

Siddharth Ramakrishnan

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SUMMARY

Researcher and educator, **Jennie M Caruthers Chair in Neuroscience** at University of Puget Sound, Washington. Expertise in electrophysiology, small animals, neural cultures, bio-electronic devices and lipid bilayers. Extensive interdisciplinary teaching experience in basic biology, cellular neuroscience, neuroethology, neuroendocrinology and the intersection of art, science & technology. Recipient of the **NSF Early CAREER award**.

EDUCATION

UNIVERSITY OF ILLINOIS, CHICAGO

Ph.D. in Biological Science (Neuroscience), Summa cum laude
Master of Science in Computer Science, Summa cum laude

Chicago, IL
2005
2002

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCES

Bachelor of Engineering in Computer Science, Distinction

Pilani, India
2000

PROFESSIONAL EXPERIENCE

UNIVERSITY OF PUGET SOUND

Associate Professor, Department of Biology, Jennie M Caruthers Chair in Neuroscience
Assistant Professor, Department of Biology, Jennie M Caruthers Chair in Neuroscience

Tacoma, WA
2015-current
2012-2015

- Developing undergraduate Neuroscience curricula, providing research experience for undergraduates and fostering the Neuroscience program, teaching courses in the Biology core

COLUMBIA UNIVERSITY

Associate Research Scientist, Department of Electrical Engineering

New York, NY
Feb – Aug 2012

- Engineering biosensors by integrating membrane proteins in lipid bilayers with CMOS microelectrode arrays

COLUMBIA UNIVERSITY

Postdoctoral Researcher, Department of Electrical Engineering

New York, NY
2009 - 2012

- Designed hybrid neural-microelectrode array interfaces to record from neurons
- Creating artificial cell membranes with functional proteins on nano-engineered surfaces for energy harvesting

UNIVERSITY OF CALIFORNIA, LOS ANGELES

Postdoctoral Researcher, Department of Physiology, School of Medicine

Los Angeles, CA
2006 – 2009

- Showed how developing, migrating neurons in embryonic brain acquire electrical activity
- Showed effects of endocrine disruptors on embryonic development.

TEACHING EXPERIENCE

UNIVERSITY OF PUGET SOUND

Associate Professor

Tacoma, WA
2015-present

Assistant Professor

2013-2015

- Foundations in Neuroscience (Class of 40 students)
- Neuroendocrinology (Class of 14 -17 students)
- Methods in Neuroscience (Lab based, 5-10 students)
- Nanobiology (lecture + laboratory)
- Biomimicry and Bioart
- Art, Science and Technology
- Queer Cultures (Science, Sexuality and Ethics)
- Cell Biology Laboratory
- History of Medicine (STS, Kristin Johnson, Guest Lecture 2/18/2014)
- Buddhism and Consciousness (Religion, Elisabeth Benard, Guest Lecture 9/13/2013)

- Robotics and the Brain, Freshman Seminar (Biology, Peter Wimberger, Guest Lecture, 4/24/2013)
- Nerve and Muscle Physiology (Exercise Science, Jung Kim, Guest Lecture 10/29/2012)
- Behavioral Neuroscience (Psychology, David Andresen, Guest Lecture 11/9/2012, 11/12/2012)

THE NEW SCHOOL OF DESIGN, PARSONSNew York, NY
2010 -2012**Co-Instructor**

- Taught Art, Science and Technology (www.nanobioart.com/classes/ArtSci) - Online Course; ~10 graduate students
- Biotechnology, Nanotechnology and Art (artscicenter.com/hybrid); Class Size: ~15 graduate students

THE NEW SCHOOL OF DESIGN, PARSONSNew York, NY
2011**Invited Lecturer**

- “Animal Worlds, Animal Senses” for Prof. Jackie Brookner. Discussed topics from animal sensory behavior to consciousness; Class size: ~15 graduate students

JOHN J COLLEGE OF CRIMINAL JUSTICENew York, NY
2011**Invited Lecturer**

- Taught the neurohormonal basis of sexual behavior; Class Size: ~15 graduate students

UNIVERSITY OF CALIFORNIA, LOS ANGELESLos Angeles, CA
2008**Invited Lecturer, Design Media Arts / Nanoscience and Culture**

- Taught Nanoscience & Culture; ~10 Honors undergraduate students
- Design Media Arts: Consciousness (<http://classes.design.ucla.edu/Winter09/9-1/blog/a/?s=siddharth>); Class size: ~250; Senior undergraduate and graduate students

UNIVERSITY OF ILLINOIS, CHICAGOChicago, IL
2003-2005**Lecturer (Won awards for teaching in 2003, 2004 & 2005, based on student/professor evaluations)**

- Animal Behavior & Neuroethology (2004, 2005) – Class size of ~10; senior undergraduates and graduates
- Cellular Neurobiology (2004, 2005) – Class size of ~15; senior undergraduates and graduates
- Hormones & Behavior (2004, 2005) – Class size of ~200; undergraduates
- Fundamental Neuroscience (2004, 2005); Class size of ~200; undergraduates and graduates
- Cellular Biology Laboratory (2003, 2004); Lab sizes of ~25-30; Undergraduates

PUBLICATIONS AND PRESENTATIONS• **Journal Publications/Book Chapters** (* Denotes Undergraduate Student):

- 2017** Skinner, D.*, McHugh, G.*, Hepker, M.*, **Ramakrishnan, S.**, Cortisol exposure affects the developing GnRH neural system in zebrafish, *General and Comparative Endocrinology*, (*submitted*).
- 2016** Inagaki, T., Smith, N.*, Sherva, K.M.*, **Ramakrishnan, S.**, Cross-generational effects of parental low dose BPA exposure on the Gonadotropin-Releasing Hormone³ system and larval behavior in medaka (*Oryzias latipes*), **NeuroToxicology**, (2016) Dec;57:163-173. doi: 10.1016/j.neuro.2016.09.021
- 2016** Inagaki, T., Smith, N.*, Lee, E.K.*, **Ramakrishnan, S.**, Low dose exposure to Bisphenol A alters development of Gonadotropin-Releasing Hormone³ neurons and larval locomotor behavior in Japanese Medaka, **NeuroToxicology** 52 (2016) 188–197
- 2015** Roseman, J., Lin, J., **Ramakrishnan, S.**, Roesenstein, J., Shepard, K., Hybrid integrated biological solid state system powered with adenosine triphosphate, **Nature Communications**, DOI: 10.1038/ncomms10070.
- 2015** **Ramakrishnan, S.** and Vesna.V., Games of Chance: Explorations into Animal Senses and Potentials in **Handbook of Digital Games and Entertainment Technologies**, ed. Editors: Ryohei Nakatsu, Matthias Rauterberg and Paolo Ciancarini (*accepted, in print* ISBN 978-981-4560-51-1)

- 2014 Ramakrishnan, S.**, Arnett, B.C., Murphy, A.D., Contextual Modulation of Multifunctional Central Pattern Generator, **Journal of Experimental Biology**, doi: 10.1242/jeb.086751, September 2014
- 2013** Rosenstein J.K, **Ramakrishnan S.**, Roseman J., and Shepard K., Single Ion Channel Recordings with CMOS-Anchored Lipid Membranes, **Nano Letters**, DOI: 10.1021/nl400822r, (Web): May 1, 2013
- 2013 Ramakrishnan, S.**, Morphogenesis, Morphology and Men: Pattern formation from embryo to mind, **AI and Society**, DOI 10.1007/s00146-013-0504-9, August 2013
- 2013** Vesna V., and **Ramakrishnan, S.**, Patterns, bodies and metamorphosis: The Hox Zodiac, **Technoetic Arts**, Volume 10, Numbers 2-3, December 2012 , pp. 197-206(10)
- 2011** Lei, N., **Ramakrishnan, S.**, Shi, P., Orcutt, J., Kam, L., Shepard, K, High-resolution extracellular stimulation of dispersed hippocampal culture with high-density CMOS multielectrode array based on non-Faradaic electrodes, **Journal of Neural Engineering**, 8(4); DOI: [10.1088/1741-2560/8/4/044003](https://doi.org/10.1088/1741-2560/8/4/044003)
- 2010** Vesna, V. and **Ramakrishnan, S.**, Metamorphosis of the human animal: hox zodiac, Making Reality Really Real: Reflections on Art, technology and Consciousness, Ed. Ascott, R., Gangvik, E., and Jahrmann, M., **TEKS Publishing**, ISBN #978-82-998211-2-4
- 2010 Ramakrishnan S.**, Lee W., Navarre S., Kozlowski D.J., Wayne N.L., Acquisition of spontaneous electrical activity during embryonic development of gonadotropin-releasing hormone-3 neurons located in the terminal nerve of transgenic zebrafish (*Danio rerio*), **Gen Comp Endocrinol.**, 168(3): 401-7
- 2009 Ramakrishnan, S.** and Wayne, N.L., Social cues from conspecifics alter electrical activity of gonadotropin releasing hormone neurons in the terminal nerve via visual signals, **American J. Physiology Regul. Integr Comp Physiol.** 297(1):R135-41.
- 2009** Reed, J., **Ramakrishnan, S.**, Schmit, J., Gimzewski, J., Mechanical interferometry of nanoscale motion and local mechanical properties of living zebrafish embryos., **ACS Nano.**, 3(8):2090-4
- 2008 Ramakrishnan, S.** and Wayne, N.L., Impact of Bisphenol A on embryonic development and sexual maturation, **Reproductive Toxicology**, 25(2):177-183

- **Peer Reviewed Conference Publications:**

- 2011** Roseman, J., **Ramakrishnan, S.**, Shepard, K., Hybrid biological-solid-state circuits based on integrated, solid-support lipid bilayers, Nanoelectronic Devices for Defense & Security (NANO-DDS) Conference
- 2011** Lei, N., **Ramakrishnan, S.**, Shi, P., Orcutt, J., Kam, L., Shepard, K., A High Density CMOS Multi-Electrode Array For High-Resolution Extracellular Stimulation Of Neurons, BMES Conference
- 2011** Lei, N., **Ramakrishnan, S.**, Shi, P., Orcutt, J., Kam, L., Shepard, K., An Electrically-Stimulate Optically-Record Microsystem Based on Active CMOS Multi-Electrode Array for Dissociated Cell Cultures, Proceedings of IEEE/NIH Life Science Systems & Applications Workshop 2011 (LISSA'11)

- **National/Regional Conference Publications /Posters (* Denotes Undergraduate Student, ^ High School Student):**

- 2017** Goin, A.* and **Ramakrishnan, S.** , Effect of Synthetic cathinones on GnRH neurons in zebrafish, Northwest Developmental Biology Meeting, Friday Harbor Labs, March 2016
- 2016 Ramakrishnan, S.** and Andresen D., Laboratory based undergraduate neuroscience curriculum at a small liberal arts college, Society for Neuroscience Annual Meeting, San Diego, October 2015
- 2016** Inagaki, T., O'Leary, J.*, **Ramakrishnan, S.**, Impact of timing and duration of low dose BPA exposure on extra-hypothalamic GnRH neurons, social and locomotor behavior in adult medaka, Society for Neuroscience Annual Meeting, San Diego, October 2016
- 2016** O'Leary, J.*, Inagaki, T. and **Ramakrishnan, S.**, Impact of timing and duration of low dose BPA exposure on GnRH3 neurons, social and locomotor behavior in adult medaka, Northwest Developmental Biology Meeting, Friday Harbor Labs, March 2016

- 2016** Selby, Z., Inagaki, T, and **Ramakrishnan, S.**, Social Behavior in Adult Medaka Exposed to Low-Dose Bisphenol A During Early Development Determined by Mirror Approach, Northwest Developmental Biology Meeting, Friday Harbor Labs, March 2016
- 2015** Skinner, D.*, and **Ramakrishnan, S.**, Effects of early cortisol exposure on the developing GnRH neuron system in zebrafish, Society for Neuroscience Annual Meeting, Chicago, October 2015
- 2015** Inagaki, T., Smith, N.*, Sherva, K.* , **Ramakrishnan, S.**, Transgenerational effects of Bisphenol A on embryogenesis, GnRH3 neural systems, and locomotor behavior in Japanese medaka, Society for Neuroscience Annual Meeting, Chicago, October 2015
- 2015** Smith, N.L.*, Inagaki, T., **Ramakrishnan, S.**, Embryonic low dose BPA exposure in parents has transgenerational effects on GnRH neurons in the Japanese medaka, Abstract, Northwest Developmental Biology Meeting, Friday Harbor Labs, March 2015
- 2015** Skinner, D.* and **Ramakrishnan, S.**, Bisphenol A disrupts snail embryonic development via a putative estrogen mediated catecholaminergic pathway, Abstract, Northwest Developmental Biology Meeting, Friday Harbor Labs, March 2015
- 2015** Stackhouse, S.*, Martens, H.^, and **Ramakrishnan, S.**, RFRP-3 Affects GnRH3 Neuronal Development And Larval Social Behavior In The Teleost *Oryzias latipes*, Abstract, Endocrine Society Meeting, March 5-8, 2015.
- 2014** Inagaki, T., Lee, E.K.*, and **Ramakrishnan, S.**, Impact of Bisphenol A on the developing GnRH3 Neural System and Locomotor Behavior in Japanese Medaka, Society for Neuroscience Annual Meeting, November 2014.
- 2014** Tetreau, S. *, Skinner, D.* and **Ramakrishnan, S.** , Bisphenol A affects early embryonic development in the pond snail *Helisoma trivolvis*, Annual Meeting of the Society for Developmental Biology, July 2014
- 2009** **Ramakrishnan, S.**, Navarre, S., Kozlowski, D., and Wayne, N.L., Targeted Inhibition of Electrical Activity Alters Axonal Pathfinding of Gonadotropin-Releasing Hormone-3 Neurons Located in the Terminal Nerve of Embryonic Transgenic Zebrafish (*Danio rerio*), Society for Neuroscience
- 2008** **Ramakrishnan, S.** and Wayne, N.L., Effect of social cues on the electrophysiology of terminal nerve (TN)- GnRH neurons in female medaka, Society for Behavioral Neuroendocrinology Conference † (Best Poster Award Winner)
- 2007** **Ramakrishnan, S.** and Wayne, N.L., Photoperiodic effects on reproduction and electrical activity of TN GNRH neurons in medaka (*Oryzias latipes*) Society for Behavioral Neuroendocrinology Conference
- 2006** **Ramakrishnan, S.** and Wayne, N.L, Impact of an endocrine disruptor on early embryonic development, Developmental Biology Conference, Santa Cruz
- 2006** **Ramakrishnan S,** Arnett BC and Murphy AD, Electrotonic network as a context dependant switch of a multifunctional pattern generator resulting in distinct behavioral outputs, Neural Control of Behavior, *Abstract*
- 2005** **Ramakrishnan .S,** and Murphy A. D., GnRH as a peptide switch in modulating the CPG underlying oral behaviors in snails, Society for Behavioral Neuroendocrinology
- 2004** **Ramakrishnan .S,** and Murphy A. D., Investigation of the role of GnRH as a neuromodulator during egg-laying behavior in two pulmonate snails: *Helisoma* (Planorbidae) and *Lymnaea* (Lymnaeidae), Society for Neuroscience
- 2004** **Ramakrishnan .S,** and Murphy A. D., GnRH as a possible neuromodulator during egg-laying behavior in two pulmonate snails: *Helisoma* (Planorbidae) and *Lymnaea* (Lymnaeidae), Abstract, Midwest Neurobiology Meeting
- 2003** **Ramakrishnan .S,** and Murphy A. D., Modulation of the central pattern generator by the neuropeptide GnRH in the snail *Helisoma trivolvis*, Society for Neuroscience
- 1999** **Siddharth R.,** Prashant M. and Kumar R., An algorithm for encryption using molecular genetics, Proceedings of the 3rd international conference on Computational intelligence and Multimedia Application
- **Other Student Presentations/ Talks: (* Denotes Undergraduate Student, ^ High School Student)**
- 2016** Goin, A.*, Effect of Synthetic cathinones on GnRH neurons in zebrafish, Invited Talk, Murdock Undergraduate Research Symposium, Spokane, WA

- 2016** Goin, A.* and **Ramakrishnan, S.**, Effect of Synthetic cathinones on GnRH neurons in zebrafish, Science and Math Research Symposium, University of Puget Sound^S, *Winner Best Poster Award*
- 2015** Cadwell, O.*, Rethinking literary fiction and theory of mind through digital neurolinguistic analysis, **Invited talk**, Trustee Dinner, University of Puget Sound, Tacoma, WA
- 2015** Skinner, D.*, and **Ramakrishnan, S.**, Effects of early cortisol exposure on the developing GnRH neuron system in zebrafish, Science and Math Research Symposium, University of Puget Sound^S, *Winner Best Poster Award*.
- 2015** O’Leary, J.*, Inagaki, T. and **Ramakrishnan, S.**, Do medaka recognize Bisphenol A exposed conspecifics through visual or chemosensory cues?, Science and Math Research Symposium, University of Puget Sound
- 2014** Tetreau, S.*, Investigating the mechanism by which Bisphenol A affects sustained movement in the pond snail *Helisoma trivolvis*, **Invited Talk**, Murdoch Research Symposium, Vancouver BC.
- 2015** Cadwell, O.*, **Ramakrishnan, S.** and Benvensite, M., Rethinking literary fiction and theory of mind through neurolinguistic analysis, Poster Presentation, University of Puget Sound, Tacoma, WA
- 2014** Tetreau, S.*, and **Ramakrishnan, S.**, Investigating the mechanism by which Bisphenol A affects sustained movement in the pond snail *Helisoma trivolvis*, Science and Math Research Symposium, University of Puget Sound^S, *Winner Best Poster Award*.
- 2014** Kurth, E.M.*, **Ramakrishnan S.**, and Hodum P., Reproductive and Neurophysiological Effects of Chronic Plastic Ingestion in Northern Fulmars and Sooty Shearwaters, Science and Math Research Symposium, University of Puget Sound

• **Invited Talks/Panels/Workshops:**

- 2015** **National Science Foundation**, Workshop, Primarily Undergraduate Institutions and the Brain Initiative Workshop, Chicago, October 2015
- 2015** **Seattle Sci-Art Molecular Shadows Salon**, Invited Talk, “Intersections of Art and Science”, Seattle, WA, August 2015
- 2015** **University of Puget Sound, University Relations Retreat**, Invited Talk, “Neural Swatches: Patterns of activity underlying behavior”, Tacoma, WA, August 2015
- 2015** **SciArt Nanolabs, University of California, Los Angeles, CA**, Workshop, “Workshop on DIY microscopy and Nanotoxicology”, July 2015
- 2015** **University of Washington, Seattle, DXArts**, Invited Talk, “Art and Brain: Science, Gender and Sexuality”, April 2015
- 2014** **Leonardo Art Science Education Rendezvous (LASER), UCLA**, Invited Talk, “Hox genes and body patterns”, December 2014
- 2014** **Gallaudet University, DC**, Invited Talk and Critique, “Of Merging Machines and Magic”, November 2014
- 2014** **SciArt Nanolabs, University of California, Los Angeles, CA**, Workshop, “Workshop on DIY microscopy and fish embryo development”, July 2014 (<http://vimeo.com/101642113>; <http://vimeo.com/102110833>)
- 2014** **Willamette University, Salem OR**, Invited Talk, “Dynamism during Development: Acquisition of electrical activity and axonal pathfinding in a developing neuroendocrine system”
- 2014** **PIE Conference, University of Puget Sound, Tacoma, WA**, Invited Talk, “What brains tell us about patterns and perfection”
- 2013** **Museum of Contemporary Art, Taiwan**, Invited Talk, “**Hox Zodiac**” Conference on Posthumanist Desire
- 2013** **Thompson Hall Seminar, University of Puget Sound, Tacoma**, “Under the spell of the surroundings: How environmental factors affect brain physiology, behavior and reproduction”
- 2012** **Turing Symposium, UCLA**, “Morphogenesis, Morphology and Men: Pattern Formation from Embryo to Mind” (<http://cnsi.ctrl.ucla.edu/streaming/art-sci/5252012-ramakrishnan>)

- 2012 College Art Association Panel, Los Angeles**, Panel, “Is It Time to Question the "Privileging" of Visual Art?”
- 2011 Hong Kong Microwave Festival**, Panel, “New Generation Scientists Speak: Sci|Art: Connections, Art|Sci Networks” moderated by Prof. Victoria Vesna
- 2011 EdLab Seminar at Teachers College**, Columbia University, New York, **Invited Talk**, – “Sneak peeks into the brain: Tales that fish and snails can tell”; <http://edlab.tc.columbia.edu/index.php?q=node/6374>
- 2011 National Academy of Sciences (DASER)**, Invited Talk, – “Looking within and Without: Perspectives from Neuroscience and Art|Science” (<https://www.youtube.com/watch?v=Hf7eIdwbmWs>), Washington DC.
- 2011 Indian Institute of Technology, Department of Biotechnology Chennai**, Invited Talk, “Dual Perspectives in Neuroscience: Basic vs. Hybrid systems – In Vivo vs. cultures – Patch Clamp vs. Electrode arrays”, Chennai, India
- 2011** “A Window into Hormones and Development: Environmental Estrogens Shaping Ontogeny and the Development of the GnRH Neuroendocrine System” at Indian Institute of Science Education and Research, Thiruvananthapuram, India
- 2010** Invited critique for design-media art student projects at The New School of Design, Parsons, New York
- 2009** UCLA Brown Bag lunch series at the Design Media Art Center, Los Angeles - “Pattern generation and Pattern formation in Animal neural networks” - <http://artsci.ucla.edu/?q=node/271>
- 2007** National Brain Research Center and National Institute of Immunology, India- “Master Manipulators: How neurohormones shape our brain from development to adulthood”

- **Professional Memberships**

Society for Neuroscience, Society for Developmental Biology, Biomedical Engineering Society, College Arts Association, Endocrine Society

ADDITIONAL INFORMATION AND SKILLS

- **Grants and Awards**

- 2017** NIH-NIDA R15 proposal (\$300,000) - submitted
- 2017** NSF-IOB-Preproposal - submitted
- 2016** NSF-Research Cluster Network – Undergraduate Biology Education, Life-Maker-Space, \$50,000
- 2015** Creative Capital, Andy Warhol Foundation, M(y)Crobex: Create your own Wearable Biosensor (not funded)
- 2015** NSF Major Research Instrumentation Award (in collaboration with Dr. Megan Geseel (PI), Chemistry, University of Puget Sound); **Funded: \$100,000**
- 2014** Keck Foundation Award – Initiative For NeuroCulture (2014-2018); **Funded : \$250,000**
- 2013** NSF Early CAREER Award (2013-2018); **Funded: \$700,000**
- 2012** Mellon Foundation Award for Neuroscience Consortium (NW5C); **Funded: \$10,000**
- 2011** Fellow Art|Sci Center UCLA, Los Angeles
- 2014-2016** Student Best Poster Awards, at annual Science and Math Research Symposium, University of Puget Sound
- 2008** Best Poster Award at Society for Behavioral Neuroscience, Groningen
- 2003-2005** Awards for Excellence in Teaching (3 years), Department of Biological Sciences, University of Illinois, Chicago
- 2000, 2001** University Fellowship, University of Illinois, Chicago
Dean’s Fellowship in Computer Science, University of Illinois, Chicago

- **Science Education Outreach and Exhibitions**

- 2016** Hox Zodiac Dinner, University of Puget Sound, Tacoma, March 2016
- 2015** Hox Zodiac Dinner, Vienna, Austria, October 2015

- 2015** **Hox Zodiac Dinner**, Sci Art Nanolabs, University of California Los Angeles, July 2015
- 2015** [M\(y\)Crobos: Create your own Wearable Biosensor -- a Computational Fashion Workshop](#), Eyebeam, New York
- 2015** **Food Systems, Surroundings, Sensibilities, M(y)crobos**, Cotard Syndicate (with Stefani Bardin and Toby Heys), Bronx River Art Center, NY, January 2015
- 2014** **Hox Zodiac Dinner** at the Art Sci Center, University of California, Los Angeles (Dec 2014)
- 2014** **Micronations** at the Asia Triennial (Cotard Syndicate), Manchester, England
- 2013** **Hox Zodiac** at the Posthumanist Desire Exhibition MOCA, Taipei
- 2012** **Art, Environment, Action** at the New School of Design Parsons: "Sensory Misperceptions" by the Cotard Syndicate
- 2012** Harvest Works, New York, "**Dog Nose Knows: An interactive boardgame**" with Victoria Vesna and Adeline Ducker
- 2011** Microwave International New Media Arts Festival: Dog olfaction, beyond human smells & The Hox Project; <http://www.microwavefest.net/festival2011/index.html>
- 2011** "Art|Science: Conundrum or Confluence" - http://www.thenewyorkoptimist.com/HeidiRussellPresentsSiddharthRamakrishnanArt_ScienceAug29_2011.html
- 2011** 9th Annual Symposium, Center for Society and Genetics, UCLA: The Sniffing Booth; <http://nanobioart.com/sniffingbooth>
- 2010** "The Secret of Snail Patterns" - <http://thenewyorkoptimist.com/secretsnailpatternsiddharthram071309.html>
- 2009-10** INDAF, Incheon International Digital Art Festival, Korea: "The Hox Zodiac Installation"; <http://artsci.ucla.edu/hox/>
- 2007** "Biomimicry and Ecology", Documentary, Synchronous Design; Consultant on biomimicry

• Patents and Inventions

- 2013** [WO 2013154750](#), Systems and methods for biological ion channel interfaces, Roseman, J., **Ramakrishnan, S.**, Rosenstein, J., and Shepard, K.L.
- 2013** #cu12278, Single Molecule Sensor on Nanopore Platform for Ion Channel Studies, Rosenstein, J.K., **Ramakrishnan, S.**, and Shepard, K.
- 1999** "AEGIS" – *an Algorithm for Encryption using Molecular Genetics and Image Patterns* from De Penning & De Penning. **Ramakrishnan, S.**, and Murthy, P.

• University Service

- 2017** EstroFem workshop with Mary Tsang, Organizer
- 2017** Women Advance Together Workshop with Dr. Nancy Wayne, Organizer
- 2016** Glucose sensor workshop with Dr. Rita Blaik, Organizer
- 2016** Building Arduino Sensors workshop with Dr. Tyler Fox, Organizer
- 2016** Workshop on grant writing for junior science faculty
- 2015-present** University Senate
- 2014** Chaired panel at Race and Pedagogy conference
- 2013-present** Member Institutional Review Board
- 2013-present** Member Institutional Animal Care and Use Committee
- 2014-present** Board Member Gender and Queer Studies Program
- 2013-present** Board Member Bioethics Program (Developed program and curriculum)
- 2013** Technology and Teaching Committee (Special committee to meet with trustees)

- 2013-present** Art Science Salon Organizational Committee (Organize and plan monthly salons open to the public where artists and scientists converse)
2013 Search Committee for the Biophysics Chair

- **Community Service**

- Reviewer** National Science Foundation, IOS; PLOS One, Zoological Science, Biology of Reproduction
2015-ongoing Organizer of the “Symposium on Neuroethics: Interrogating Identities”, March 7th 2015
2014-ongoing Organizer and host of Town Hall seminars in Neuroscience. First event held on Oct 30th: Dr. Christof Koch, ; CSO Allen Institute of Brain Sciences. – Understanding Consciousness by Understanding the Brain
2014 Hosted and mentored a local high school student from the School of the Arts, Tacoma Public schools
2013-present Help with the McCarver elementary school visits to the labs
2013-present Teach at the Science and Math Institute of the Tacoma Public Schools on topics of Neuroscience
2013-present Have mentorship lunches and lab tours with the students from SAMI, Tacoma Public Schools on research and science

- **Volunteer Activities**

- 2010** Founder, FreeWriteNYC Youth New York; Conducted creative writing workshops for teenagers in public libraries
2009 Volunteer, Creative Art Workshops for Kids New York taught children to constructively use art and sculpture
2007- 09 Site Coordinator, Reading to Kids, Los Angeles; Organized English reading clubs in low income neighborhoods