

ARUN SETHURAMAN
Assistant Professor
Life Sciences South 250
Department of Biology
San Diego State University
San Diego CA 92182

Website: www.arunsethuraman.weebly.com
Email: asethuraman@sdsu.edu
Google Scholar Profile:
<https://scholar.google.com/citations?user=PIFc1aYAAAAJ&hl=en&oi=ao>

EDUCATION

Doctor of Philosophy, Bioinformatics and Computational Biology (Major), Genetics (Minor) 2013

“On inferring and interpreting genetic population structure – applications to conservation, and the estimation of pairwise genetic relatedness”, Iowa State University

Bachelor of Engineering (Honors), Computer Science (Major) 2007
Birla Institute of Technology and Science, Pilani, India

APPOINTMENTS

Assistant Professor (Tenure track) 2021 - present
Department of Biology
San Diego State University
San Diego, California

Assistant Professor (Tenure track) 2016 - 2021
Department of Biological Sciences,
California State University San Marcos
San Marcos, California

Research Assistant Professor 2013 - 2016
Center for Computational Genetics and Genomics,
Department of Biology, Temple University, Philadelphia, Pennsylvania
Advisor: Dr. Jody Hey, Professor, Temple University

Graduate Research/Teaching Assistant 2008 - 2013
Department of Ecology, Evolution and Organismal Biology,
Iowa State University, Ames, Iowa
Advisor: Dr. Fredric J. Janzen, Professor, Iowa State University
Co-Advisor: Dr. Karin S. Dorman, Professor, Iowa State University

Junior Research Associate 2007 - 2008
Software Engineering, and Technology Labs,
Infosys Limited, Bangalore, India
Advisor: Dr. Ravi Prakash Gorthi, Vice President, Research, Infosys Limited

Research Intern 2007
Symantec Corporation, Pune, India
Advisor: Chinmaya Bargale, Senior Manager, Symantec Corporation

Undergraduate Research Assistant 2005 - 2007
Department of Biological Sciences, Birla Institute of Technology and Science, Pilani, India
Advisor(s): Dr. Suman Kapur, Professor, Birla Institute of Technology and Science, Pilani

Dr. Shibashish Choudhary, Associate Professor, Birla Institute of Technology and Science, Pilani

METHODS/SOFTWARE DEVELOPED & MAINTAINED

- 1) **PPP** – Pop-gen Pipeline Platform (Python) – Comprehensive platform for population genomic analyses – ppp.readthedocs.io/en/latest/
- 2) **InRelate** (R) – Accurate estimation of genetic relatedness from multi-locus, multi-allelic genomic data in inbred/structured populations – www.github.com/arunsethuraman/inrelate
- 3) **MigSelect** (C/C++) – Estimation of linked natural selection and differential introgression under the Isolation with Migration (IM) model – www.github.com/arunsethuraman/migselect
- 4) **MULTICLUST** (C/C++) – Estimation of population structure and admixture proportions from multi-allelic, multi-locus population genomic data – www.github.com/arunsethuraman/multiclust
- 5) **IMa2p** (C++) – Parallel estimation of evolutionary demographic history under the Isolation with Migration (IM) model – www.github.com/arunsethuraman/ima2p
- 6) **IMa3** (C++) – Parallel estimation of evolutionary demographic history and population trees under the Isolation with Migration (IM) model – www.github.com/jodyhey/ima3
- 7) **IMGui** (JavaScript) – Graphical User Interface for IMa2p and IMa3 for estimation of evolutionary history under the Isolation with Migration (IM) model – <https://github.com/jaredgk/IMgui-electron-packages>

PUBLICATIONS (Undergraduate/graduate/postdoctoral/staff mentees indicated with *)

Manuscripts in revision/review

1. Schiebelhut LM, et al., Practical guidance in conservation genomics: from study design to application, *in revision*, *Molecular Ecology Resources*
2. Sustaita D, Wulf G*, **Sethuraman A** Genetic correlates of variation in beak morphology and bite performance in loggerhead shrikes (*Lanius ludovicianus*), *in revision*, *Journal of Avian Biology*
3. Jones AG, Obrycki JJ, **Sethuraman A**, Weisrock DW Population genetics and phenological characteristics of two non-native predatory lady beetles in North America, *in review*, *Molecular Ecology*
4. **Sethuraman A**, Sousa V, Hey J Model-based assessments of differential introgression and linked natural selection during divergence and speciation, *in review* DOI: 10.1101/786038.
5. Lynch M*, **Sethuraman A** Accounting for gene flow from unsampled “ghost-populations” while estimating evolutionary history under the IM (Isolation with Migration) model. DOI: 10.1101/733600 *in revision at Molecular Ecology Resources*
6. **Sethuraman A**, Nunziata S, Jones AG, Weisrock DW, Obrycki JJ Range-wide Population genomics of *Hippodamia convergens* and implications for biological control, *in review*
7. Li H, Summerhays B*, Shu X, Vasquez Y*, Vansant H*, Grenier C*, Gonzalez N*, Kansagra K*, Cartmill R*, Ling M, Obrycki JJ, Li B, **Sethuraman A** Population Genomics of Global Invasion Success in the Asian Harlequin Lady Beetle, *Harmonia axyridis*, *in revision*, *BMC Biology*
8. **Sethuraman A** Teaching Computational Genomics and Bioinformatics on a High Performance Computing Cluster, *in revision*, *Biology Methods and Protocols*

Peer-reviewed Articles Published

9. **Sethuraman A**, Stancheva R, Sanders C*, Caceres L*, Castro D*, Hausknecht-Buss H*, Henry S*, Johansen H*, Kasler A*, Lastor S*, Massaro I*, Mekuria I*, Moron-Solano A*, Read N, Vengerova G, Zhang A*, Zhang X, Read B Genome of a novel *Sediminibacterium* discovered in association with two species of freshwater cyanobacteria from streams in Southern California, G3. DOI: 10.1101/2021.08.20.457134
10. Grant T*, **Sethuraman A**, Escobar MA, Vourlitis G Chronic dry nitrogen inputs alter soil microbial community composition in Southern California semi-arid shrublands, *Applied Soil Ecology*. DOI: 10.1016/j.apsoil.2022.104496
11. **Sethuraman A**, Tovar A*, Welch W*, Dettmers R*, Arce C*, Skaggs T*, Rothenberg A*, Saisho R*, Summerhays B*, Cartmill R*, Grenier C*, Vasquez Y*, Vansant H*, Obrycki JJ Genome of the parasitoid wasp *Dinocampus coccinellae* reveals extensive duplications, accelerated evolution, and independent origins of thelytokous parthenogeny and solitary behavior, G3. DOI: 10.1093/g3journal/jkac001
12. Vourlitis G, Steinecke D*, Martinez T*, Konda K, Rendon R, Khor S, Hall V, **Sethuraman A** Fire and post-fire management affects soil microbial abundance and activity in semi-arid shrubland soils, *Soil Biology and Biochemistry*. DOI: 10.1016/j.apsoil.2021.104319
13. Webb A*, Knoblauch J, Sabankar N*, Sukesh Kallur A, Hey J, **Sethuraman A** The PopGen Pipeline Platform: A Software Platform for Facilitating Population Genomic Analyses., *Molecular Biology and Evolution*. DOI: 10.1093/molbev/msab1113
14. Rushworth C, Baucom R, Blackman B, Neiman M, Orive M, **Sethuraman A**, Ware J, Matute D Who are we now? A demographic assessment of the evolution societies. *Evolution*. DOI: 10.1111/evo.14168
15. Grenier C*, Summerhays B*, Cartmill R*, Martinez T*, Saisho R*, Rothenberg A*, Scott J*, Obrycki JJ, **Sethuraman A** Lack of phenotypic variation in larval utilization of pea aphids in populations of the lady beetle *Hippodamia convergens*. *Biological Control*. DOI: 10.1101/1740506
16. **Sethuraman A**, Janzen FJ, Weisrock DW, Obrycki JJ Insights from population genomics to enhance and sustain biological control of insect pests, *Insects*. DOI: 10.3390/insects11080462
17. Vansant H*, Vasquez Y*, Obrycki JJ, **Sethuraman A** Coccinellid host morphology dictates morphological diversity of the parasitoid wasp, *Dinocampus coccinellae*. *Biological Control*. DOI: 10.1101/460998
18. **Sethuraman A**, Gonzalez NM*, Grenier CE*, Kansagra KS*, Mey KK*, Nunez-Zavala SB*, Summerhays BEW*, Wulf GK* (2018) Continued misuse of multiple-testing correction methods in population genetics - a wake-up call? *Molecular Ecology Resources*. DOI: 10.1111/1755-0998.12969
19. Hey J, Chung Y, **Sethuraman A**, Lachance J, Tishkoff S, Wang Y (2018), Phylogeny estimation by Integration over Isolation with Migration Models, *Molecular Biology and Evolution*. DOI: 10.1093/molbev/msy162
20. **Sethuraman A** (2018), Estimating relatedness using admixture proportions in structured populations, G3. DOI: 10.1534/g3.118.200485
21. Hendricks S, Garner B, Anderson E, Antao T, **Sethuraman A**, Forester B, Hand B, Hohenlohe P, Kardos M, Koop LB, Bernatchez L, Waples R, Luikart G (2018) Recent advances in population genomics data analysis: Improving bioinformatics and computational approaches, *Evolutionary Applications*. DOI: 10.1111/eva.12659

22. **Sethuraman A**, Vasquez Y*, Rubio MA*, Janzen FJ, Obrycki JJ (2017) Recent demographic histories of three predatory lady beetles reveals complex patterns of diversity and population size change in the United States, *Insect Science*. DOI: 10.1111/1744-7917.12481
23. Knoblauch J, **Sethuraman A**, Hey J (2017) IMGui – A browser based GUI for Isolation with Migration Analyses, *Molecular Biology and Evolution*. DOI: 10.1093/molbev/msw252
24. Mitchell TS, Refsnider JM, **Sethuraman A**, Warner DA, Janzen FJ (2017) Experimental assessment of winter conditions on turtle nesting phenology and behavior, *Evolutionary Ecology Research*. URL: <http://www.evolutionary-ecology.com/abstracts/v18/3052.html>
25. **Sethuraman A**, Hey J (2017) IMA2p - Parallel MCMC and inference of ancestral demography under the isolation with migration (IM) model, *Molecular Ecology Resources*, DOI: 10.1111/1755-0998.12437
26. Hey J, Chung Y, **Sethuraman A** (2016) On the occurrence of false positives in tests of migration under an isolation with migration model, *Molecular Ecology* DOI: 10.1111/mec.13381
27. **Sethuraman A**, Janzen FJ, Obrycki JJ (2015) Population genetics of the predatory lady beetle *Hippodamia convergens*, *Biological Control*, DOI: 10.1016/j.biocontrol.2015.01.002
28. **Sethuraman A**, McGaugh SE, Becker ML*, Chandler CH, Christiansen JL, Hayden S, LeClere A, Monson-Miller J, Myers EM, Paitz RT, Refsnider JM, VanDeWalle T, Janzen FJ (2014) Molecular phylogeography and population genetics of Blanding's Turtle (*Emys blandingii*) in the Midwestern United States, *Conservation Genetics*, DOI: 10.1007/s10592-013-0521-8
29. Shaffer B et al. (2013) The Painted Turtle Genome: extreme physiological adaptations in a slowly evolving lineage, *Genome Biology*, DOI: 10.1186/gb-2013-14-3-r28

Peer Reviewed Conference Proceedings Published

30. Pasala A, **Sethuraman A**, Niranjani S, Gorthi RP (2009) Managing Global Software: the MAS way. SETLabs Briefings on Knowledge Engineering and Management, Infosys Limited.
31. Gorthi A, Niranjani S, Pasala A, **Sethuraman A** (2009) Applications of Collaborative Multi-Agent Technology to Business – A Comprehensive Survey. SETLabs Briefings on Knowledge Engineering and Management, Infosys Limited.
32. **Sethuraman A**, Yalla KK*, Sarin A*, Gorthi RP (2008) Agents Assisted Software Project Management. Proceedings of the 1st Bangalore Annual Compute Conference, ACM, New York, NY. DOI: 10.1145/1341771.1341777
33. Pasala A, **Sethuraman A**, Niranjani S, Gorthi RP, Gadde KB (2008) Context-aware Mobile Assistant Agents in Software Project Management. Proceedings of IEEE TENCON 2008, IEEE. DOI: 10.1109/TENCON.2008.4766780

Patents

33. Method for Providing Context Aware Access in Global Software Project Management – Pasala A, **Sethuraman A**, Niranjani S, Gorthi RP (2012)

Grants, Fellowships, Awards

Awarded - Total \$2,842,767 (as of September 2022)

2022 - USDA HSI "The Farm Classroom - a comprehensive approach incorporating soil ecology, virology, and population genomics in hops (*Humulus lupulus* L.) biology" - \$283,804, PI: **Sethuraman A**, co-PI's: Vourlitis G, Jancovich J

2022 - NSF ACCESS Education Allocation - 650,000 core-hours, "Sethuraman's Course: BIOL 624 Population Genetics at San Diego State University", PI: **Sethuraman A**

2022 - NSF XSEDE Education Allocation - 500,000 core-hours, "Sethuraman's Course: BIOMI 609 Computational Genomics and Bioinformatics at San Diego State University", PI: **Sethuraman A**

2021 - NIH R15, "The Genomic Landscape of Archaic Variation in Modern Humans" - \$440,987, PI: **Sethuraman A** (PI transfer to Dr. Kimberly Ayers, CSUSM)

2021 - NSF CAREER Award, "Developing New Computational Methods to Address the Missing Data Problem in Population Genomics" - \$600,344, PI: **Sethuraman A**

2021 - CSUPERB COVID-19 Research Recovery Microgrant - "Deciphering the Evolutionary History of *Dinocampus coccinellae* (Hymenoptera: Braconidae)" - \$1,500, PI: **Sethuraman A**

2019 - CSUSM GPSM - "Transcriptome sequencing of the predatory lady beetle, *Hippodamia convergens*" - \$3,000, PI: **Sethuraman A**

2019 - NSF REU grant - "Next Generation Sequencing and Beyond: from Beetles to Beer" - \$390,867, PI: Betsy Read, Co-PI: **Sethuraman A**.

2018 - CSU-AWS Credit Award - Co-PI's **Sethuraman A**, Panahi A, and Macklin T - \$50,000 (in AWS credits)

2018 - USDA NIFA REEU #2017-06423 "From field to lab to the classroom - Development of a research-based undergraduate course in Molecular Methods for the agricultural/natural resource sciences.", \$278,679; PI: George Vourlitis, Co-PI: **Sethuraman A**

2018 - CSUSM Faculty Center Professional Development Grant - \$750, PI: **Sethuraman A**

2017 - CSUSM GPSM #86969, - "The adaptive evolutionary history of host-specificity in the parasitoid wasp, *Dinocampus coccinellae* (Braconidae)" - \$3,000, PI: **Sethuraman A**

2016 - NSF Advances in Biological Informatics Development grant #1564659, - "Improved Tools for Population Genomics" - \$794,836, PI: **Sethuraman A**, Co-PI: Jody (Emanuel) Hey, Temple University

Awards

2020 - Kerri Mowen Excellence in Faculty Mentoring Award, CSUSM Office of Graduate Studies and Research

2019 - Nominee/Candidate for CSUSM Wang Family Excellence Award

2018 - CSM Outstanding Faculty-Student Collaboration Award, CSUSM (awarded to Yumary Vasquez and **Sethuraman A** - \$1000

2016 - Faculty Merit Award for Excellence in Research and Teaching, Temple University

2015 - Faculty Merit Award for Excellence in Research and Teaching, Temple University

2014 - Entomological Society of America Travel Award - \$1000

2013 - Walter J. Allen and Shaun B. Keister Scholarship, Iowa State University - \$1000

2013 (S) - Iowa State University-Howard Hughes Medical Institute Graduate Teaching Fellowship - \$750

2013 – Dr. Martin Luther King Jr. Iowa State University Advancing One Community Award - \$500

2012 – Iowa State University Teaching Excellence Award

2012(F) – Iowa State University-Howard Hughes Medical Institute Graduate Teaching Fellowship - \$500

2012 – iEvoBio Travel Grant, National Evolutionary Synthesis Center, Society for Study of Evolution- \$300

2012 – Professional Advancement Grant, Iowa State University - \$200

2012(S) – Iowa State University-Howard Hughes Medical Institute Graduate Teaching Fellowship - \$500

2012 – Honors Seminar Instructor Development Grant, Iowa State University - \$500

2011 – Professional Advancement Grant, Iowa State University - \$200

2011 – GPSS Peer Teaching Award, Iowa State University - \$200

2011 – Honors Seminar Instructor Development Grant, Iowa State University - \$250

2011 – James Cornette Research Fellowship in Bioinformatics and Computational Biology, Iowa State University - \$3,000

2010 – Iowa State University, Department of Ecology, Evolution and Organismal Biology Research Grant – Detecting Allele Size Homoplasy in Cryptically Structured Populations of *Emydoidea blandingii* - \$500

2010 – Sigma Xi Grant in Aid of Research – Quantifying Directed Allelic Flow under Differential Selection Regimes in *Caenorhabditis elegans* - \$400

2008 – Iowa State University, Office of Biotechnology Graduate Fellowship - \$32,000

2007 – Infosys Recognition Award for Excellence in Research in Artificial Intelligence - \$500

Media Mentions

2021 – “Biology Professor Receives Prestigious NSF Award”, CSUSM News - <https://news.csusm.edu/biology-professor-receives-prestigious-nsf-career-award/>

2021 – CSUSM Report to the Community - <https://www.csusm.edu/rtc/live/>

2020 – “Undergraduate Research Conference Receives Rave Reviews”, CSUSM News - <https://news.csusm.edu/research-conference/>

2019 – “5th Annual BCB Symposium”, Iowa State News - <https://www.predictivephenomicsinplants.iastate.edu/5th-annual-bcb-symposium>

2019 – “Study shows fire rehabilitation may be missing mark”, Carlsbad Business Journal - https://carlsbad.org/wp-content/uploads/2019/08/CBJ0819_v3.pdf

2019 – “Study shows fire rehabilitation may be missing mark”, CSUSM News - <https://news.csusm.edu/research-methods-molecular-evolution-ecology/>

2017 – “Poster campaign celebrates LGBTQA community”, CSUSM News - <https://news.csusm.edu/beyond-the-stereotype-2017/>

2017 – “Grant will help professor gain new insights into population genetics”, CSUSM News - <https://news.csusm.edu/grant-will-help-professor-gain-new-insights-into-population-genetics/>

2016 – featured Expert on Youngzine - <https://youngzine.org/expert/arun-sethuraman>

2013 – “Advancing One Community Award recipients announced”, Iowa State News - <https://www.inside.iastate.edu/article/2013/01/24/one>

POSTERS AND PRESENTATIONS

Invited Lectures

2022 - Virtual Conservation Genomics 2022, University of Montana

2022 - Invited speaker, Natural History Museum of Los Angeles (virtual)

2022 - Seminar in Ecology and Evolutionary Biology, UC Riverside

2022 - Genomics Education Partnership Research Seminar Series (virtual)

2022 - oSTEM - SQUAD Seminar Series, UC San Diego (virtual)

2021 - Seminar in Ecology and Evolutionary Biology, UC Davis (virtual)

2021 - Plenary Speaker, UC Berkeley Center for Computational Biology Retreat (virtual)

2021 – Virtual Conservation Genomics 2021, University of Montana

2021 – Seminar in Biology, California State University East Bay, CA

2021 – Seminar in Biology, California State University Northridge, CA

2021 – Plenary Speaker, CSUPERB Virtual Symposium 2021

2020 – Seminar in Biology, San Francisco State University, San Francisco, CA

2020 – Seminar in Biology, McMaster University, Hamilton Ontario

2020 – Arthropod Genomics Symposium, i5k Online

2020 - Seminar in Evolutionary Biology, San Diego State University, San Diego, CA

2019 – Super Computing/Distributed Computing Symposium, UC San Diego, San Diego, CA

2019 - Seminar in Evolutionary Biology, California State University Northridge, CA

2019 – 5th Annual Bioinformatics and Computational Biology Symposium, Iowa State University

2018 - Invited Speaker as part of the “Two Scientists Walk into a Bar” series, organized at Wavelength Brewing Co., Vista, CA

2017 - “Inferring evolutionary history for conservation using IMA2p”, Conservation Genomics 2017, Flathead Biological Station, University of Montana

2017 - “PPP - Population Genomics Pipeline Platform”, Conservation Genomics 2017, Flathead Biological Station, University of Montana

2016 – “Genomics of admixed and structured populations”, MiraCosta College, Oceanside, CA

2016 – “Genomic islands and castaways – model-based assessment of demography and linked selection during speciation”, Institute of Bioinformatics and Evolutionary Studies, Center for Modeling Complex Interactions, Fall Seminar Series, Moscow, Idaho

2015 – “Fast Multinomial Clustering with Applications to Genetic Population Structure” – Dorman KS, **Sethuraman A**, Chen WC, Joint Statistical Meetings, Seattle, Washington

2015 – “Model based inference in the genomics of structured populations”, invited presentation, Department of Biological Sciences, BITS Pilani, Pilani, Rajasthan, India.

2014 – “IMa2p – Parallel MCMC and inference of ancestral demography under the Isolation with Migration Model” – **Sethuraman A**, Hey J, Computational Research On Owsnest (CROO) Symposium, Temple University.

2014 – “Population genetics of the convergent lady beetle *Hippodamia convergens* in the Americas” – **Sethuraman A**, Janzen FJ, Obrycki JJ, Entomological Society of America Meetings, Portland, Oregon

Conferences/Symposia/Workshops

2021 – “Genome of the convergent lady beetle, *Hippodamia convergens* and the evolutionary history of Coleoptera” – Zhang A, Reyes R, Tovar A, **Sethuraman A**, CSUSM Summer Scholars Research Symposium, San Marcos, CA

2020 – “How Does Parasitoid Wasp Size Covary With Its Lady Beetle Host Morphology?” – Dettmers R, Rothenberg A, Saisho R, Tovar A, Skaggs T, Arce C, Welch W, **Sethuraman A**, CSUSM Summer Scholars Research Symposium, San Marcos, CA (online)

2020 – “Bridging the Gap: How population genetics can offer insight into the conservation status of vertebrate species” – Mey K, Steinecke D, Gonzalez N, Rothenberg A, Saisho R, Tovar A, Skaggs T, Dettmers R, Welch W, Arce C, **Sethuraman A**, CSUSM Summer Scholars Research Symposium, San Marcos, CA (online)

2020 – “Heritability of Size Morphology in the Parthenogenetic Wasp: *Dinocampus coccinellae*” – Welch W, Dettmers R, Tovar A, Arce C, Skaggs T, Rothenberg A, Saisho R, **Sethuraman A**, CSUSM Summer Scholars Research Symposium, San Marcos, CA (online)

2020 – “Genomic Landscape of Neanderthal Ancestry in Modern Humans” – Sethuraman A, The Allied Genomics Conference (TAGC 2020), Washington DC

2019 – “Interspecies interactions of *H. convergens* and its effectiveness for biological control” – Summerhays B, Grenier C, Cartmill R, Martinez T, Saisho R, Rothenberg A, Scott J, **Sethuraman A**, CSUSM Summer Scholars Research Symposium, San Marcos, CA

2019 – “Gene expression profiling across life history stages of *Hippodamia convergens*” – Scott J, Saisho R, Cartmill R, Rothenberg A, Summerhays B, Grenier C, Martinez T, **Sethuraman A**, CSUSM Summer Scholars Research Symposium, San Marcos, CA

2019 – “The Effects of Gene Flow from Unsampled Ghost Populations on the Estimation of Evolutionary History Under the Isolation with Migration Model” – **Sethuraman A**, Evolution 2019, Providence, RI

2019 – “Inconsistencies in Type 1 Error Corrective Methods used in Population Genetics Studies” – Gonzalez N, Kansagra K, Summerhays B, Wulf G, Grenier C, Mey K, Nunez S, **Sethuraman A**, CSUPERB Annual Symposium, Orange County, CA

2019 – “Population Genetics, Form, and Function of Loggerhead Shrikes in California” – Wulf G, Mey K, **Sethuraman A**, Sustaita D, Society for Integrative and Comparative Biology 2019 Annual Meeting Abstracts P2-175, Miami, FL

2018 – “Population genomics of two invasive predatory lady beetles in the United States” – Kansagra K, Gonzalez N, Grenier C, Summerhays B, **Sethuraman A**, CSUSM Summer Scholars Poster Symposium, San Marcos, CA

2018 – “Inconsistencies in Type 1 Error Corrective Methods used in Population Genetics Studies” – Gonzalez N, Kansagra K, Summerhays B, Wulf G, Grenier C, Mey K, Nunez S, **Sethuraman A**, CSUSM Summer Scholars Poster Symposium, San Marcos, CA

2018 – “Inconsistencies in Type 1 Error Corrective Methods used in Population Genetics Studies” – Gonzalez N, Kansagra K, Summerhays B, Wulf G, Grenier C, Mey K, Nunez S, **Sethuraman A**, SACNAS Regional Meeting, San Diego CA

2018 – “Population genetics of Loggerhead Shrikes in California” – Wulf G, Mey K, **Sethuraman A**, Sustaita D, CSUSM Summer Scholars Poster Symposium, San Marcos, CA

2018 - “Estimation of relatedness in inbred populations” - **Sethuraman A**, Population, Evolutionary, Quantitative Genetics 2018, Madison, WI

2018 - “The effect of unsampled ghost populations on the estimation of evolutionary history” - Lynch M*, **Sethuraman A**, Population, Evolutionary, Quantitative Genetics 2018, Madison, WI

2018 - “Introduction to Galaxy Workshop” - Clements D, **Sethuraman A**, California State University San Marcos, CA

2017 – “Morphological and genomic diversity of the parasitoid wasp, *Dinocampus coccinellae* in the United States” – Vasquez Y*, Vansant H*, **Sethuraman A**, UCLA Undergraduate Research Symposium, Los Angeles, CA

2017 – “Effects of unsampled ghost populations on the estimation of evolutionary history under the Isolation with Migration model” – Lynch M*, **Sethuraman A**, EMBO Population Genomics Workshop, Napoli, Italy

2017 – “Population genetics of predatory lady beetles in North America” – Rubio MA*, Vasquez Y*, **Sethuraman A**, CSUPERB Symposium, San Jose, CA

2017 – “PPP v.1.0 Pop-gen Pipeline Platform, a Galaxy Project based platform for model-based population genomics” – Takehara S*, Lynch M*, **Sethuraman A**, CSUPERB Symposium, San Jose, CA

2016 – “Evidence and estimation of differential introgression and linked selection effects using mixture model-based IM analyses” – **Sethuraman A**, Sousa V, Hey J, Evolution 2016, Austin, Texas

2014 – “Parallel MCMC and Inference of Ancient Demography under the IM Model” – **Sethuraman A**, Hey J, Evolution 2014, Raleigh, North Carolina.

2012 – “P-MULTICLUST – Multinomial Clustering of Amino Acid Sequences to Identify Protein Subfamilies – A Case Study in Sex Determination Genes” – **Sethuraman A**, Chen WC, Dorman KS, Janzen FJ, Ecological Genomics Symposium, Kansas City, Missouri.

2012 – “MULTICLUST – Multinomial Clustering of Multilocus Genotypes to Identify Genetic Subpopulation Structure” – **Sethuraman A**, Chen WC, Dorman KS, Janzen FJ, World Congress on Evolutionary Biology, Ottawa, Ontario, Canada

2012 – “P-MULTICLUST – Multinomial Clustering of Amino Acid Sequences to Identify Protein Subfamilies – A Case Study in Sex Determination Genes” – **Sethuraman A**, Chen WC, Dorman KS, Janzen FJ, World Congress on Evolutionary Biology, Ottawa, Ontario, Canada

2012 – “P-MULTICLUST – Multinomial Clustering of Amino Acid Sequences to Identify Protein Subfamilies – A Case Study in Sex Determination Genes” – **Sethuraman A**, Chen WC, Dorman KS, Janzen FJ, Conference on New Statistical Methods for Next Generation Sequencing Data Analysis, Iowa State University, Ames, Iowa

2011 – “Cryptic Genetic Population Structure in North American Blanding’s Turtles explained by genome-wide SSR Homoplasy” – **Sethuraman A**, Becker ML, Janzen FJ, Joint Meeting of Herpetologists and Ichthyologists, Minneapolis, Minnesota.

2010 – “Population Genetics and Phylogeographic History of *Emydoidea blandingii* across the Midwestern States of Iowa, Illinois, Nebraska and Minnesota” – **Sethuraman A**, McGaugh SE, Becker ML*, Chandler CH, Christiansen JL, Hayden S, LeClere A, Monson-Miller J, Myers EM, Paitz RT, Refsnider JM, VanDeWalle T, Janzen FJ, Midwest Partners in Amphibian and Reptile Conservation (MWPARC) meeting on Blanding’s Turtle Biology, Conservation & Management, Oregon, Illinois

2010 – “Population Genetics and Phylogeography of the Blanding’s Turtle (*Emys blandingii*) in the Midwestern United States – **Sethuraman A**, McGaugh SE, Becker ML, Chandler CH, Christiansen JL, Hayden S, LeClere A, Monson-Miller J, Myers EM, Paitz RT, Refsnider JM, VanDeWalle T, Janzen FJ, Midwest Ecology and Evolution Conference, Ames, Iowa

2009 – “Prediction of Protein Crystallization using Recursive Partition Trees” – **Sethuraman A**, Vangaveti S, Walsh J, Sarkar T, Boyken S, Boggess E, Hoy J, New Mexico Bioinformatics Symposium, Santa Fe, New Mexico

2009 – “Context-aware Mobile Assistant Agents in Software Project Management” – **Sethuraman A**, Pasala A, Gorthi RP, IEEE TENCON Conference, Hyderabad, India

2008 – “Applications of Business Rules Management Systems to Financial Market Prediction” – **Sethuraman A**, Gorthi RP, Bloomberg LP, Skillman, New Jersey

2008 – “Agents Assisted Software Project Management” – **Sethuraman A**, Sarin A, Yalla KK, Gorthi RP, ACM Compute Conference, Bangalore, India

2007 – “Modeling Effects of Cell Signaling as Finite State Automata” – **Sethuraman A**, Kapur S, APOGEE 2007 Conference, Pilani, India

2007 – “Phylogenetic Tree Traversal using Spanning Tree Algorithms” – **Sethuraman A**, Choudhary S, APOGEE 2007 Conference, Pilani, India

2006 – “Managing Virtual Machines on Veritas Provision Manager” – **Sethuraman A**, Nigam N, Bargale C, Symantec Corporation, Pune, India

TEACHING

Instructor/Developer – San Diego State University, CSU San Marcos, Temple University, Iowa State University

BIOL 624 Population Genetics - *New Prep.*, Fall 2022 (24 students)

BIOMI 609 Computational Genomics and Bioinformatics - *New Prep.*, Spring 2022 (30 students)

BIOL 770 Seminar in Evolution and Systematics - *New Prep.*, Spring 2022 (10 students)

BIOL 212 Evolution – *New Prep.*, Spring 2020 (40 students)

BIOL 564 Seminar in Evolution – *New Prep.*, Fall 2019 (18 students)

BIOL 328 Human Heredity – *New Prep.*, Spring 2019 (10 students), Summer 2019 (10 students), Spring 2020 (20 students), Summer 2020 (20 students), Spring 2021 (10 students), Summer 2021 (14 students)

BIOL 596 Molecular Methods in Ecology and Evolution Lecture and Lab- *New Prep.in collaboration with Dr. George Vourlitis*, Spring 2019 (12 students), Spring 2020 (20 students)

BIOL 502 Population Genetics – Fall 2020 (24 students), Spring 2018 (21 students), Spring 2017 (40 students)

BIOL 502L Population Genetics Lab - *New Prep.*, Spring 2018 (21 students), Fall 2020 (24 students)

BIOL 480 Bioinformatics - *New Prep.* Fall 2017 (30 students), Fall 2018 (30 students), Fall 2019 (30 students)

BIOL 480L Bioinformatics - *New Prep.* Fall 2017 (30 students), Fall 2018 (30 students), Fall 2019 (30 students)

Workshop on Genomics and Bioinformatics - *New Prep.* (30 High School Teachers), Temple University, Summer 2017, Summer 2018, Summer 2019

BIOL 352 Genetics lecture and lab - Fall 2016 - *New Prep.* (48 students), Spring 2017 (48 students), Fall 2017 (48 students), Fall 2018 (72 students), Spring 2019 (96 students), Spring 2020 (48 students), Fall 2020 (48 students), Spring 2021 (48 students)

Co-taught classes on Evolutionary Genetics (Spring 2014 ~ 15 students), and Programming for Biologists (Spring 2015 ~ 20 students) at Temple University, Philadelphia, PA.

Developed and taught two semesters of an Honors Seminar (open to all STEM and non-STEM majors) on “Current Topics in Evolution” (~34 students) – Spring 2011, 2012, Honors Program, Iowa State University, Ames, Iowa.

Co-taught a summer term of principles of human anatomy – Summer 2012 (~10 students). Department of Ecology, Evolution and Organismal Biology, Iowa State University, Ames, Iowa.

Graduate Teaching Assistant – Iowa State University

Taught principles of human anatomy (3 semesters – Fall 2009, 2011, 2012 ~ 96 students), principles of genetics (1 semester – Fall 2010 ~ 60 students), principles of human physiology (2 semesters – Spring 2012, 2013 ~ 64 students), and introductory biology (Spring 2011 ~ 40 students). Department of Ecology, Evolution and Organismal Biology, Iowa State University, Ames, Iowa.

Facilitator – Iowa State University

Helping develop and facilitate a Graduate Teaching Assistant Learning Community for all undergraduate Physics and Chemistry courses at Iowa State University. This community is funded by the Iowa State University – Howard Hughes Medical Institute (ISU-HHMI) program in implementing inquiry-based laboratories in STEM courses. Spring 2013 (~20 Graduate Teaching Assistants), Departments of Physics, and Chemistry, Iowa State University, Ames, Iowa.

MENTORSHIP

Staff – 3 (CSUSM), 2 (Temple University)

Graduate student supervision – 6 (CSUSM), 7 (SDSU)

Independent study supervision – 4 (SDSU), 30 (CSUSM), 1 (Temple University), 4 (Iowa State University) 2 (Infosys)

Graduate Thesis Committee Membership – 7 (CSUSM), 7 (SDSU)

Staff at CSUSM:

Apeksha Sukesh Kallur (Fall 2017 – Summer 2018) – now Software Engineer II at American Express
Nitesh Sabankar (Summer 2018 - present) – now Software Engineer I at Facebook
Jonathan Tedjo (Summer 2018) – now Software Engineer I at General Atomics

Staff at Temple University:

Dr. Andrew Webb (Fall 2016 – Summer 2019) – now Postdoctoral Researcher at Princeton University
Jared Knoblauch (Fall 2016 – Summer 2019) – now Scientific Programmer at Children’s Hospital of Philadelphia

Graduate students at SDSU:

Alexandra McElwee-Adame (Fall 2022 - present), Margaret Wanjiku (Fall 2022 - present), Tamar Beridze (Fall 2022 - present), Michael Kuzminskiy (Fall 2021 – present), Anais Aoki (Fall 2021 – present), Gavrilang Ang (Spring 2022 - present), Khuyen Nguyen (Spring 2022 - present)

Graduate students at CSUSM:

Melissa Lynch (Fall 2017 – Summer 2019), Bryce Summerhays (Fall 2017 – Fall 2019), Nitesh Sabankar (Computer Science, Spring 2018), Jiali Tang (Fall 2018 – Spring 2019), Andrew Rynerson (Fall 2019 – Spring 2021), Alicia Tovar (Fall 2019 – Summer 2021)

Graduate Committee Member at CSUSM, SDSU:

Timothy Grant (Fall 2016 – Fall 2020) – now Instructional Support Coordinator at CSU San Marcos
Marcus Hubbell (Spring 2017 – Fall 2020) – now Environmental Scientist at California State Parks
Allison De Peralta (Fall 2017 – Summer 2020) – now R&D Scientist at Agilent Technologies
David Papp (Fall 2018 – Summer 2020) – now Graduate Student at UCSD/SDSU
Aida Rodriguez (Spring 2018 – Spring 2020) – now Wildfire Research Associate 2 at CSU San Marcos
Ciara Sanders (Fall 2020 – Summer 2022) - now Graduate Student at Princeton University
Victoria Apaldetti (Fall 2020 – present)
Stephanie Young (Fall 2021 - Spring 2022) - now Graduate Student at SDSU
Yazmin Lommel (Spring 2022 - present)
Zachary Snider (Spring 2022 - present)
Sarah Hood (Spring 2022 - present)
Jonah Alderson (Spring 2022 - present)
Dimitri Krutkin (Spring 2022 - present)
Alex Handzel (Spring 2022 - present)

Biology Undergraduate students at CSUSM:

Yumary Vasquez (Fall 2016 – Spring 2018) – now PhD Candidate at UC Merced, Melissa Lynch (Fall 2016 – Summer 2017) – now Bioinformatics Scientist at Rancho Biosciences, Hannah Vansant (Spring 2017 – Spring 2018) – now NIH MHIRT Scholar at Oxford University, Shiori Takehara (Fall 2016 – Summer 2017) – now QC Specialist III at GenMark Diagnostics, Michael Adrian Rubio (Fall 2016 – Spring 2017) – now Senior Lab Technologist at Nittobo America Inc, James Price (Spring 2017) – now Diamond Grader at Gemological Institute of America, Daniel Magnusson (Fall 2017) – now Production Technician at BioLegend, Merielle Redwine (Summer 2017 – Summer 2018), Khyati Kansagra (Fall 2017 – Spring 2019) – now Graduate Student at Johns Hopkins University, Malia Stuart (Spring 2018) – now Veterinary Assistant at VCA Animal Hospitals, Nicolette Gonzalez (Summer 2018) – now CMA at Dr. Reddy Rheumatology, Ken Mey (Summer 2018 – Spring 2020) – now Chemist at Inova Diagnostics, Stefany Nunez (Spring 2018 – Spring 2019) – now Graduate Student at UC Irvine, Christy Grenier (Spring 2018 – Summer 2019) – now Clinical Laboratory Technician at Sequenom, Ryan Cartmill (Fall 2018 – Spring 2020) – now Chemist at BioTechne, Gwendalyn Wulf (Summer 2018 – Spring 2020) – now Conservation Geneticist at the San Diego Zoo Global, Roxane Saisho (Summer 2019 – Summer 2020) –

now Scientist at Agilent Technologies, Alexander Rothenberg (Summer 2019 – Fall 2020), Dylan Steinecke (Spring 2019 – Spring 2020) – now Graduate Student at UCLA, Jeff Jaureguy (Spring 2019 – Spring 2020) – now Graduate Student at UCSD, Jerrika Scott (NSF REU Scholar – Summer 2019), Tanairi Martinez (Spring 2019 – Spring 2020), Ryan Dettmers (Fall 2019 – Fall 2020), Walker Welch (Spring 2020 – Summer 2021), Timothy Skaggs (Spring 2020 – Spring 2021), Camila Arce (Spring 2020 – Spring 2021), MJ Lee (Fall 2020 – present), Theresa Buck (Fall 2020 – Spring 2021), Michele Ruben (Fall 2020 – Spring 2021), Robert Reyes (Spring 2021 – present), Andrew Zhang (NSF REU Scholar – Summer 2021)

Biology Undergraduate students at SDSU:

Adrian Kristan (Fall 2021 - present), Scott Monahan (Fall 2021 - present), Alexis Willcoxson (Fall 2021 - Spring 2022), Mohammad Shah (Fall 2022 - present)

Computer Science Undergraduate students at CSUSM:

Jack Wang (Fall 2018 – Fall 2019) – now Graduate Student at CSU San Marcos

High school students:

Arushi Dogra (Del Norte High School, Fall 2016 – Summer 2017, Summer 2018), Abraham Reiter (High Tech High School, Summer 2017), Deepthi Mohanraj (Redmond High School, Summer 2017).

Professionals:

Jaya Ramrakhyani (Illumina, Fall 2017)

Undergraduate students prior to CSUSM:

Khea Wolffe (Temple University, Summer 2014), Leighfonda Allen (Iowa State University, Summer 2013), Chelsea Sawyers (Iowa State University, Summer 2012), Audra Loy (Iowa State University, Spring 2012), Melissa Moody (Iowa State University, Summer 2011), Morgan Becker (Iowa State University, Spring 2011), Narayana Pappu (Cornell University, 2007 – 2008), Antoine Boulanger (EPFL, 2007 – 2008)

SERVICE

PROFESSIONAL MEMBERSHIP

Society for Molecular Biology and Evolution 2020-present, American Genetics Association 2020-present, Genetics Society of America 2018-present, Society for the Study of Evolution (SSE) 2009-present, Midwest Partners in Amphibian and Reptile Conservation (MWPARC) 2009-present, Association of Computing Machinery (ACM) 2007-2009, IEEE 2007-2009

CSU-SYSTEM WIDE SERVICE

2018 - 2022	SDSU + CSUSM Representative, Faculty Consensus Group, CSUPERB
2020 – 2022	CSUPERB Committee for Bioinformatics Internships

UNIVERSITY-WIDE SERVICE

2019 – 2021	Secretary, LGBTQA Faculty Staff Association, CSUSM
2018 - 2021	FSA Representative to the CSUSM Office of Inclusive Excellence consensus group
2018 - 2019	President, LGBTQA Faculty Staff Association, CSUSM
2017 - 2018	Organizing Committee Member, University Leadership Conference, CSUSM

UNIVERSITY/COLLEGE-LEVEL SERVICE

2021 - 2022 Faculty Representative on Committee for Research Activities, Office of Sponsored Projects, CSUSM
 2020 – 2021 Search Committee Member, Chief Diversity Officer, CSUSM
 2019 – 2021 President’s Workgroup for Diversity and Inclusion
 2019 Organizing Committee, Southern California Conference for Undergraduate Research (SCCUR)
 2019 – 2021 Faculty Representative, Committee for Undergraduate Research (CUGR)
 2018 - 2019 College of Science and Mathematics Representative on Faculty Awards Selection Committee (FASC), CSUSM
 2017 – 2018 Academic Senator, College of Science and Mathematics, CSUSM
 2017 – 2018 Vice President, LGBTQA Faculty Staff Association, CSUSM

DEPARTMENTAL SERVICE (SDSU)

2022 - present Urban Evolution TT Faculty Search Committee
 2021 - present Curriculum committee, BMI Graduate Program
 2021 - present Ted Cohn Evolutionary Biology Graduate Scholarship Committee

DEPARTMENTAL SERVICE (CSUSM)

2019 – 2021 Ad-hoc committee for course reconfigurations (with Drs. Vourlitis, and Mueller)
 2018 - 2021 Ad-hoc committee on building an interface for career-based advising in the Biological Sciences
 2017 - 2021 Ad-hoc committee on designing the Department of Biological Sciences “pathways” to graduation documents
 2017 - 2021 Ad-hoc committee on incorporating computational/quantitative skills in Department-wide efforts to overhaul coursework
 2017 - 2021 Ad-hoc committee on change-of-major/minor requirements/requests

STUDENT-LEVEL SERVICE

2016 – 2021 Mentor, Faculty Mentoring Program, CSUSM
 2017 – 2021 Faculty Advisor, Pre-dental Society, CSUSM

PROFESSIONAL DEVELOPMENT

2021 - present Participant, Multi-Campus Transformation Equity Network (MCTEN)
 2016 – 2017 Participant, Faculty Learning Community on “Learning Matters”
 2016 – 2017 Member, LGBTQA Faculty Staff Association, CSUSM

SCIENTIFIC/GLOBAL COMMUNITY SERVICE

2021 – present Associate Editor, Journal of Heredity, American Genetics Association
 2021 – present Conference Organizing Committee, Genetics Society of America
 2021, 2022 Panelist - Beckman Scholars Program
 2021 Panelist – Genome Canada LSARP Competition
 2020, 2021, 2022 Panelist – NSF Evolutionary Processes Cluster, NSF BRC-BIO program, NSF Division of Biological Infrastructure
 2020, 2021 Ad hoc Reviewer, NSF-DEB, NSF-ABI, Genome Canada
 2020 – present Member, Diversity Committee, Society for Study of Evolution
 2020 – present Topic Editor, Insects, MDPI
 2018 - present Associate Editor, G3, Genetics Society of America
 2015 – 2020 Blogger, Social Evolution Forum
 (www.evolution-institute.org/social-evolution-forum/)
 2014 - present Contributor, The Molecular Ecologist (www.molecularecologist.com)

2013 - 2016 Faculty Mentor, NIH-MARC program, Temple University
2010 - present Ad hoc reviewer, Ecology and Evolution, Molecular Ecology, Molecular Ecology Resources, Conservation Genetics, Biochemical Genetics, PLoS One, Nature Scientific Reports, Johns Hopkins University Press, Evolutionary Applications, Biological Control, Insects, eLife, Genome Biology and Evolution, Insects, G3, Environmental Entomology, PLoS Genetics, BMC Genomics

PRIOR TO CSUSM

2012 - 2013 President, Indian Students' Association, Iowa State University
2009 - 2011 Treasurer, Indian Students' Association, Iowa State University
2009 - 2013 Member, International Financial Advisory Committee, Iowa State University
2008 - 2013 Editor, SKETCH, Bi-annual Student Magazine, Iowa State University
2008 - 2013 General Assembly Member, International Students Council, Iowa State University
2006 Chief Editor, Cactus Flower, Annual Student Magazine, Birla Institute of Technology & Science, Pilani, India