Joseph LaCoste Sanguinetti, Ph.D.

OFFICE ADDRESS

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Lab Website:	https://semalab.arizona.edu/

EDUCATION

- 2011 2014 Ph.D., Cognition and Neural Systems, Psychology University of Arizona Advisors: Mary Peterson, Ph.D.; John J. B. Allen, Ph.D.
- 2009 2011 M.A., Cognition and Neural Systems, Psychology University of Arizona Advisors: Mary Peterson, Ph.D.; John J. B. Allen, Ph.D.
- 2003 2007 B.A., Psychology B.A., Philosophy and Religion University of North Carolina Wilmington Magna Cum Laude Honors Thesis Advisor: Julian Keith, Ph.D.

POST-DOCTORAL TRAINING

- 2016 2018 Postdoctoral Fellow Army Research Laboratory PI: Alfred Yu
- 2014 2016 Postdoctoral Fellow University of Arizona PI: John J. B. Allen

ACADEMIC APPOINTMENTS

2020-	Affiliate Faculty of Cognitive Science GIDP University of Arizona	
2019 – Present	Adjunct Professor University of Arizona	
2016 – Present	Research Assistant Professor University of New Mexico	
2014 – Present	Associate Director Center for Consciousness Studies University of Arizona	
EMPLOYMENT		
2019	Research Scientist Center for Consciousness Studies University of Arizona	

- 2008 2010 Neurofeedback Specialist Allied Psychophysiology Wilmington, North Carolina
- 2005 2007 Applications Specialist Cortech Solutions, Inc. Wilmington, North Carolina

AFFLILIATIONS

BrainMind, *Faculty Advisor*, 2019 to present Mind and Life Society, *Member*, 2016 to present International Society for Therapeutic Ultrasound, *Member*, 2018 The Society for Neuroscience, *Member*, 2007 to 2018 Society for Psychological Research, *Member*, 2009 to present Vision Sciences Society, *Member*, 2009 to 2016

PUBLICATIONS

- Reznik, S. J., **Sanguinetti, J. L.,** Tyler, W. J., Daft, C., & Allen, J. J. (2020). A double-blind pilot study of transcranial ultrasound (TUS) as a five-day intervention: TUS mitigates worry among depressed participants. *Neurology, Psychiatry and Brain Research, 37, 60-66.*
- Sanguinetti, J. L., Hameroff, S., Smith, E. E., Sato, T., Daft, C. M., Tyler, W. J., & Allen, J. J. (2020). Transcranial focused ultrasound to the right prefrontal

cortex improves mood and alters functional connectivity in humans. *Frontiers in Human Neuroscience*, 14, 52.

- Gibson, B., **Sanguinetti, J.L**, Mullins, T., Salazar, S., Buchman, L., Cutter, C., ... & Yu, A. (2019). Excitability changes induced in the motor cortex by transcranial ultrasound stimulation. *Brain Stimulation: Basic, Translational, and Clinical Research in Neuromodulation, 12*(2), 469-470.
- Robinson, C., Bryant, N., Maxwell, J., Jones, A., Robert, B.,....Sanguinetti, J.L., Ketz, N.A., Pilly, P.K., & Clark, V.P., (2018). The benefits of closed-loop transcranial alternating current stimulation on subjective sleep quality. *Brain sciences*, 8(12), 204.
- Tyler, W. J., **Sanguinetti, J. L.,** Fini, M., & Hool, N. (2017). Non-invasive neural stimulation. In *SPIE Defense+ Security (pp. 101941L-101941L)*. International Society for Optics and Photonics.
- Sanguinetti, J. L., & Peterson, M. A. (2016) A behavioral task sets an upper bound on the time required to access object memories before object segregation. *Journal of Vision*. 16(15), 26-26.
- Sanguinetti, J. L., Trujillo, L. T., Schnyer, D. M., Allen J. B., & Peterson, M. A. (2016). Increased alpha indexes inhibitory competition across a border. *Vision Research*. 126, 120-130.
- Goldstein, M. R., Peterson, M. J., Sanguinetti, J. L., Tononi, G., & Ferrarelli, F. (2015). Topographic deficits in alpha-range resting EEG activity and steady state visual evoked responses in schizophrenia. Schizophrenia Research, 168(1), 145-152.
- Sanguinetti, J. L., Allen, J. J. B., & Peterson, M. A. (2014). The ground side of an object; perceived as shapeless yet processed for semantics. *Psychological Science.* 25.1 256-264.
- Cacciamani, L., Mojica, A. J., **Sanguinetti, J. L.,** & Peterson, M. A. (2014). Semantic access occurs outside of awareness for the ground side of a figure. *Attention, Perception, & Psychophysics*, 76(8), 2531-2547.
- Cavanagh, J. F., **Sanguinetti, J. L.,** Allen, J. J. B., Sherman, S. J., & Frank, M. J. (2014). The subthalamic nucleus contributes to post error slowing. *Journal of Cognitive Neuroscience*, 26. 2637–2644.
- Peterson, M. A., Cacciamani, L., Mojica, D., & **Sanguinetti, J. L.** (2012). Meaning can be accessed for the ground region of a figure, *Gestalt Theory*, 34(3/4), 297-314.

BOOK CHAPTERS

Sanguinetti, J. L., Smith, E., Allen, J. J. B., & Hameroff, S. (2014). Human brain stimulation with transcranial ultrasound (TUS): Potential applications for mental health. In *Bioelectromagnetic Medicine*. (pp. 355-361), New York, NY: Taylor & Francis.

RESEARCH AWARDS

2020	Facilitating mindfulness training. Funded by University of Arizona Foundation Crowdfunding Campaign (PI; direct costs \$68,000)
2020	Sonication enhanced mindfulness acquisition. Funded by the Atlantic Foundation. (PI; \$50,000)
2019	Modulation of the default mode network with ultrasonic neuromodulation. Funded. (co-PI; PI John JB Allen; \$150,000)
2017	Enhancement of mindfulness meditation with focused ultrasound. Funded by the Stiller Family Foundation (co-PI; PI Vince Clark; \$16,567).
2013 – 2014	A randomized clinical trial of transcranial ultrasound for mood enhancement. Funded by Thync/Neurotrek (co-PI; PI John J. B. Allen; \$88,998).

INVITED TALKS

- Sanguinetti, J. L., Young, S., (2020). A novel direction for contemplative neuroscience with sonication enhanced mindfulness acquisition, plenary session. The Science of Consciousness Conference. Online (Tucson, AZ)
- Sanguinetti, J. L., (2020). Ultrasonic Neuromodulation: A New Tool for Brain Mapping and Therapeutic Interventions. ANTNeuro Webinar. Online (Berlin, Germany).
- Sanguinetti, J. L. (2020). Enhancing mindfulness and well-being via ultrasonic neuromodulation? Philosophical challenges and clinical applications. USC Center for Mindfulness Science and USC Department of Psychiatry. Online (Los Angeles, CA).
- Sanguinetti, J. L. (2020). Enhancing well-being and mindfulness with ultrasonic neuromodulation. USC Center for Mindfulness Science and USC Department of Neurology Grand Rounds. Online (Los Angeles, CA).

- Sanguinetti, J. L. (2020). Enhancing well-being and mindfulness with ultrasonic neuromodulation. Brain and Mind Meeting. Online (Tehran, Iran).
- Sanguinetti, J. L., Young, S. (2020). ultrasonic neuromodulation and mindfulness training. Awakened Futures Summit. Online (San Francisco, CA).
- Sanguinetti, J. L., (2019). Accelerating mindfulness training with ultrasonic neuromodulation. BrainMind Summit Stanford. (Palo Alto, CA).
- Sanguinetti, J. L. (2019). A technoboost for meditation. TEDx BigSky. Big Sky, Montana.
- Sanguinetti, J.L. (2019). Sonication enhanced mindful awareness (SEMA). Awakened Futures Summit. San Francisco, California.
- Sanguinetti, J. L. (2018). Enhancing positive mood states and mindfulness with ultrasonic neuromodulation. Departmental Symposium at University of Würtzburg, Würtzburg, Germany.
- Sanguinetti, J. L. (2018). Brain stimulation and the future of meditation. Presentation at Consciousness Hacking, San Francisco, California.
- Sanguinetti, J. L. (2018) Accelerated mindfulness with ultrasonic neuromodulation. Presentation at The Science of Consciousness Conference, Tucson, Arizona.
- Sanguinetti. J.L., (2018). Noninvasive neuromodulation. Albuquerque Consciousness Hacking Society, Albuquerque, New Mexico.
- Sanguinetti, J. L. (2018). Enhancing well-being and mindfulness with ultrasonic neuromodulation. Grand rounds presentation at University of New Mexico Medical Hospital. Albuquerque, New Mexico.
- Sanguinetti, J. L., Martin, J. A. (2017). Brain stimulation and transformative technology. Workshop at The Science of Consciousness, San Diego, California.
- Sanguinetti, J. L. (2017). Effects of transcranial ultrasound on mood and potential clinical applications. New Mexico Clinical Neurostimulation Meeting, Albuquerque, New Mexico.
- Sanguinetti, J. L. (2017). Studies of transcranial ultrasound on cognition, mood, and functional connectivity. BrainSTIM, Vancouver, Canada.

- Sanguinetti, J. L. (2016). What 1 million vibrations per second can do for you: Mood alteration and ultrasound. Transformative Technology Conference, Palo Alto, California.
- Sanguinetti, J. L., Goldstein, M., Dieckman, L., Tyler, W. J., Allen J. J. B. (2016). Noninvasive neuromodulation with transcranial ultrasound. Invited Symposium at Society for Psychophysiological Research Annual Meeting, Minneapolis, Minnesota.
- Sanguinetti, J. L. (June, 2015). *Phenomenological reports after transcranial ultrasound: Discovery of new phenomenon for controlled experiments.* Plenary at Towards a Science of Consciousness, Helsinki, Finland.
- Sanguinetti, J. L. (June, 2015). *Transcranial ultrasound modulates mood in human volunteers*. Presentation at WAAG Society Institute for Art, Science and Technology, Amsterdam, The Netherlands.
- Sanguinetti, J. L. (December, 2014). *The ground side of an object: Perceived as shapeless yet processed for semantics.* University of Arizona Cognitive Science Colloquium, Tucson, Arizona.
- Sanguinetti, J. L. (April, 2014). *The influence of transcranial ultrasound on mood and arousal in healthy volunteers.* Workshop at Towards a Science of Consciousness Conference, Tucson, Arizona.
- Sanguinetti, J. L., Smith, E., William, J. T., Hameroff S., & Allen, J. J. B. (April, 2014). Transcranial ultrasound (TUS) brain stimulation in humans: Effects on mood/mental states in three studies. Towards a Science of Consciousness, Tucson, Arizona.
- Sanguinetti, J. L. (December, 2013). *Evidence for proactive conflict in the subthalamic nucleus with intracranial EEG.* Third Annual UA/ASU Cognitive Science Conclave, Phoenix, Arizona.
- Sanguinetti, J. L., & Peterson M. A. (May, 2013). *Fast access to category level representations can be dissociated from perception.* Vision Sciences Society, Naples, Florida.
- Sanguinetti, J. L. (September, 2009). *Neuroimaging and meditation: What fMRI has to say about meditation?* Arizona Meditation Research Interest Group (AMRIG), University of Arizona, Tucson, Arizona.

CHAIRED CONFERENCE SYMPOSIA

June 2017. Noninvasive Brain Stimulation (Chair). Towards a Science of Consciousness. San Diego, CA.

- April 2014. Disorders of Consciousness (Chair). Towards a Science of Consciousness. Tucson, AZ.
- April 2014. Brain Networks and Consciousness (Chair). Towards a Science of Consciousness. Tucson, AZ.

HONORS AND AWARDS

2014	College of Science Graduate Student Award for Scholarship
2012	Galileo Circle Scholar, College of Science, University of Arizona
2012	Winner; Graduate and Professional Student Council Student Showcase, Biological Sciences
2011	Graduate Interdisciplinary Research Award, Cognitive Science
2011	Graduate and Professional Council Travel Grant
2010	University of Arizona Student-Teacher Interaction Grant
2010	Graduate and Student Council Travel Grant
2009	University of Arizona Graduate School Fellowship
2005	Psi Chi National Psychology Honors Society
2005	University of North Carolina-Wilmington Chancellors Travel Award
2003	First Prize; Western Carolina University Student Publication Contest

PUBLISHED CONFERENCE ABSTRACTS

- Gibson, B. C., Sanguinetti, J. L., Mullins, T. S., Salazar, S. R., Bauchman, L. P., Cutter, C. D., Klein, E. P., Aragon, D. F., Heinrich, M. D., Yu, A. B., & Clark, V.P (2019). Excitability changes induced in the motor cortex by diagnostic ultrasound. Accepted for presentation at 3rd International Brain Stimulation Conference.
- Mullins, T. S., Sanguinetti, J. L., Gibson, B. C., Heinrich, M. D., Aragon, D. F., Spinks, J. A., Jones, A. P., Robert, B. M., Lamphere, M. L., Yu, A. B., & Clark, V.P (2019). Transcranial Ultrasound Stimulation and the Effect on Inhibition as Assessed by a Stop Signal Task. Accepted for presentation at 3rd International Brain Stimulation Conference.
- Mullins, T. S., Sanguinetti, J. L., Gibson, B. C., Heinrich, M. D., Aragon, D. F., Spinks, J. A., Jones, A. P., Robert, B. M., Lamphere, M. L., Yu, A. B., & Clark, V.P (2019). Transcranial Ultrasound Stimulation of the Ventrolateral Prefrontal Cortex Impairs Inhibitory Control on a Stop Signal Task. Accepted for presentation at New Mexico Psychological Association Fall Conference.
- Heinrich, M. D., Sanguinetti, J. L., Hicks, G., Gibson, B. C., Mullins, T. S., Aragon, D. F., Spinks, J. A., Lamphere, M. L., Yu, A. B., & Clark, V.P (2019).
 Photobiomodulation for Cognitive Enhancement in Healthy Adults. Accepted for presentation at 3rd International Brain Stimulation Conference.

- Ayars, A., Peterson, M., & Sanguinetti, J. (2015). Semantic unmasking effect is not explained by triggering of memory. *Journal of Vision, 15*(12), 1090-1090.
- Sanguinetti, J. L., Smith, E. E., Tyler, W. J., Hameroff, S., & Allen, J. J. (2014). Transcranial ultrasound (TUS) Brain stimulation affects mood in healthy human volunteers with a prototype ultrasound device. *Psychophysiology* 51, S42-S42.
- Sanguinetti, J. L., Trujillo, L. T., Schnyer, D. M., Allen, J. J., & Peterson, M. A. (2014). Increased alpha band activity indexes inhibitory competition across a border during figure assignment. *Journal of Vision*, 14(10), 49-49.
- Sanguinetti, J. L., Smith, E. E., Dieckman, L., Vanuk, J., Hameroff, S., & Allen, J. J.
 B. (2013). Noninvasive transcranial ultrasound (TUS) for brain stimulation: Effects on mood in a pilot study. *Psychophysiology*, *50*, S36.
- Cacciamani, L., Mojica, A. J., Sanguinetti, J. L., & Peterson, M. A. (2013). Accessing meaning for the groundside of a figure: How long does it last? *Journal of Vision, 13*(9), 71-71.
- Sanguinetti, J. L., & Peterson, M. A. (2013). Unmasking the mask: Semantic similarity produces disinhibition in a masked priming paradigm. *Journal of Vision, 13*(9), 47-47.
- Cacciamani, L., Mojica, A. J., Sanguinetti, J. L., & Peterson, M. A. (2012). Meaning can be accessed for the groundside of a figure. *Journal of Vision, 12*(9), 305-305.
- Sanguinetti, J. L., Cavanagh, J., Allen, J. J. B., & Sherman, S. (2011). Dissociating proactive and reactive conflict in the subthalamic nucleus. *Psychophysiology*, *44*, 166.
- Sanguinetti, J. L., Peterson, M. A., Ash, K. M, & Allen, J. J. B. (2010). Electrophysiological evidence for inhibitory cross-edge competition during figure-ground perception. *Psychophysiology*, 47, S77.

CONFERENCE/MEETING PRESENTATIONS NOT APPEARING AS PUBLISHED ABSTRACTS

Mullins, T. S., Sanguinetti, J. L., Gibson, B. C., Heinrich, M. D., Aragon, D. F., Spinks, J. A., Jones, A. P., Robert, B. M., Lamphere, M. L., Yu, A. B., & Clark, V.P (2019). Transcranial Ultrasound Stimulation and the Effect on Inhibition as Assessed by a Stop Signal Task. Accepted for presentation at Neuroscience Day.

- Mullins, T. S., Sanguinetti, J. L., Gibson, B. C., Heinrich, M. D., Aragon, D. F., Spinks, J. A., Jones, A. P., Robert, B. M., Lamphere, M. L., Yu, A. B., & Clark, V.P (2019). Transcranial Ultrasound Stimulation of the Ventrolateral Prefrontal Cortex Impairs Inhibitory Control on a Stop Signal Task. Accepted for presentation at Southwestern Psychological Association Conference.
- Heinrich, M. D., Sanguinetti, J. L., Hicks, G., Gibson, B. C., Mullins, T. S., Aragon, D. F., Spinks, J. A., Lamphere, M. L., Yu, A. B., & Clark, V.P (2019). Enhancing Learning with Asynchronous 40hz Pulsed Photobiomodulation. Accepted for presentation at Southwestern Psychological Association Conference.
- Heinrich, M. D., Sanguinetti, J. L., Hicks, G., Gibson, B. C., Mullins, T. S., Aragon, D. F., Spinks, J. A., Lamphere, M. L., Yu, A. B., & Clark, V.P (2019).
 Photobiomodulation for Cognitive Enhancement in Healthy Adults. Accepted for presentation at Neuroscience Day.
- Allen, J. J. B., Sanguinetti, J. L., Cooley, S., & Hameroff, S. (June, 2015). The promise of altering consciousness and treating brain disorders with transcranial ultrasound (TUS). Invited Keynote at Towards a Science of Consciousness, Helsinki, Finland.
- Hameroff, S., Cooley, S., Sanguinetti, J. L., & Allen, J. J. B. (June, 2015). 'Tuning the brain' – Can transcranial ultrasound ('TUS') treat mental and cognitive disorders? Invited presentation for the WAAG Society Institute for Art, Science and Technology, Amsterdam, The Netherlands.
- Hameroff, S., Sanguinetti, J. L., Cooley, S., & Allen, J. J. B. (June, 2015). *Tuning your mood with transcranial ultrasound.* Presentation at Towards a Science of Consciousness, Helsinki, Finland.
- Michael, G., Sanguinetti, J. L., Tyler, W. J., Hameroff, S., & Allen, J. J. B. (April, 2014). Transcranial ultrasound (TUS) stimulation at the scalp vertex increases self-ratings on a buddhist-based nonattachment scale. Presentation at Towards a Science of Consciousness, Tucson, Arizona.
- Sanguinetti, J. L., Allen J. J. B., & Hameroff, S. (March, 2013). *Transcranial ultrasound brain stimulation increases positive affect in healthy participants.* Presentation at the University of Arizona Frontiers in Biomedical Research Poster Forum, Tucson, Arizona.

Sanguinetti, J. L., Heshmati, S., Allen J. J. B., & Peterson, M. A. (September, 2012). Masked repetition priming with event-related potentials reveals that access to semantics can be dissociated from visual perception. Presentation at Annual Meeting for the Society for Neuroscience (285.19/VV20), New Orleans, Louisiana.

- Peterson, M. A., Sanguinetti, J. L., & Allen, J. J. B. (August, 2011). *ERP evidence that semantic access occurs for objects that are suggested but not perceived on the ground side of a figure.* Presentation at European Conference on Visual Perception, Paris, France.
- Sanguinetti, J. L., Allen, J. J. B., & Peterson, M. A. (September, 2010). A repetition paradigm with figure-ground stimuli reveals that both semantic and shape representations can be accessed outside of awareness. Poster at Society for Neuroscience Annual Conference, San Diego, California.
- Sanguinetti, J. L., Ash, K., Peterson, M. A., & Allen, J. J. B. (December, 2010). *Priming for conscious and unconscious shapes reveals differential processes during figure-ground organization.* Poster at UA/ASU Cognitive Science Conclave, Tucson, Arizona.
- Keith, J. R., Sanguinetti, J. L., Byrd, B. D., Psilos, K. E., Flynn, J. R., & Smith, L. (September, 2008). *Recognition memory: Event related potentials with source localization.* Poster at Society for Neuroscience Annual Conference, Washington, D.C.
- Sanguinetti, J.L., & Keith, J. R. (May, 2007). Brain electrical activity during recognition memory: an event-related potentials study. Poster at Undergraduate Research Conference of the Colonial Academic Alliance, Wilmington, North Carolina.
- Sanguinetti, J. L., & Keith, J. R. (May, 2007). *Brain electrical activity for recognition memory*. Poster at Undergraduate Research Conference of the Colonial Academic Alliance. Harrisonburg, Virginia.
- Saling, M., Keith, J. R., Priester, C., Sanguinetti, J. L. (September, 2006). *The effects of fluoxetine and environmental enrichment on recovery of function after dentate gyrus lesions.* Poster at Society for Neuroscience Annual Conference, Atlanta, Georgia.

TEACHING EXPERIENCE

2018	Noninvasive Neuromodulation. Guest lecture for Neurobiology
2010	(PSY599), University of New Mexico.
2015	Non-invasive Brain Stimulation. Guest lecture for Cognitive
2015	Neuroscience (PSY329), University of Arizona.
2014	Non-invasive Brain Stimulation. Guest lecture for Cognitive
2014	Neuroscience (PSY329), University of Arizona.
2014	Neuroscience of Vision. Guest lecture for Cognitive Neuroscience
2014	(PSY329), University of Arizona.
2013	Instructor, Research Methods (PSY297), University of Arizona.

- 2013 **Co-instructor**, Biopsychology (INDV360), University of Arizona.
- 2012 Teaching Assistant, Introduction to Psychology (INDV150), University of Arizona.
- 2011 **Instructor**, Research Methods (PSY297, Online), University of Arizona.
- 2010 Teaching Assistant, Sensation and Perception (PSY356), University of Arizona.
- 2010 Teaching Assistant, Cognitive Psychology (PSY329, Online), University of Arizona.
- 2010 *Science of Psychology.* Guest lecture for Sensation and Perception (PSY356), University of Arizona.
- 2009 Teaching Assistant, Introduction to Psychology (INDV150), University of Arizona.

RESEARCH EXPERIENCE

2	2014	Graduate Research Assistant University of Arizona Department of Psychology & Anesthesiology Supervisors: John J. B. Allen, Ph.D., Stuart Hameroff M.D.
2	2013	Research Associate The Center for Consciousness Studies University of Arizona
2	2009 – 2011	Graduate Research Assistant University of Arizona Department of Psychology Supervisor: Mary Peterson, Ph.D.
2	2008 – 2010	Research Advisor/Collaborator Brain-Computer Interface Project Department of Computer Science University of North Carolina Wilmington
	2007 – 2009	Assistant Research Scientist Regenerative Neuroscience Laboratory Department of Psychology University of North Carolina Wilmington Supervisor: Julian Keith, Ph.D.
2	2006 – 2007	Research Assistant Regenerative Neuroscience Laboratory University of North Carolina Wilmington, Supervisor: Julian Keith, Ph.D.

INTERNSHIP

2005 – 2006 Internship Easter-Seals/United Cerebral Palsy Wilmington, North Carolina

PROFESSIONAL ORGANIZATIONS

The Society for Neuroscience, 2007 to present Vision Sciences Society, 2009 to present Society for Psychological Research, 2009 to present

COMMUNITY SERVICE

2011-2013	Representative
	Graduate and Professional Student Council
	School of Science
	University of Arizona

2011-2013 Co-Founder/Co-president SAGE, Students against Guns in Education

SELECTED EXAMPLES OF POPULAR PRESS COVERAGE

PC Magazine. Can Brain Machine Interfaces Mend Your Moods? Consciousness Central. Episode TSC2015. Video Interview. *Wired.* Ultrasound Waves Applied to the Brain Can Alter Patients' Moods PBS NewsHour. Your Brain Sees Things that You Don't Huffington Post. Your Brain Processes Information Even When You're Not Conscious of It UA News. Your Brain Sees Things that You Don't Science Daily. Your Brain Sees Things that You Don't Kurzweil.net. Does Your Brain See Things You Don't? El Nacional. Tu Cerbro Puede Ver Cosas que Tus Ojos No Ven Le HuffPost. Perception du Cerveau: Il Voit des Choses, Mais Pas Nous Science@ORF. Gehirn: Bedeutung ohne Bewusstsein Pnahoboctn. Мозг "видит" знакомые объекты, даже когда человек этого не осознает Vcharkarn.com สมอง"เห็น"แม้จิตไม่ได้"เห็น" คลิกที่นี่ Reddit. The New Reddit Journal of Science. Your Brain Sees Things that You Don't. 2,591 upvotes. Science Daily. 'Good Vibration:' Brain Ultrasound Improves Mood UA News. Mediating Mood through Brain Ultrasound Science Daily. Good Vibrations: Mediating Mood Through Brain Ultrasound

The Indian Express. Brain Ultrasound May Boost Mood: Study