

Omar S. Navarro Leija

EDUCATION

- University of Pennsylvania** – School of Engineering and Applied Science 9/2016 – Present
PhD Student, Computer Science
- University of Nevada, Las Vegas** – Howard R. Hughes College of Engineering 9/2011 – 5/2016
BS Computer Science, Math Minor; GPA: 3.7
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RECOGNITIONS

- ◆ NSF Graduate Research Fellowship Program 2017
 - ◆ UNLV Senior design competition 2016 1st place CS award.
 - ◆ NASA GSFC Poster Presentation 1st place award for Operations.
 - ◆ Nevada NASA Space Grant 2015.
 - ◆ Recipient of Nevada Millennium Scholarship 2011-2016
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PUBLICATIONS

- ◆ **"A Monad for Deterministic Parallel Shell Scripting"**, Ryan Scott, Omar S. Navarro Leija, Joseph Devietti, Ryan R. Netwon. OOPSLA (2017) (**In Review**).
 - ◆ **"GPUdrano: Detecting uncoalesced accesses in GPU programs"**, Rajeev Alur, Joseph Devietti, Omar S. Navarro Leija, Nimit Singhania. CAV 2017 (**Accepted**).
 - ◆ **"Measuring accelerated rates of insertions and deletions independent of rates of nucleotide substitution"**, Navarro Leija, O., Varghese, S. & Han, M.V. J Mol Evol (2016). doi:10.1007/s00239-016-9761-9
 - ◆ **"Agile multiscale decompositions for automatic image registration"**, James M. Murphy ; Omar Navarro Leija and Jacqueline Le Moigne. Proc. SPIE 9840, Algorithms and Technologies for Multispectral, Hyperspectral, and Ultraspectral Imagery XXII, 984011 (May 17, 2016); doi:10.1117/12.2222182; <http://dx.doi.org/10.1117/12.2222182>
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RESEARCH

- ◆ **"ProcessJ compiler: Running millions of concurrent processes"**, Omar Navarro Leija; Austing Ross and Jan Pedersen. UNLV CS 2016 Senior design competition. 5/2016
 - ◆ **"Understanding transposable element dysregulation in human somatic cells"**, GM Jonaid; Austin Ross; Nicky Chung; Elizabeth Park; Omar Navarro Leija; Sophia Quinton; Daphnie Churchill and Mira Han. International Society for Computational Biology 2016. Poster Presentation. 4/2016
 - ◆ **"Measuring conservation scores for insertion and deletion mutations"**. Omar Navarro Leija ; Sanju Varghese and Mira Han. OUR-UNLV Fall Poster Undergraduate Research Showcase. 10/2015
 - ◆ **"Shearlet features for remotely sensed image registration"**, Omar Navarro Leija and Jacqueline Le Moigne. NASA GSFC Poster Presentation. 8/2015
 - ◆ **"Evolutionary constraint on insertion/deletions in the genome"**, Omar Navarro Leija ; Sanju Varghese and Mira Han. UNLV NSF REU Poster Presentation. 8/2014
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EXPERIENCE

- NASA Goddard Space Flight Center**– Software Engineering Intern 6/2015 – 8/2015
- Project: "Shearlet features for remotely sensed image registration".
 - Developed open source Shearlet Transform library in C (pending release).
 - Implemented shearlet feature algorithms into image registration software in C.
- UNLV Han Lab**– Bioinformatics Research Assistant

- Research in bionformatics and molecular biology. 8/2014 – 7/2016
 - Developed novel algorithms for phylogenetic and conservation score inference.
- UNLV NSF REU Internship**– Bioinformatics 6/2014 – 8/2014
- Project: “Evolutionary constraint on insertions/deletions in the genome.”
 - Developed C software to estimate rate of insertions and deletions in genomes.
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TEACHING

- ◆ **Upenn CIS552: Advanced Programming** – Teaching Assistant
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WORKSHOPS & CONFERENCES

- ◆ **POPL**: Principles Of Programming Languages - 2017
 - ◆ **PLMW**: Programming Languages Mentoring Workshop (POPL) – 2017
 - ◆ **CPA**: Communicating Process Architectures, Review Panel - 2015
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◆ ACTIVITIES & LEADERSHIP

- ◆ **ProcessJ**: A java like language for process-oriented programming: <https://processj.cs.unlv.edu/>
 - ◆ Las Vegas Functional Programming Meetup Group
 - ◆ ACM UNLV Student Chapter President, Fall 2014 – Spring 2015
 - ◆ ACM UNLV Student Chapter Member: 9/2013 – 5/2016
 - ◆ ACM Southern California Regional Programming Competition: 2013, 2014
 - ◆ UNLV Differential Fee Committee Member 2015
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SKILLS

Programming (In order of familiarity): C, Python, Haskell, Java, Cuda, Bash
Spanish (fluent): Speak, Read, Write
