayee M, Der Torossian Torres M, Beauchamp MS, de la Fuente-Nunez C, Gogotsi Y, Vitale F. Stability of Ti3C2Tx MXene Films and Devices under Clinical Sterilization Processes. ACS Nano (May 2023) 17(10):9442-9454.

90. Zhang Y, Rennig J, Magnotti JF, Beauchamp MS. Multivariate fMRI responses in superior temporal cortex predict visual contributions to, and individual differences in, the intelligibility of noisy speech. Neuroimage. 2023 Sep;278:120271.

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92. Wang Z, Magnotti JF, Zhang X, Beauchamp MS. YAEL: Your Advanced Electrode Localizer. eNeuro (in press).

93.

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.

5. Beauchamp, MS, Yoshor D. Stimulating the brain to restore vision. *Science* 370 (6521), 1168-1169, 4 Dec 2020.

6. Beauchamp, MS. Face and Voice Perception: Monkey see, monkey hear. *Current Biology*, Volume 31, Issue 9, 10 May 2021, Pages R435-R43731.

7. Beauchamp MS, Bosking WH, Oswalt D, Yoshor D. Raising the stakes for cortical visual prostheses. *Journal of Clinical Investigation* 2021;131(23):e154983.

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)

Bioengineering 5740 (Fall 2023)
With Bijan Pesaran

Core III Systems Neuroscience: Lecture on *Auditory Systems 3*
Spring Semester: 2023, 2024

Course Directors: 2023: Maria Geffen, Franz Weber, Bijan Pesaran
2024: Greg Corder, Franz Weber

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

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. Independent support from NIH T32.
Inga Schepers, Ph.D. (2012 – 2013). Current position: Postdoctoral researcher, University of Oldenburg. Independent support from Deutsche Forschungsgemeinschaft.
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, University of Pennsylvania. Independent support from NIH T32.
Johannes Rennig, Ph.D. (2015 – 2019). Independent support from Deutsche Forschungsgemeinschaft.
Brian Metzger, Ph.D. (2018 – 2020).
Yue Zhang, Ph.D. (2019 – 2022).

Zhengjia Wang, 2021 - present.

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). Radiation Oncology Resident, Harvard Medical School.
Zhengjia Wang, 2017 – 2021 (Rice Statistics). Postdoctoral Fellow, Univ. of Penn.
Spencer Averbeck 2021 – present (UPenn Bioengineering Graduate Group).

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)
Josepheen 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)