

Cristina (Crista) Videira Lopes

Chancellor's Professor of Software Engineering
Bren School of Information and Computer Sciences
University of California, Irvine
Irvine, CA 92697-3440
(714) 809-0819

Emails: lopes@uci.edu / crista@tagide.com / cristavlopes@gmail.com

Websites: <http://www.ics.uci.edu/~lopes>, <http://tagide.com>

Education

PhD, Northeastern University, USA. 1998.

Computer Science

Dissertation Title: D – A Language Framework for Distributed Programming

Advisors: Lieberherr, K., Kiczales, G.

MS, Instituto Superior Técnico, Portugal. 1992.

Major: Electrical and Computer Engineering

Dissertation Title: Support for distribution in an object-oriented system

Advisor: Alves Marques, J.

Licenciatura, Instituto Superior Técnico, Portugal. 1989.

Major: Electrical and Computer Engineering

Professional Positions

Director, Master of Software Engineering Program, (July 1, 2018 – present)

Director, Institute for Software Research, (July 1, 2017 – June 30, 2018).

Associate Director, Institute for Software Research, (April 2016 - June 30, 2017).

Professor, Informatics (Software Engineering), UC Irvine (2012 – present).

Associate Professor, Informatics (Software Engineering), UC Irvine (2006-2012).

Assistant Professor, Informatics (Software Engineering), UC Irvine (2002-2006).

Member of the Research Staff, Computer Science Laboratory, Xerox Palo Alto Research Center.
(1999 - 2002).

Member of the Research Staff, Systems and Practice Laboratory, Xerox Palo Alto Research
Center. (1998 - 1999).

Research Assistant, College of Computer Science, Northeastern University. (1995 - 1997).

Visiting Scientist, Systems and Practice Laboratory, Xerox Palo Alto Research Center. (1995 -
1997).

Teaching Assistant, Departamento de Engenharia Electrotécnica e de Computadores, Instituto Superior Técnico. (1990 - 1992).

Research Assistant, Instituto de Engenharia de Sistemas e Computadores (INESC). (1989 - 1992).

Awards and Honors

Chancellor's Professor (2021). University of California, Irvine. This title is designed for persons who have earned the title of Professor and who have demonstrated unusual academic merit and whose continued promise for scholarly achievement is unusually high.

Special Recognition by ACM SIGSOFT and IEEE Computer Society TCSE (2020) for outstanding contributions to the Software Engineering community as Virtualization Chair of the 42nd International Conference on Software Engineering (ICSE 2020).

IEEE Fellow (2019). IEEE Fellow is a distinction reserved for select IEEE members whose extraordinary accomplishments in any of the IEEE fields of interest are deemed fitting of this prestigious grade elevation.

Dean's Honoree for Teaching Excellence (2018). Bren School of ICS, University of California, Irvine.

Test of Time Award (2017). Association Internationale pour les Technologies Objets (AITO). AITO established an annual Test of Time Award to recognize a research contribution that had a lasting impact on the field. The award is given by AITO at the ECOOP conference to the authors of an ECOOP paper published 20 years earlier.

Pizzigati Prize for Software in the Public Interest (2016). Tides Foundation. The Antonio Pizzigati Prize for Software in the Public Interest annually awards a \$10,000 cash grant to one individual who has created or led an effort to create an open source software product of significant value to the nonprofit sector and movements for social change.

ACM Distinguished Scientist (2011).

IEEE Senior Member (2010).

Distinguished Alumni Award, Northeastern University. (2004).

National Science Foundation Early Career Award. (2004).

Chancellor's Award for Excellence in Undergraduate Research. University of California, Irvine, (2004).

XEROX Achievement Award (2000).

Fulbright Scholar (1992—1997).

Portuguese Foundation for Science and Technology Fellowship. (1992—1997).

Editorial and Advisory Boards

The Art, Science, and Engineering of Programming, Founder and Editor in Chief. Diamond open access, independent, free-of-charge journal for programming research. (December 2016 - Present).

Proceedings of the ACM in Programming Languages (PACM PL). Led the creation of this journal and member of Advisory Board. (2015 - Present).

ENTREPRENEURSHIP

Companies

Clowdr CIC, UK. Co-Founder and Non-Executive Director (November 2020 – present).
Co-founders: Jonathan Bell, Benjamin Pierce, Ed Nutting, Ross Gardiner. Virtual and hybrid conferencing in a SaaS model. The services provided by Clowdr CIC are directly derived from the virtual conference platform prototype developed under one of my NSF grants.

Quinta das Queimas, Unipessoal Lda, Portugal. Founder and Director (October 2017 – present). Attempt at keeping the centennial family vineyards and winery up and running. (Unrelated to Computer Science)

Encitra, USA. Co-Founder and Technology Advisor (May 2008 – May 2018). Co-founders: Christer Lindstrom and Ron Swenson. 3D immersive urban planning services. The services provided by Encitra build on top of the OpenSimulator platform. Still in operation as of 2022.

Metaverse Ink, USA. Co-founder and Technology advisor (November 2007—2009).
Co-founders: William Cook and Jeff Greenberg. Search engine for 3D virtual worlds.

Consulting

Litigation/Expert Witness, several Law Firms, Irvine, CA. (September 2004 - present).

Encitra Inc. (2009 - 2018).

RESEARCH

Publications

Books Authored

- B.2 **Lopes, C. V.** (2020). *Exercises in Programming Style* 2nd Edition. (pp. 336). Boca Raton, FL, USA: CRC Press. ISBN 9780367350208.

- B.1 **Lopes, C. V.** (2014). *Exercises in Programming Style*. (pp. 304). Boca Raton, FL, USA: Chapman and Hall/CRC Press. ISBN 1482227371. Korean version also available.

Book Chapters, Peer-Reviewed

- BC.8 Saini, V., Farmahinifarahani, F., Sajnani, H., **Lopes, C.V.** (2021) OreO: Scaling Clone Detection Beyond Near-Miss Clones. In *Code Clone Analysis*. Inaoue, K and Roy, C. (Eds.) Springer. ISBN 978-981-16-1927-4
Reprint of C.95
- BC.7 Sajnani, H, Saini, V., Roy, C., **Lopes, C. V.** (2021) SourcererCC: Scalable and Accurate Clone Detection. In *Code Clone Analysis*. Inaoue, K and Roy, C. (Eds.) Springer. ISBN 978-981-16-1927-4
Reprint of C.105
- BC.6 Debeauvais, T., Valadares, A., **Lopes, C. V.** (2015). RESTful Client-Server Architecture: A Scalable Architecture for Massively Multiuser Online Environments. In Cooper, K., Scacchi, W. (Eds.) *Computer Games and Software Engineering*. Chapman & Hall / CRC Press.
Equal contributor. Co-authors are students under my supervision.
- BC.5 Ossher, J., **Lopes, C. V.** (2013). Applying Program Analysis to Code Retrieval (Ch. 11). In Sim, S., Gallardo-Valencia, R. (Eds.) *Finding Source Code on the Web for Remix and Reuse* (pp. 205-225). New York: Springer. doi: 10.1007/978-1-4614-6596-6_11.
Equal contributor. Co-author was student under my supervision.
- BC.4 Javanmardi, S., McDonald, D., Caruana, R., Forouzan, S., **Lopes, C. V.** (2013). Learning to Detect Vandalism in Social Content Systems: A Study on Wikipedia. In Ozyer, T., Erdam, Z., Rokne, J., Khoury, S. (Eds.) *Mining Social Networks and Security Informatics* (pp. 203-225). Springer. doi: 10.1007/978-94-007-6359-3_11.
Equal contributor. First author was student under my supervision.
- BC.3 Javanmardi, S., **Lopes, C. V.** (2011). Trust in Online Collaborative IS. In Pardede, E. (Ed.) *Community-Built Databases: Research and Development* (pp. 341-370). Springer.
Equal contributor. First author was student under my supervision.
- BC.2 Jurdak, R., **Lopes, C. V.**, Baldi, P. (2006). Battery Lifetime Estimation and Optimization for Underwater Sensor Networks. *Sensor Network Operations* (pp. 397-420). IEEE Press.
Advisor, equal contributor
- BC.1 **Lopes, C. V.** (2004). AOP: A Historical Perspective (What's in a Name?). *Aspect-Oriented Software Development*. Addison-Wesley. ISBN 0321219767.

Conference/Workshop/Symposium Proceedings, Peer-Reviewed

- C.114 Klotzman, V., Farmahinifarahani, F., **Lopes, C.V.** (2021) Public software development activity during the pandemic. In Proceedings of 15th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM). October 2021.

- C.113 Farmahinifarahani, F., Lu, Y., Saini, V., Baldi, P., **Lopes, C.V.** (2021) D-REX: Static Detection of Relevant Runtime Exceptions with Location Aware Transformer. In Proceedings of IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM'21). September 2021.
- C.112 Shmakov, A., Lanier, J., McAleer, S., Achar, R., **Lopes, C.V.** and Baldi, P. (2020). ColosseumRL: A Framework for Multiagent Reinforcement Learning in N-Player Games. In Proceedings of Challenges and Opportunities for Multi-Agent Reinforcement Learning (COMARL AAAI).
- C.111 Shen, W., Achar, R. and **Lopes, C.V.** (2019). A simulation analysis of large contests with thresholding agents. In *Winter Simulation Conference (WSC)* Gaylord National Resort & Conference Center National Harbor, Maryland, December 8-11, 2019. doi: 10.1109/WSC40007.2019.9004668
- C.110 Achar, R., Dawn, P. and **Lopes, C.V.** (2019). GoTcha: an interactive debugger for GoT-based distributed systems. In Proceedings of the 2019 ACM SIGPLAN International Symposium on New Ideas, New Paradigms, and Reflections on Programming and Software (Onward!). doi: 10.1145/3359591.3359733
- C.109 Saini, V., Farmahinifarahani, F., Lu, Y., Yang, D., Martins, P., Sajjani, H., Baldi, P., **Lopes, C.V.** (2019). Towards Automating Precision Studies of Clone Detectors. In *IEEE/ACM International Conference on Software Engineering (ICSE)*. **Distinguished Artifact Award**.
- C.108 Zhang, T., Yang, D., **Lopes, C.V.**, Kim M. (2019). Analyzing and Supporting Adaptation of Online Code Examples. In *IEEE/ACM International Conference on Software Engineering (ICSE)*.
- C.107 Shen, W., Feng, Y., **Lopes, C.V.** (2019). Multi-Winner Contests for Strategic Diffusion in Social Networks. In *33rd AAAI Conference on Artificial Intelligence*, Jan 27-Feb 1, 2019, Honolulu.
- C.106 Shen, W., Achar, R., **Lopes, C.V.** (2018) Toward Understanding the Impact of User Participation in Autonomous Ridesharing Systems. In *Winter Simulation Conference (WSC)*, Gothenburg, Sweden, 2018, pp. 845-856. doi: 10.1109/WSC.2018.8632454
- C.105 Saini, V., Farmahinifarahani, F., Lu, Y., Baldi, P., **Lopes, C.V.** (2018). Oreo: detection of clones in the twilight zone. In *Proceedings of the 2018 26th ACM Joint Meeting on European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2018)*. ACM, New York, NY, USA, 354-365. DOI: <https://doi.org/10.1145/3236024.3236026>
Distinguished Paper Award
- C.104 Shen, W., Crandall, J.W., Yan, K., **Lopes, C.V.** (2018) Information Design in Crowdfunding under Thresholding Policies. In *Proceedings of the 17th International Conference on Autonomous Agents and MultiAgent Systems (AAMAS '18)*. International Foundation for Autonomous Agents and Multiagent Systems, Richland, SC, 632-640.
- C.103 Martins, P., Achar R., **Lopes, C.V.** (2018) 50K-C: A Dataset of Compilable, and Compiled, Java Projects. In *IEEE/ACM 15th International Conference on Mining Software Repositories (MSR)*, Gothenburg, 2018, pp. 1-5.
- C.102 Suzuki, M., de Paula, A.C., Guerra, E., **Lopes, C.V.**, Lemos, O.A.L. (2017). An exploratory study of functional redundancy in code repositories. In *IEEE 17th International Working Conference on Source Code Analysis and Manipulation* (pp. 31-40).
- C.101 Yang, D., Martins, P., Saini, V., **Lopes, C. V.** (2017). Stack Overflow in Github: Any Snippets There? [Conference]. (pp. 280-190). 14th International Conference on Mining Software Repositories, May 20, 2017 - May 28, 2017, Buenos Aires, Argentina. IEEE Press. doi:

<https://doi.org/10.1109/MSR.2017.13>. (Top research conference).
Advisor

- C.100 Valadares, A., **Lopes, C. V.**, Achar, R., Bowman, M. (2016). CADIS: aspect-oriented architecture for collaborative modeling and simulation [Conference]. (pp. 1024-1035). Winter Simulation Conference (WinterSim), December 11, 2016 - December 14, 2016, Arlington, Virginia. IEEE Press. doi: <https://doi.org/10.1109/WSC.2016.7822162>.

Advisor, equal contributor

- C.99 Saini, V., Sajnani, H., **Lopes, C. V.** (2016). Comparing Quality Metrics for Cloned and Non Cloned Java Methods: A Large Scale Empirical Study [Conference]. (pp. 256-266). IEEE International Conference on Software Maintenance and Evolution (ICSME), October 2, 2016 - October 7, 2016, Raleigh, NC, USA. IEEE. doi: <https://doi.org/10.1109/ICSME.2016.94>.

Advisor

- C.98 de Paula, A., Guerra, E., **Lopes, C. V.**, Sajnani, H., Lemos, O. (2016). An Exploratory Study of Interface Redundancy in Code Repositories [Conference]. In, *IEEE 16th International Working Conference on Source Code Analysis and Manipulation* (pp. 107-116). IEEE 16th International Working Conference on Source Code Analysis and Manipulation, October 2, 2016 - October 3, 2016, Raleigh, NC, U.S.A. IEEE. doi: 10.1109/SCAM.2016.31.

Advisor

- C.97 D'Souza, A., Yang, D., **Lopes, C. V.** (2016). Collective Intelligence for Smarter API Recommendations in Python [Conference]. In, *IEEE 16th International Working Conference on Source Code Analysis and Manipulation* (pp. 51-60). IEEE 16th International Working Conference on Source Code Analysis and Manipulation, October 2, 2016 - October 3, 2016, Raleigh, NC, U.S.A. IEEE. doi: 10.1109/SCAM.2016.22.

Advisor

- C.96 Yang, D., Hussain, A., **Lopes, C. V.** (2016). From Query to Usable Code: An Analysis of Stack Overflow Code Snippets [Conference]. 13th International Conference on Mining Software Repositories, May 2016, Austin, Texas. IEEE.

- C.95 Sajnani, H., Saini, V., Svajlenko, J., Roy, C., **Lopes, C. V.** (2016). SourcererCC: Scaling Code Clone Detection to Big Code [Conference]. International Conference on Software Engineering, May 2016, Austin, Texas. ACM.

Main advisor

- C.93 Shen, W., **Lopes, C. V.** (2015). Managing Autonomous Mobility on Demand Systems for Better Passenger Experience [Conference]. 18th Conference on Principles and Practice of Multi-Agent Systems (PRIMA 2015).

Secondary contributor.

- C.92 **Lopes, C. V.**, Ossher, J. (2015). How Scale Affects Structure in Java Programs [Conference]. (pp. 675--694). ACM Conference on Object-Oriented Programming, Systems, Languages and Applications (OOPSLA 2015). ACM. (Top research conference).

Primary contributor and author.

- C.91 Lemos, O. L., Paula, A. C., Sajnani, H., **Lopes, C. V.** (2015). Can the use of types and query

expansion help improve large-scale code search? [Conference]. (pp. 41--50). IEEE 15th International Working Conference on Source Code Analysis and Manipulation (SCAM), September 2015. IEEE.

Secondary contributor

- C.90 Valadares, A., **Lopes, C. V.**, Liu, H. (2014). Enabling Fine-grained Load Balancing for Virtual Worlds with Distributed Simulation Engines [Conference]. In, *Proceedings of the 2014 Winter Simulation Conference* (pp. 12 pages). Winter Simulation Conference. USA: Winter Simulation Conference Foundation.
- Equal contributor. First author is student under my supervision.
- C.89 Valadares, A., **Lopes, C. V.** (2014). A Framework for Designing and Evaluating Distributed Real-Time Applications [Symposium]. In, *Proceedings of the 18th IEEE/ACM International Symposium on Distributed Simulation and Real Time Applications* (pp. 10 pages). IEEE/ACM International Symposium on Distributed Simulation and Real Time Applications. USA: IEEE.
- Equal contributor. First author is student under my supervision.
- C.88 Sajnani, H., Saini, V., **Lopes, C. V.** (2014). A Comparative Study of Bug Patterns in Java Cloned and Non-cloned Code [Conference]. In, *Proceedings of the 2014 14th International Working Conference on Source Code Analysis and Manipulation* (pp. 10 pages). IEEE International Working Conference on Source Code Analysis and Manipulation. USA: IEEE. (25% acceptance rate).
- Equal contributor. Co-authors are students under my supervision.
- C.87 Sajnani, H., Saini, V., Ossher, J., **Lopes, C. V.** (2014). Is Popularity a Measure of Quality? An Analysis of Maven Components [Conference]. In, *Proceedings of the 2014 30th International Conference on Software Maintenance and Evolution* (pp. 10 pages). International Conference on Software Maintenance and Evolution (ICSME). USA: IEEE. (25% acceptance rate).
- Equal contributor. Co-authors are/were students under my supervision.
- C.86 Gabrielova, E., **Lopes, C. V.** (2014). Impact of Event Filtering on OpenSimulator Server Performance [Conference]. In, *Proceedings of the 2014 Summer Simulation Multi-Conference*. Summer Simulation Multi-Conference (SummerSim). USA: The Society for Modeling & Simulation International.
- Main contributor. Co-author is student under my supervision who helped run the experiments.
- C.85 Saini, V., Sajnani, H., Ossher, J., **Lopes, C. V.** (2014). A dataset for maven artifacts and bug patterns found in them [Conference]. In, *Proceedings of the 11th Working Conference on Mining Software Repositories* (pp. 416-419). Working Conference on Mining Software Repositories (MSR). USA: ACM. 978-1-4503-2863-0. doi: 10.1145/2597073.2597087. (Data Challenge paper).
- Equal contributor. Co-authors are/were students under my supervision.
- C.84 Lemos, O., Paula, A., Zanichelli, F., **Lopes, C. V.** (2014). Thesaurus-based automatic query expansion for interface-driven code search [Conference]. In, *Proceedings of the 11th Working Conference on Mining Software Repositories* (pp. 212-221). Working Conference on Mining Software Repositories (MSR). USA: ACM. 978-1-4503-2863-0. doi: 10.1145/2597073.2597087.
- Equal contributor. First author is long-time collaborator and regular visiting scholar.
- C.83 Khademi, M., Hondori, H., McKenzie, A., Dodakian, L., **Lopes, C. V.**, Cramer, S. C. (2014). Comparing direct and indirect interaction in stroke rehabilitation [Conference]. In, *CHI'14 Extended Abstracts on Human Factors in Computing Systems* (pp. 1639-1644). Human Factors in Computing Systems (CHI). USA: ACM. 978-1-4503-2474-8. doi: 10.1145/2559206.2581192. (Works-in-progress)

session).

Equal contributor. First author is student under my supervision, others are collaborators from the Medical School.

- C.82 Khademi, M., Hondori, H., McKenzie, A., Dodakian, L., **Lopes, C. V.**, Cramer, S. C. (2014). Free-hand interaction with leap motion controller for stroke rehabilitation [Conference]. In, *CHI'14 Extended Abstracts on Human Factors in Computing Systems* (pp. 1663-1668). Human Factors in Computing Systems (CHI). USA: ACM. 978-1-4503-2474-8. doi: 10.1145/2559206.2581192. (Works-in-progress session).
- Minor contributor. First author is student under my supervision, others are collaborators from the Medical School.
- C.81 Debeauvais, T., **Lopes, C. V.**, Yee, N., Ducheneaut, N. (2014). Retention and progression: Seven months in World of Warcraft [Conference]. In, *Proceedings of the 9th International Conference on the Foundations of Digital Games* (pp. 8 pages). International Conference on the Foundations of Digital Games. (Selected as "Exemplary Full Paper" (20%)).
- Minor contributor
- C.80 Sajnani, H., **Lopes, C. V.** (2014). Probabilistic component identification [Conference]. In, *Proceedings of the 7th India Software Engineering Conference* (pp. 119--123). India Software Engineering Conference. USA: ACM. 978-1-4503-2776-3. doi: 10.1145/2590748.2590757. (22% acceptance rate).
- Equal contributor. Co-author is student under my supervision.
- C.79 Khademi, M., Hondori, H., Dodakian, L., Cramer, S. C., **Lopes, C. V.** (2013). An assistive tabletop keyboard for stroke rehabilitation [Conference]. In, *Proceedings of the 2013 ACM international conference on Interactive tabletops and surfaces* (pp. 337-340). ACM international conference on Interactive tabletops and surfaces. USA: ACM. 978-1-4503-2271-3. doi: 10.1145/2512349.2512394. (29% acceptance rate).
- Minor contributor. First author is student under my supervision.
- C.78 Lemos, O., Paula, A., Konishi, G., Ossher, J., Bajracharya, S., **Lopes, C. V.** (2013). Using thesaurus-based tag clouds to improve test-driven code search [Symposium]. In, *Proceedings of the 2013 VII Brazilian Symposium on Software Components, Architectures and Reuse* (pp. 99-108). Brazilian Symposium on Software Components, Architectures and Reuse (SBCARS). USA: IEEE. doi: 10.1109/SBCARS.2013.21.
- Equal contributor. First author is long-time collaborator and regular visiting scholar.
- C.77 Khademi, M., Hondori, H., Dodakian, L., Cramer, S. C., **Lopes, C. V.** (2013). Comparing "pick and place" task in spatial Augmented Reality versus non-immersive Virtual Reality for rehabilitation setting [Conference]. In, *Proceedings of the 2013 IEEE EMBS Conference on Biomedical Engineering and Sciences* (pp. 4613-4616). IEEE EMBS Conference on Biomedical Engineering and Sciences (IECBES). USA: IEEE. doi: 10.1109/EMBC.2013.6610575. 24110762.
- Equal contributor. First author is student under my supervision, others are collaborators from the Medical School.
- C.76 Sajnani, H., **Lopes, C. V.** (2013). A parallel and efficient approach to large scale clone detection [Workshop]. In, *Proceedings of the 2013 7th International Workshop on Software Clones* (pp. 46-52). International Workshop on Software Clones (IWSC). USA: IEEE. doi: 10.1109/IWSC.2013.6613042. (Research Workshop).

Equal contributor. Co-author is student under my supervision.

- C.75 Hondori, H., Khademi, M., Dodakian, L., Cramer, S., **Lopes, C. V.** (2013). A spatial augmented reality rehab system for post-stroke hand rehabilitation [Conference]. In, *Studies in Health Technology and Informatics* (Vol. 184, pp. 279-285). Medicine Meets Virtual Reality (MMVR). IOS Press. 23400171.

Equal contributor. Second author is student under my supervision, others are collaborators from the Medical School.

- C.74 Djorgovski, G., Hut, P., Knop, R., Longo, G., McMillan, S., Vesperini, E., Donalek, C., Graham, M., Mahabal, A., Sauer, F. et al. (2013). The MICA Experiment: Astrophysics in Virtual Worlds [Conference]. In, *SLACTIONS 2012 International Research Conference on Virtual Worlds* (pp. 50-57). International Research Conference on Virtual Worlds. Portugal: UTAD. 978-989-704-102-0.

Minor contributor

- C.73 Khademi, M., Handori, H., **Lopes, C. V.**, Dodakian, L., Cramer, S. C. (2012). Haptic augmented reality to monitor human arm's stiffness in rehabilitation [Conference]. In, *Proceedings of the 2012 IEEE EMBS Conference on Biomedical Engineering and Sciences* (pp. 892-895). IEEE EMBS Conference on Biomedical Engineering and Sciences (IECBES). USA: IEEE.

Minor contributor

- C.72 Hondori, H., Khademi, M., **Lopes, C. V.** (2012). Use of a Portable Device for Measuring Arm's Planar Mechanical Impedance during Motion [Conference]. In, *Proceedings of the 2012 IEEE EMBS Conference on Biomedical Engineering and Sciences* (pp. 908-983). IEEE EMBS Conference on Biomedical Engineering and Sciences (IECBES). USA: IEEE.

Minor contributor

- C.71 Hondori, H., Khademi, M., **Lopes, C. V.** (2012). Monitoring intake gestures using sensor fusion (microsoft kinect and inertial sensors) for smart home tele-rehab setting [Conference]. 1st Annual IEEE Healthcare Innovation Conference. IEEE.

Minor contributor

- C.70 Ossher, J., Sajjani, H., **Lopes, C. V.** (2012). Astra: Bottom-up Construction of Structured Artifact Repositories [Conference]. In, *Proceedings of the 2012 19th Working Conference on Reverse Engineering* (pp. 41-50). Working Conference on Reverse Engineering (WCRE). USA: IEEE. 1095-1350. doi: 10.1109/WCRE.2012.14. (33% acceptance rate).

Equal contributor. Co-authors are/were students under my supervision.

- C.69 Valadares, A., Debeauvais, T., **Lopes, C. V.** (2012). Evolution of scalability with synchronized state in virtual environments [Workshop]. In, *Proceedings of the 2012 IEEE International Workshop on Haptic Audio Visual Environments and Games* (pp. 142-147). IEEE International Workshop on Haptic Audio Visual Environments and Games (HAVE). USA: IEEE. 978-1-4673-1568-5. doi: 10.1109/HAVE.2012.6374453. (Research Workshop).

Equal contributor. Co-authors are students under my supervision.

- C.68 Valadares, A., Debeauvais, T., **Lopes, C. V.** (2012). Restful massively multi-user virtual environments: A feasibility study [Conference]. In, *Proceedings of the IEEE International Games Innovation Conference (IGIC)* (pp. 1-4). IEEE International Games Innovation Conference (IGIC). USA: IEEE.

Equal contributor. Co-authors are students under my supervision.

- C.67 Martie, L., Palepu, V., Sajnani, H., **Lopes, C. V.** (2012). Trendy bugs: Topic trends in the Android bug reports [Conference]. In, *Proceedings of the 2012 9th IEEE Working Conference on Mining Software Repositories (MSR)* (pp. 120-123). Mining Software Repositories (MSR). USA: IEEE. 2160-1852. doi: 10.1109/MSR.2012.6224268. (Data Challenge short paper).

Equal contributor. Co-authors were students in one of my graduate courses. This work resulted from a course project.

- C.66 Debeauvais, T., Nardi, B. A., **Lopes, C. V.**, Yee, N., Ducheneaut, N. (2012). 10,000 Gold for 20 Dollars: An exploratory study of World of Warcraft gold buyers [Conference]. In, *Proceedings of the International Conference on the Foundations of Digital Games* (pp. 105--112). International Conference on the Foundations of Digital Games. USA: ACM. doi: 10.1145/2282338.2282361. (29% acceptance rate).

Minor contributor

- C.65 Sajnani, H., Naik, R., **Lopes, C. V.** (2012). Easing software evolution: change-data and domain-driven approach [Conference]. In, *Proceedings of the 5th India Software Engineering Conference* (pp. 119--123). India Software Engineering Conference. USA: ACM. (24% acceptance rate).

Equal contributor. First author is student under my supervision.

- C.64 Philip, K., Umarji, M., Agarwala, M., Sim, S., Gallardo-Valencia, R., **Lopes, C. V.**, Ratanotayanon, S. (2012). Software reuse through methodical component reuse and amethodical snippet remixing [Conference]. In, *Proceedings of the ACM 2012 conference on Computer Supported Cooperative Work* (pp. 1361--1370). Computer Supported Cooperative Work (CSCW). USA: ACM. doi: 10.1145/2145204.2145407.

Equal contributor for the concept, minor contributor for the study methodology and implementation.

- C.63 Valadares, A., Debeauvais, T., **Lopes, C. V.** (2011). RCAT: a RESTful Client-scalable ArchiTecture [Workshop]. In, *NetGames* (pp. 1-2). International Workshop on Network and Systems Support for Games. IEEE. 978-1-4577-1933-2. doi: <http://dx.doi.org/10.1109/NetGames.2011.6080987>. (Research workshop.)

Equal contributor. Co-authors are students under my supervision.

- C.62 Sajnani, H., Naik, R., **Lopes, C. V.** (2011). Application Architecture Discovery: Towards Domain-driven, Easily Extensible Code Structure [Conference]. In, *18th Working Conference on Reverse Engineering* (pp. 401-405). Working Conference on Reverse Engineering. IEEE. 978-1-4577-1948-6. (Research conference).

Equal contributor. First author is student under my supervision.

- C.61 Javanmardi, S., McDonald, D., **Lopes, C. V.** (2011). Vandalism Detection in Wikipedia: A High-Performing, Feature-Rich Model and its Reduction through Lasso [Symposium]. In, *Proceedings of the 7th International Symposium on Wikis and Open Collaboration (WikiSym)*. (Research conference).

Equal contributor

- C.60 Ossher, J., Sajnani, H., **Lopes, C. V.** (2011). File Cloning in Open Source Java Projects: The Good, The Bad, and The Ugly [Conference]. In, *Proceedings of the 27th IEEE International Conference on Software Maintenance*. (22%).

Advisor, equal contributor

- C.59 Ganjisaffar, Y., Debeauvais, T., Javanmardi, S., Caruana, R., **Lopes, C. V.** (2011). Distributed Tuning of Machine Learning Algorithms using MapReduce Clusters [Workshop]. In, *Proceedings of KDD 2011 Workshop on Large-Scale Data Mining*. (Research workshop).

Advisor, secondary contributor

- C.58 Sajnani, H., Javanmardi, S., McDonald, D., **Lopes, C. V.** (2011). Multi-Label Classification of Short Text: A Study on Wikipedia Barnstars [Workshop]. In, *Proceedings of AAAI-11 Workshop on Analyzing Microtext*. (Research workshop).

Advisor, equal contributor

- C.57 Ganjisaffar, Y., Caruana, R., **Lopes, C. V.** (2011). Bagging Gradient-Boosted Trees for High Precision, Low Variance Ranking Models [Conference]. In, *Proceedings of the 34th Annual ACM SIGIR Conference*. (20%).

Advisor, equal contributor

- C.56 Ganjisaffar, Y., Zilio, A., Javanmardi, S., Cetindil, I., Sikka, M., Katumalla, S., Khatib, N., Li, C., **Lopes, C. V.** (2011). qSpell: Spelling Correction of Web Search Queries using Ranking Models and Iterative Correction [Workshop]. In, *Proceedings of Spelling Alteration for Web Search Workshop*. (Paper describing work for Microsoft's Speller Challenge (<http://www.spellerchallenge.com/>), team got 3rd place (100+ teams competing)).

Advisor, secondary contributor

- C.55 Valadares, A., **Lopes, C. V.** (2011). Virtually Centralized, Globally Dispersed: A Sametime 3D Analysis [Workshop]. In, *Proceedings of the Workshop on Location Awareness for Mixed and Dual Reality*. (Research workshop).

Advisor, equal contributor

- C.54 Bajracharya, S. K., Ossher, J., **Lopes, C. V.** (2010). Leveraging usage similarity for effective retrieval of examples in code repositories [Symposium]. In, *Proceedings of the 18th ACM SIGSOFT International Symposium on Foundations of Software Engineering*. (20%).

Advisor, equal contributor

- C.53 Javanmardi, S., **Lopes, C. V.** (2010). Statistical Measure of Quality in Wikipedia [Workshop]. In, *Proceedings of KDD'2010 Workshop on Social Media Analytics*. (Research workshop).

Advisor, equal contributor

- C.52 Javanmardi, S., Ganjisaffar, Y., Grant, S., **Lopes, C. V.** (2010). Statistical Measure of the Effectiveness of the Open Editing Model of Wikipedia [Conference]. In, *Proceedings of ICWSM Data Challenge*. (Research workshop).

Advisor, equal contributor

- C.51 Javanmardi, S., Ganjisaffar, Y., **Lopes, C. V.**, Baldi, P. (2010). Scientific Mashups: The Issue of Trust in the Aggregation of Web 2.0 Content [Conference]. WebScience 2010. (Research conference).

Advisor, equal contributor

- C.50 Javanmardi, S., Ganjisaffar, Y., **Lopes, C. V.**, Baldi, P. (2009). User Contribution and Trust in Wikipedia [Conference]. In, *Proceedings of the 5th International Conference on Collaborative*

computing: Networking, Applications and Worksharing. Washington DC, USA: (Research conference).

Advisor, equal contributor

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Advisor, equal contributor

- C.48 Lemos, O., Bajracharya, S., Ossher, J., Cesar Masiero, P., **Lopes, C. V.** (2009). Applying Test-Driven Code Search to the Reuse of Auxiliary Functionality [Symposium]. In, *Proceedings of the 24th Annual ACM Symposium on Applied Computing (SAC)* (pp. 476-482). (29%).

Advisor

- C.46 Henckel, A., **Lopes, C. V.** (2009). StellarSim: A Plugin Architecture for Scientific Visualizations in Virtual Worlds [Conference]. In, *Proceedings of 1st International Conference on Facets of Virtual Environments (FAVE)*. (Research conference).

Advisor, equal contributor

- C.45 Ganjisaffar, Y., Javanmardi, S., **Lopes, C. V.** (2009). Using User Reviews to Improve Search in Wikipedia [Workshop]. SIGIR 2009 Workshop on Search in Social Media. Boston, USA: (Research workshop).

Advisor, equal contributor

- C.44 Ganjisaffar, Y., Javanmardi, S., **Lopes, C. V.** (2009). Review-based Ranking of Wikipedia Articles [Conference]. In, *Proceedings of the International Conference on Computational Aspects of Social Networks, Fontainebleau (CASoN)*. France: (Research conference).

Advisor, equal contributor

- C.43 Bajracharya, S., Ossher, J., **Lopes, C. V.** (2009). Sourcerer: An internet-scale software repository [Workshop]. (pp. 1-4). ICSE Workshop on Search-Driven Development: Users, Infrastructure, Tools, and Evaluation (SUITE). USA: IEEE Computer Society. doi: 10.1109/SUITE.2009.5070010.

- C.42 Linstead, E., Hughes, L., Lopes, C., Baldi, P. (2009). Exploring Java Software Vocabulary: A Search and Mining Perspective [Workshop]. International Workshop on Search-Driven Development - Users, Interfaces, Tools, and Environments. Vancouver, BC:

- C.41 Bajracharya, S., **Lopes, C. V.** (2009). Mining Search Topics from a Code Search Engine Usage Log [Conference]. In, *Proceedings of the 6th IEEE International Working Conference on Mining Software Repositories (MSR)* (pp. 111-120). (29%, Best paper award).

Advisor, equal contributor

- C.40 Ossher, J., Bajracharya, S., Linstead, E., Baldi, P., **Lopes, C. V.** (2009). SourcererDB: An Aggregated Repository of Statically Analyzed and Cross-Linked Open Source Java projects [Conference]. In, *Proceedings of the 6th IEEE International Working Conference on Mining Software Repositories (MSR)* (pp. 183-186). (Short paper).

Advisor, equal contributor

- C.39 Linstead, E., **Lopes, C. V.**, Baldi, P. (2008). An Application of Latent Dirichlet Allocation to Analyzing Software Evolution [Conference]. In, *Proceedings of 7th International Conference on Machine Learning and Applications* (pp. 813-818). (Research conference).
Advisor, equal contributor
- C.38 Ganjissaffar, Y., Javanmardi, S., Grant, S., **Lopes, C. V.** (2008). CalSWIM: A Wiki-based Data Sharing Platform [Conference]. In, *Proceedings of the 4th International Conference on Collaborative Computing: Networking, Applications, and Worksharing (CollaborateCom)* (pp. 34-43). (Research conference).
Advisor, equal contributor
- C.37 Baldi, P., **Lopes, C. V.**, Linstead, E., Bajracharya, S. (2008). A Theory of Aspects as Latent Topics [Conference]. In, *Proceedings of the 23rd ACM SIGPLAN Conference on Object-Oriented Programming Systems, Languages and Applications (OOPSLA)* (pp. 543-562). (Top research conference, 33%).
Advisor, equal contributor
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- C.35 Ruengmee, W., Silva, R., Bajracharya, S., Redmiles, D., **Lopes, C. V.** (2008). XE (eXtreme Editor) - Bridging the Aspect-Oriented Programming Usability Gap [Conference]. 23rd IEEE/ACM International Conference on Automated Software Engineering (ASE). (12%).
Advisor, equal contributor
- C.34 **Lopes, C. V.**, Kan, L., Popov, A., Morla, R. (2008). PRT Simulation in an Immersive Virtual World [Conference]. In, *Proceedings of First International Conference on Simulation Tools and Techniques for Communications, Networks and Systems (SIMUTools)*. Marseilles, France: (Research conference).
Advisor, primary contributor
- C.33 Javanmardi, S., **Lopes, C. V.** (2007). Modeling Trust in Collaborative Information Systems [Conference]. In, *Proceedings of the 3rd International Conference on Collaborative Computing: Networking, Applications and Worksharing*. New York, USA: (Research conference).
Advisor, equal contributor
- C.32 Jurdak, R., Ruzzelli, A. G., O'Hare, G. M.P, **Lopes, C. V.** (2007). Reliable Symbol Synchronization in Acoustic Sensor Networks [Conference]. In, *Proceeding of IEEE GlobeCom*. Washington, D.C: (Research conference).
Advisor, equal contributor
- C.31 Jurdak, R., Ruzzelli, A. G., O'Hare, G. M.P, **Lopes, C. V.** (2007). Design Considerations for Deploying Underwater Sensor Networks [Workshop]. In, *Proceedings of IEEE Conference on Sensor Communication (SENSORCOMM)*. UNWAT Workshop. Valencia, Spain: (Research workshop).
Advisor, equal contributor
- C.30 Linstead, E., Rigor, P., Bajracharya, S., **Lopes, C. V.**, Baldi, P. (2007). Mining Internet-Scale

Software Repositories [Conference]. In Weiss, Y., Scholkopf, B., Platt, J. (Eds.). *Advances in Neural Information Processing Systems 20, NIPS 2007*. Cambridge, MA: MIT Press. (22%).

Equal contributor

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- Advisor, equal contributor
- C.28 Linstead, E., Rigor, P., Bajracharya, B., **Lopes, C. V.**, Baldi, P. (2007). Mining Concepts from Code with Probabilistic Topic Models [Conference]. In, *Proceedings of the 22nd IEEE/ACM International Conference on Automated Software Engineering, (ASE'07)*. Atlanta, GA: (11%).
- Advisor, equal contributor
- C.27 Jurdak, R., Aguiar, P., Baldi, P., **Lopes, C. V.** (2007). Software Modems for Underwater Sensor Networks [Conference]. In, *Proc. IEEE/OES Oceans'07*. Aberdeen, Scotland: (Research conference).
- Advisor, equal contributor
- C.26 Linstead, E., Rigor, P., Bajracharya, S., **Lopes, C. V.**, Baldi, P. (2007). Mining Eclipse Developer Contributions via Author-Topic Models [Workshop]. In, *Proceedings of MSR 2007: International Workshop on Mining Software Repositories*. Minneapolis, MN: (Winner, Mining Challenge Award).
- Advisor
- C.25 Lemos, O. A. L, Ferrari, F. C., Masiero, P. C., **Lopes, C. V.** (2006). Testing aspect-oriented programming Pointcut Descriptors [Workshop]. In, *Proceedings of the 2nd workshop on Testing aspect-oriented programs, in conjunction with the International Symposium on Software Testing and Analysis (ISSTA'06)*. Portland, Maine: (Research workshop).
- Advisor, equal contributor
- C.24 Jurdak, R., **Lopes, C. V.**, Baldi, P. (2006). Software Acoustic Modems for Short Range Mote-based Underwater Sensor Networks [Conference]. In, *Proceedings of the IEEE/OES Asian-Pacific OCEANS'06*. Singapore: (Research conference).
- Advisor, equal contributor
- C.23 Honório, L. M., Barbosa, D. A., **Lopes, C. V.** (2005). Análise e Desenvolvimento do Método Primal-Dual de Pontos Interiores Aplicado na Resolução do Problema de Fluxo de Potência usando Programação Orientada a Aspectos [Symposium]. II IEEE Latin-American Robotics Symposium (LARS'05) / VII Simpósio Brasileiro de Automação Inteligente(SBAI'05).
- C.22 Bajracharya, S., Ngo, T., **Lopes, C. V.** (2005). On Using Net Options Value as a Value Based Design Framework [Conference]. In, *Proc. of the Seventh International Workshop on Economics-Driven Software Engineering Research (EDSER'05)*. held in conjunction with the 27th International Conference on Software Engineering (ICSE'05).
- C.21 Jurdak, R., Baldi, P., Lopes, C. (2005). State-Driven Energy Optimization in Wireless Sensor Networks [Conference]. In, *Proceedings of the IEEE/IEE International Conference on Sensor Networks (SENET)*. Montreal, Canada:

- C.20 Lopes, C., Ngo, T. (2005). Unit-Testing Aspectual Behavior [Conference]. In, *Proc. of Workshop on Testing Aspect-Oriented Programs (WTAOP), held in conjunction with the 4th International Conference on Aspect-Oriented Software Development (AOSD'05)*.
- C.19 Lopes, C., Bajracharya, S. (2005). An Analysis of Modularity in Aspect-Oriented Design [Conference]. In, *Proc. 4th International Conference on Aspect-Oriented Software Development (AOSD'05)*. Chicago: (21%).
- C.18 Mandal, A., Lopes, C., Givargis, T., Haghghat, A., Jurdak, R., Baldi, P. (2005). Beep: 3D Indoor Positioning Using Audible Sound [Conference]. In, *Proc. IEEE Consumer Communications and Networking Conference (CCNC)*. Las Vegas: (34%).
- C.17 Haghghat, A., Lopes, C., Givargis, T., Mandal, A. (2004). Location-Aware Web System [Workshop]. In, *Proc. Workshop on Building Software for Pervasive Computing*. OOPSLA'04.
- C.16 Jurdak, R., Lopes, C., Baldi, P. (2004). A Framework for Modeling Sensor Networks [Workshop]. In, *Proc. Workshop on Building Software for Pervasive Computing*. OOPSLA'04.
- C.15 Jurdak, R., Lopes, C., Baldi, P. (2004). An Identification Scheme for Location Systems Using Robust Acoustic Signals [Conference]. ACS/IEEE International Conference on Pervasive Services (IPCS'2004).
- C.14 Lopes, C., Chadha, A. (2003). A 40bps Speech Coding Scheme [Conference]. IEEE Globecom. San Francisco, CA: (30%).
- C.13 Lopes, C., Dourish, P., Lorenz, D., Lieberherr, K. (2003). Beyond AOP: Toward Naturalistic Programming [Conference]. Onward! track of Conference on Object-Oriented Programming Systems, Languages and Applications (OOPSLA'03). Anaheim, CA: (15% Appears in ACM SIGPLAN Notices Volume 38, Number 12, December 2003).
- C.12 Domingues, N., Lacerda, J., Aguiar, P., Lopes, C. (2002). Aerial Communications Using Piano, Clarinet, and Bells [Workshop]. International Workshop on Multimedia Signal Processing. IEEE Signal Processing Society.
- C.11 Bellotti, V., Back, M., Edwards, K., Grinter, R., Henderson, A., Lopes, C. (2002). Making Sense of Sensing Systems: Five Questions for Designers and Researchers [Conference]. In, *Proc. Computer Human Interaction (CHI'2002)*. Minneapolis, Minnesota: ACM Press. (15%).

- C.10 Lopes, C., Aguiar, P. (2001). Aerial Acoustic Communications [Workshop]. In, *Proc. IEEE Workshop on Applications of Signal Processing in Audio and Acoustics (WASPPA'2001)*. New Paltz, NY: Mohonk House. IEEE Catalog N.01TH8575.
- C.9 (2000). Workshop on Aspects and Dimensions of Concern: Requirements on, and Challenge Problems For, Advanced Separation Of Concerns [Workshop]. In Tarr, P., D'Hondt, M., Bergmans, L., **Lopes, C. V.** (Eds.). *European Conference on Object-Oriented Programming (ECOOP'2000) Workshop Reader*. France: Springer-Verlag LNCS n. 1964.
- C.8 Lippert, M., **Lopes, C. V.** (2000). A Study on Exception Detection and Handling Using Aspect-Oriented Programming [Conference]. In, *Proc. of the 22nd International Conference of Software Engineering (ICSE'2000)*. IEEE Computer Society. Limerick, Ireland: (15%).
- C.7 **Lopes, C.**, Kiczales, G. (1998). Recent Developments in AspectJ [Conference]. In, *Proc. of Workshop on Aspect-Oriented Programming at the European Conference on Object-Oriented Programming (ECOOP'98)*. Belgium: Workshop Reader, Springer-Verlag LNCS n. 1543.
- C.6 Kiczales, G., Lamping, J., Mendhekar, A., Maeda, C., **Lopes, C.**, Loingtier, J. M., Irwin, J. (1997). Aspect-Oriented Programming [Conference]. In, *Proc. European Conference on Object-Oriented Programming (ECOOP'97)*. Finland: Springer-Verlag LNCS n.1241. (19%).
- C.5 Kiczales, G., Lamping, J., **Lopes, C.**, Maeda, C., Mendhekar, A., Murphy, G. (1997). Open Implementation Design Guidelines [Conference]. In, *Proc. 19th International Conference of Software Engineering (ICSE'97)*. ACM Press. (23%).
- C.4 Lopes, C. (1996). Adaptive Parameter Passing [Symposium]. In, *Proc. International Symposium on Object Technologies for Advanced Software (ISOTAS'96)*. Japan: Springer-Verlag LNCS n.1049. (25%).
- C.3 **Lopes, C. V.**, Lieberherr, K. (1996). AP/S++: Case-study of a MOP for purposes of software evolution [Conference]. In, *Proc. Reflection'96*. San Francisco, California:
- C.2 Lopes, C. (1995). Graph-Based Optimizations for Parameter Passing in Remote Invocations [Workshop]. In, *Proc. of the International Workshop on Object-Oriented Programming on Operating Systems (IWOOS'95)*. IEEE Computer Society.
- C.1 Lopes, C., Lieberherr, K. (1994). Abstracting Function-to-Process Relations in Concurrent Object-Oriented Applications [Conference]. In, *Proc. European Conference on Object-Oriented*

Programming (ECOOP'94). Springer-Verlag LNCS 821. (15%).

Journal Articles, Peer-Reviewed

- J.26 Zhou, R.J., Hondori, H., Khademi, M., Cassidy, J.M., Wu, K.M., Yang, D.Z., Kathuria, N., Erani, F.R., Dodakian, L., McKenzie, A., **Lopes, C.V.**, Scacchi, W., Srinivasan, R., Cramer, S.C. (2018). Predicting Gains With Visuospatial Training After Stroke Using an EEG Measure of Frontoparietal Circuit Function. In *Frontiers in Neurology* Vol 9:597. doi: 10.3389/fneur.2018.00597
Secondary contributor
- J.25 Saini, V., Sajnani, H., **Lopes, C. V.**. (2017) Cloned and Non-cloned Java Methods: A Comparative Study. Kosche, R. (Ed.). *Empirical Software Engineering*. Vol 23(4) pp 2232—2278. December 2017 Springer (IF: 3.275).
Co-authors are students under my supervision.
- J.24 **Lopes, C. V.**, Maj, P., Martins, P., Saini, V., Yang, D., Zitny, J., Sajnani, H., Vitek, J. DéjàVu: A Map of Code Duplicates on GitHub. (2017) Aldrich, J. (Ed.). *Proceedings of the ACM on Programming Languages (PACM PL), 1(OOPSLA)*, 84 pages. ACM. October 2017. doi: <http://doi.org/10.1145/3133908>. (Top journal in programming languages).
Distinguished Artifact Award.
Principal investigator and main author
- J.23 **Lopes, C. V.**, Achar, R., Valadares, A. (2017). Predicate Collection Classes. *Journal of Object Technology*, 16(2), 38. April 2017. AITO.
Main contributor
- J.22 Valadares, A., Gabrielova, E., **Lopes, C. V.** (2016). On Designing and Testing Distributed Virtual Environments. *Journal on Concurrency and Computation: Practice and Experience*, 28(12), 15 pages. USA: Wiley. doi: 10.1002/cpe.3803.
Equal contributor. Both co-authors are students under my supervision.
- J.21 Hondori, H., Khademi, M., Dodakian, L., McKenzie, A., **Lopes, C. V.**, Cramer, S. C. (2015). Choice of Human–Computer Interaction Mode in Stroke Rehabilitation. *Neurorehabilitation and neural repair*, 30(3), 258-265. SAGE. doi: 10.1177/1545968315593805. 26138411. (Epub before print).
Equal contributor on study design, and technical considerations. This paper reports on the study proposed and funded by the American Heart Association, in which I am the PI.
- J.20 Sajnani, H., Saini, V., **Lopes, C. V.** (2015). A Parallel and Efficient Approach to Large Scale Clone Detection. Kosche, R. (Ed.). *Journal of Software: Evolution and Processes*, 27(6), 402--429. USA: John Wiley and Sons. (IF: 1.32. Extended and greatly improved version of C.76).
Equal contributor. Co-authors are students under my supervision.
- J.19 Lemos, O., Paula, A., Konishi, G., Bajracharya, S., Ossher, J., **Lopes, C. V.** (2014). Thesaurus-Based Tag Clouds for Test-Driven Code Search. *Journal of Universal Computer Science*, 20(5), 772-796. J.UCS Consortium. (Extended and greatly improved version of C.78).
Equal contributor. First author is long-time collaborator and regular visiting scholar.

- J.18 Bajracharya, S. K., Ossher, J., **Lopes, C. V.** (2014). Sourcerer: An Infrastructure for the Large-Scale Collection and Analysis of Open-Source Code. *Science of Computer Programming*, 79(1), 241-259. Elsevier. (IF: 1.282).

Equal contributor. Co-authors are/were students under my supervision.

- J.17 **Lopes, C. V.**, Lindstrom, C. (2012). Virtual cities in urban planning: the uppsala case study. *Journal of Theoretical and Applied Electronic Commerce*, 7(3), 88-100. Chile: Universidad de Talca. 0718-1876. doi: 10.4067/S0718-18762012000300009.

Main contributor

- J.16 **Bajracharya, S., Lopes, C. V.** (2012). Analyzing and mining a code search engine usage log. *Journal of Empirical Software Engineering*, 17(4-5), 424-466. Springer. doi: 10.1007/s10664-010-9144-6. (Extended and greatly improved version of C.41. (Previously listed as J.12 for 2012 review)).

Equal contributor. Co-author was student under my supervision.

- J.15 Goodrich, M. T., Papamanthou, C., Nguyen, D., Tamassia, R., **Lopes, C. V.**, Ohrimenko, O., Triandopoulos, N. (2012). Efficient verification of web-content searching through authenticated web crawlers. *Proceedings of the VLDB Endowment*, 5(10), 920-931. USA: VLDB Endowment. doi: 10.14778/2336664.2336666.

Equal contributor on the concept, minor contributor on the technical details.

- J.14 Sim, S. E., Umarji, M., Ratanotayanon, S., **Lopes, C. V.** (2012). How Well do Internet Code Search Engines Support Code Retrieval on the Web? *ACM Transactions on Software Engineering and Methodology*, 21(1, Article 4), 1-30. New York, NY: doi: <http://dx.doi.org/10.1145/2063239.2063243>. (Top research journal IF: 3.8).

Equal contributor for the concept, minor contributor for the study methodology and implementation.

- J.13 Lemos, O. A. L., Bajracharya, S., Ossher, J., Masiero, P. C., **Lopes, C. V.** (2011). A Test-Driven Approach to Code Search and its Application to the Reuse of Auxiliary Functionality. *Information and Software Technology*, 53(4), 294-306. Butterworth-Heinemann. (IF: 1.507).

Advisor, equal contributor

- J.12 Bajracharya, S., **Lopes, C. V.** (2010). Analyzing and Mining a Code Search Engine Usage Log. *Empirical Software Engineering*, 1-43. Springer. 1382-3256. (IF: 1.776).

Advisor, equal contributor

- J.11 Javanmardi, S., **Lopes, C. V.**, Baldi, P. (2010). Modeling User Reputation in Wikipedia. *Journal of Statistical Analysis and Data Mining*, 3(2), 126-139. (Top research journal IF: 2.5).

Advisor, equal contributor

- J.10 Yozbatiran, N., Harness, E. T., Le, V., Luu, D., **Lopes, C. V.**, Cramer, S. (2010). A tele-assessment system for monitoring treatment effects in subjects with spinal cord injury. *Journal of Telemedicine and Telecare*, 16(3), 152-7. (IF: 1.274).

Advisor, equal contributor

- J.9 Linstead, E., Bajracharya, S., Ngo, T., Rigor, P., **Lopes, C. V.**, Baldi, P. (2009). Sourcerer: Mining

and Searching Internet-Scale Software Repositories. *Journal of Data Mining and Knowledge Discovery*, 18(2), 300-336. Springer. (IF: 1.238).

Advisor, equal contributor

- J.8 Jurdak, R., Ruzzelli, A. G., O'Hare, G. M. P, **Lopes, C. V.** (2008). Mote-based Underwater Sensor Networks: Opportunities, Challenges, and Guidelines. *Telecommunication Systems Journal*, 37(1-3), 37-47. Springer.

Equal contributor

- J.7 Honorio, L. M., **Lopes, C. V.** (2007). Intelligent Optimal Power Flow System Development Using Aspect-Oriented Modeling. *IEEE Transactions on Power Systems*, 22(4). (Top research journal IF: 3.432).

Equal contributor

- J.6 Jurdak, R., Baldi, P., **Lopes, C. V.** (2007). Adaptive Low Power Listening for Wireless Sensor Networks. *IEEE Transactions on Mobile Computing*, 6(8), 988 - 1004. 1536-1233. (Top research journal IF: 3.352).

Advisor, equal contributor

- J.5 **Lopes, C. V.**, Haghghat, A., Mandal, A., Givargis, T., Baldi, P. (2006). Localization of Off-the-shelf Mobile Devices Using Audible Sound: Architectures, Protocols and Performance Assessment. *ACM Mobile Computing and Communications Review (MC2R)*, 10(2), 38-50. (Top research journal).

Advisor, primary contributor

- J.4 **Lopes, C. V.**, Bajracharya, S. (2006). Assessing Aspect Modularizations Using Design Structure Matrix and Net Option Value. *Transactions on Aspect-Oriented Software Development I*, 3880, 1-35. Springer LNCS 3880. 3-540-32972-2. (Research journal).

Advisor, primary contributor

- J.3 Jurdak, R., Baldi, P. F., **Lopes, C. V.** (2005). U-MAC: A Proactive and Adaptive UWB Medium Access Control Protocol. *Wireless Communications and Mobile Computing Journal*, 5(5), 551-566. Wiley. (IF: 0.81).

Advisor, equal contributor

- J.2 Jurdak, R., **Lopes, C. V.**, Baldi, P. F. (2004). A Survey, Classification and Comparative Analysis of Medium Access Control Protocols for Ad Hoc Networks. *IEEE Communications Surveys and Tutorials*, 6(1). IEEE. (Top research journal, 2010 IF: 4.5).

Advisor, equal contributor

- J.1 Sousa, P., Sequeira, M., Ferreira, P., Zuquete, A., **Lopes, C. V.**, Pereira, J., Guedes, P., Marques, J. A. (1993). Distribution and Persistence in the IK Platform: Overview and Evaluation. *Usenix Computing Systems Journal*, 6(4). Usenix.

Conference/Workshop/Symposium Proceedings, Other

- C.94 **Lopes, C. V.** (2016). Simulating Cities: A Software Engineering Perspective [Symposium]. In Thiemann, P. (Ed.), *Programming Languages and Systems* (pp. 1--14). 25th European Symposium on Programming, ESOP 2016, Held as Part of the European Joint Conferences on Theory and

Practice of Software, ETAPS 2016, Eindhoven, The Netherlands, April 2-8, 2016, April 2016, Eindhoven, NL. Springer. (Invited paper).

- C.47 **Lopes, C. V.** (2009). The Massification of Systems Modeling and Simulation with Virtual Worlds [Conference]. In, *Proceedings of 7th joint meeting of the European Software Engineering Conference (ESEC) and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE)*. (Invited paper, 22%).

Abstracts Published

- A.13 Cramer, S.C, Zhou, R., Ingemanson, M., Choi,J.J., Wu, K.M., Kaur, A., Erani, F., Yang, D.Z., Khaturi, N., Cassidy, J.M., Scacchi, W., Dodakian, L., McKenzie, A., Lopes, C.V. (2017). Targeted Training of a Motor-parietal Circuit Improves Its Behavioral Output. In International Stroke Conference.

- A.12 Cramer, S. C., **Lopes, C. V.** et al. (2017). Targeted Training of a Motor-parietal Circuit Improves Its Behavioral Output [Abstract]. *Stroke*, 48(Suppl 1). American Heart Association, Inc. 0039-2499. http://stroke.ahajournals.org/content/48/Suppl_1/A11.

Main advisor on technology/programming aspects of the work

- A.11 Sajnani, H., Saini, V., Kim, J., Lopes, C. V. (2016). SourcererCC and SourcererCC-I: tools to detect clones in batch mode and during software development [Abstract]. ACM.

- A.10 Valadares, A., **Lopes, C. V.** (2015). An aspect-oriented approach to large-scale urban simulations [Abstract]. *Proceedings of the 2015 Winter Simulation Conference*,, 3100--3101. IEEE Press.

Advisor

- A.9 Fraser, S. D., Bak, L., DeLine, R., Feamster, N., Kuper, L., **Lopes, C. V.**, Wu, P. (2015). The Future of Programming Languages and Programmers [Abstract]. *SPLASH Companion*,, 63-66. ACM. doi: <http://dx.doi.org/10.1145/2814189.2818719>.

- A.8 Hondori, H., Khademi, M., McKenzie, A., Dodakian, L., **Lopes, C. V.**, Cramer, S. C. (2014). Utility of Augmented Reality in Relation to Virtual Reality in Stroke Rehabilitation [Abstract]. *Stroke*, 45 (Supp_1), ATMP43-ATMP43. (International Stroke Conference Moderated Poster Abstracts).

Equal contributor (study design). Second author is student under my supervision, others are collaborators from Medical School.

- A.7 Khademi, M., Fan, M., Hondori, H., **Lopes, C. V.** (2013). Multi-perspective multi-layer interaction on mobile device [Abstract]. *Proceedings of the adjunct publication of the 26th annual ACM symposium on User Interface Software and Technology (UIST)*,, 65-66. 978-1-4503-2406-9. doi: 10.1145/2508468.2514712. (Poster).

Minor contributor. First author is student under my supervision.

- A.6 Khademi, M., Hondori, H., **Lopes, C. V.** (2012). Optical illusion in augmented reality [Abstract]. *Proceedings of the 18th ACM symposium on Virtual Reality Software and Technology*,, 195--196. (Poster).

Minor contributor.

- A.5 Hondori, H., Tech, A., Khademi, M., **Lopes, C. V.** (2012). Real-time Measurement of Arm's Mechanical Impedance with Augmented Reality Illustration [Abstract]. *IEEE-EMBC 2012 Un-conference in Robotic Rehabilitation*, 2 pages. (Poster).
Minor contributor.
- A.4 Sajnani, H., Ossher, J., **Lopes, C. V.** (2012). Parallel code clone detection using MapReduce [Abstract]. *IEEE 20th International Conference on Program Comprehension (ICPC)*, 261-262. 1092-8138. doi: 10.1109/ICPC.2012.6240500. (Poster).
Equal contributor. All authors are/were students under my supervision.
- A.3 **Lopes, C. V.** (2012). Aspects as latent topics [Abstract]. *Proceedings of the 11th annual international conference on Aspect-oriented Software Development Companion*, 5-6. doi: 10.1145/2162110.2162116. (Keynote).
- A.2 Linstead, E., Hughes, L., **Lopes, C. V.**, Baldi, P. (2009). Capturing Java Naming Conventions with First-Order Markov Models [Abstract]. (ICPC Poster Session).
Advisor, equal contributor
- A.1 Bajracharya, S., Ngo, T., Linstead, E., Dou, Y., Rigor, P., Baldi, P., **Lopes, C. V.** (2006). Sourcerer: A Search Engine for Open Source Code Supporting Structure-Based Search [Abstract]. *Companion to the 21st ACM SIGPLAN symposium on Object-oriented programming systems, languages, and applications (OOPSLA)*, 681-682. doi: 10.1145/1176617.1176671. (Poster session).

Editorials/Letters/Notes

- N.4 **Lopes, C. V.** et al. (2017). Introducing The Art, Science, and Engineering of Programming. *The Art, Science, and Engineering of Programming*, 1(1), 4. AOSD. doi: <https://doi.org/10.22152/programming-journal.org/2017/1/editorial>.
- N.3 **Lopes, C. V.** (2014). The OOPSLA two-phase review process [Letter to the Editor]. *The OOPSLA two-phase review process*, 49(4), 27-32. Doi: 10.1145/2641638.2641648.
- N.2 **Lopes, C. V.** (2014). SIGPLAN Treasurer's Report [Letter to the Editor]. *SIGPLAN Treasurer's Report*, 49(4), 4. Doi: 10.1145/2641638.2641648.
- N.1 **Lopes, C. V.** (2013). SIGPLAN Treasurer's Report [Letter to the Editor]. *SIGPLAN Treasurer's Report*, 48(4), 6. Doi: 10.1145/2641638.2641648.

Magazine Articles

- M.4 Pierce B.C., Hicks, M, **Lopes, C.V.**, Palsberg, J. (2020) Conferences in an era of expensive carbon. *Communications of the ACM* 63(3) pp 35—37. February 2020.
Equal contributor
- M.3 **Lopes, C. V.**, Baldi, P. F. (2012). The Universal Campus: An open virtual 3-D world infrastructure for research and education. *ACM eLearn Magazine*, 2012(4), 6 (online article). ACM. Doi: 10.1145/2181207.2206888.

Main contributor

- M.2 **Lopes, C. V.** (2011). Hypergrid: Architecture and Protocol for Virtual World Interoperability. *IEEE Internet Computing*, 15(5), 22–29. IEEE.
- M.1 **Lopes, C. V.**, Aguiar, P. Q. (2003). Acoustic Modems for Ubiquitous Computing. *IEEE Pervasive Computing, Mobile and Ubiquitous Systems*, 2(3), 62 – 71. IEEE. (Top research magazine).

Primary contributor

Other Articles

- W.3 Shmakov, A., Lanier, J., McAleer, S., Achar, S., **Lopes, C.V.**, Baldi, P. (2019) ColosseumRL: A Framework for Multiagent Reinforcement Learning in -Player Games. arXiv preprint arXiv:1912.04451
- W.2 Martins, P., Achar, R., Lopes, C.V. (2018). The Java Build Framework: Large Scale Compilation. arXiv preprint arXiv:1804.04621
- W.1 **Lopes, C. V.** (2016). Architectures for Massively Multi-User Environments. Mirakhorli, M. (Ed.). *IEEE Software Blog*. IEEE. (Invited post).
<http://blog.ieeesoftware.org/2016/01/architectures-for-massively-multi-user.html>.

Technical Reports

- TR.3 **Lopes, C. V.**, Ngo, T. (2005). *JAML: An Extensible Language Framework for Developing Aspect-Specific Languages* (Technical Report). ISR Technical Report.
- TR.2 **Lopes, C. V.**, Ngo, T. (2004). *The Aspect Oriented Markup Language and its Support of Aspect Plugins* (Technical Report, No. UCI-ISR-04-8). Institute for Software Research.
- TR.1 Hürsch, W., **Lopes, C. V.** (1995). *Separation of Concerns* (Technical Report, No. NU-CCS-95-03). Northeastern University technical report.

Software

- S.15 Lopes, C. V., Bell, J., and Pierce, B. (2020). Clowdr: Virtual Conference Platform. (Supported ICSE 2020, IFCP 2020, and several other smaller conferences).
- D.5 Martins, P., Achar R., **Lopes, C.V.** (2018) 50K-C: A Dataset of Compilable, and Compiled, Java Projects. (Data for the work described in C.103).
- S.14 Lopes, C. V. (2014). OpenSimulator: Virtual World Platform (Version 0.7.3 through 0.8.1) Irvine, CA, USA. Overt Foundation. (Downloads during this period: ~50,000).
- D.4 Sajnani, H., Saini, V., Ossher, J., Lopes, C. V. (2014). UCI Source Code Data Sets: Maven Components and their Quality (Data for the work described in C.87).

- D.3 Lopes, C. V., Ossher, J. (2013). UCI Source Code Data Sets: the Maven repository dataset (<http://www.ics.uci.edu/~lopes/datasets/>).
- S.13 Ganjisaffar, Y., Lopes, C. V. (2011). jforests (Version 0.0.1) (<http://code.google.com/p/jforests/>).
- S.12 Lopes, C. V. (2011). OpenSimulator: Virtual World Platform (Version 0.6 through 0.7.1.1) Irvine, CA, USA. Overt Foundation. (<http://opensimulator.org>, Core Developer. OpenSim is being used by thousands of people).
- D.2 Lopes, C. V., Javanmardi, S. (2010). Wikipedia User Contribution Dataset: data based on Wikipedia dump up to January 2010 (<http://nile.ics.uci.edu/events-dataset-api/>).
- S.11 Lopes, C. V., Bajracharya, S., Ossher, J. (2010). Sourcerer, a search engine for open source code (<http://sourcerer.ics.uci.edu>).
- D.1 Lopes, C. V., Bajracharya, S. K. (2010). UCI Source Code Data Sets: data sets collected and curated for software engineering research (<http://www.ics.uci.edu/~lopes/datasets/>).
- S.10 Ganjisaffar, Y., Lopes, C. V. (2009). Crawler4j, a Web crawler (<http://code.google.com/p/crawler4j/>).
- S.6 Lopes, C. V. (2008). CalSWIM.org, a web site with information, interactive maps and simulations for the Newport Bay Watershed (<http://nile.ics.uci.edu/calswim>).
- S.9 Lopes, C. V., Lemos, O. (2008). CodeGenie, a Test-Driven Code Search plugin to the Eclipse platform (<http://sourcerer.ics.uci.edu/codegenie/>).
- S.7 Ganjisaffar, Y., Lopes, C. V. (2008). XWiki Excel Plugin, an open source addon to XWiki that allows the retrieval of data from Excel spreadsheets, displaying them in tables (<http://code.xwiki.org/xwiki/bin/view/Plugins/ExcelPlugin>).
- S.8 Ganjisaffar, Y., Lopes, C. V. (2008). XWiki GoogleMaps Plugin, an open source addon to XWiki that allows the embedding of Google maps on XWiki sites (<http://code.xwiki.org/xwiki/bin/view/Plugins/GoogleMapPlugin>).
- S.5 Javanmardi, S., Lopes, C. V. (2007). Wikipedia Event Extractor (<http://mondego.ics.uci.edu/wikipediaeventextractor>).
- S.4 Lopes, C. V. (2006). Perl tools for web literature retrieval: ICSEGen (<http://mondego.ics.uci.edu/icsergen> (satirical software). Research Assistant: <http://mondego.ics.uci.edu/ra>).
- S.3 Haghghat, A., Lopes, C. V. (2005). WebBeep, an indoor localization system based on audible sound that can accurately perform localizations within 40cm and that delivers location-dependent web pages to cell phones and PDAs (Deployed in a large room in Calit2. <http://www.ics.uci.edu/~lopes/beep/index.html>).
- S.2 Lopes, C. V. (2002). Digital Voices codec: Java implementation of a coder/decoder for an acoustic modem (Available for download from <https://github.com/diva/digital-voices>).
- S.1 Lopes, C. V. (2000). AspectJ (up to version 0.7) (Available for download from <http://aspectj.org>).

Presentations Given

- "The Future of Conferences", **Lopes, C (Keynote Speaker)**. StrangeLoop. St Louis, USA. October 2021.
- "Virtual Conferences", **Lopes, C (Keynote Speaker)**. ACM Symposium on User Interface Software and Technology (UIST). New Orleans, USA. October 2019.
- "Objects in the Age of Data", **Lopes, C. (Keynote Speaker)**. ACM International Conference on Systems, Programming, Languages and Applications: Software for Humanity (SPLASH). Vancouver, Canada. October 2017.
- "Simulating Cities: A Systems Design Perspective", **Lopes, C. (Keynote Speaker)**. European Symposium on Programming (ESOP 2016), ETAPS, Eindhoven, Netherlands. (April 2016).
- "Simulating Cities: A Systems Design Perspective", **Lopes, C. (Keynote Speaker)**. Modularity 2016, AOSA, Malaga, Spain. (March 2016).
- "Exercises in Programming Style", **Lopes, C. (Keynote Speaker)**. Joy of Coding, Rotterdam, NL. (May 29, 2015).
- "Exercises in Programming Style", **Lopes, C. (Keynote Speaker)**. Pattern Languages of Programming, Hillside Group, Monticello, IL. (September 15, 2014).
- "Exercises in Programming Style", **Lopes, C. (Featured Speaker)**. European Conference on Object-Oriented Programming, Summer School, AITO, Uppsala, Sweden. (July 31, 2014).
- "Exercises in Programming Style", **Lopes, C. (Keynote Speaker)**. Google, Google, Irvine. (July 9, 2014).
- "Exercises in Programming Style", **Lopes, C. (Keynote Speaker)**. Software Guru Conference and Expo, Software Guru, Mexico City. (June 25, 2014).
- "Direct and Indirect Interaction in Stroke Rehabilitation", **Lopes, C. (Featured Speaker)**. 4th Annual Stroke Workshop, Chapman University, Orange, CA. (November 17, 2013).
- "Scale Effects and Other Stories", **Lopes, C. (Featured Speaker)**. QCon San Francisco, San Francisco. (Talk about study on scale effects in Java programs). (November 11, 2013).
- "Exercises in Style", **Lopes, C. (Featured Speaker)**. GOTO Aarhus, Aarhus, Denmark. (Talk about upcoming book). (October 1, 2013).
- "Exercises in Style", **Lopes, C. (Featured Speaker)**. Strangeloop, St. Louis. (Talk about upcoming book). (September 19, 2013).
- "Distributed Traffic Simulation in OpenSimulator", **Lopes, C. (Panelist)**. 1st OpenSimulator Community Conference, AvaCon / Overte, Online virtual conference. Peer Reviewed. (September 7, 2013).
- "Hypergrid History", **Lopes, C. (Panelist)**. 1st OpenSimulator Community Conference, Hypergrid: Now and in the Future (Panel), AvaCon / Overte, Online virtual conference. (September 7, 2013).
- "OpenSim History", **Lopes, C. (Panelist)**. 1st OpenSimulator Community Conference, The Future of OpenSimulator (Panel), AvaCon / Overte, Online virtual conference. (September 7, 2013).

"Exercises in Style", **Lopes, C. (Presenter)**. Working Group 2.16 Programming Language Design, IFIP, Aarhus, Denmark. (Talk about upcoming book). (August 23, 2013).

"Exercises in Style", **Lopes, C. (Featured Speaker)**. ISR Forum, Institute for Software Research, UC Irvine, Irvine, CA. (Talk about upcoming book). (May 31, 2013).

"Software Research, Practice and Innovation", **Lopes, C. (Featured Speaker)**. Symposium on Learning from Experiences in Software Engineering (SLESE) (Co-located with FSE), ACM, Cary, North Carolina. (November 16, 2012).

Lopes, C. (Keynote Speaker). CWIC Southern California, Celebration of Women in Computing in Southern California, Santa Ana, CA. (April 14, 2012).

"Architectures for Online Massive Multiuser Virtual Environments", **Lopes, C. (Featured Speaker)**. University of Southern California CS seminar, University of Southern California, CA. (February 24, 2012).

Lopes, C. Interview at Web radio Internet Evolution. (April 2011).

Lopes, C. Intel Research, Santa Clara, CA. (February 2010).

Lopes, C. Calit2 Ubiquity Forum, UCSD. (September 2009).

"Challenges", **Lopes, C. (Speaker)**. Symposium on the Foundations of Software Engineering (ESEC/FSE). (August 2009).

Lopes, C. Generative and Transformational Techniques in Software Engineering Summer School, Portugal. (July 2009).

Lopes, C. Universidade Nova, Lisboa, Portugal. (July 2009).

Lopes, C. CalTech. (June 2009).

Lopes, C. Institute for Software Research Forum, UCI. (June 2009).

Lopes, C. Metaverse U Conference, Stanford University. (May 2009).

Lopes, C. Second Life, Meta-Institute for Computational Astrophysics (MICA). (May 2009).

Lopes, C. H2ology (Panel), Calit2. (November 2008).

Lopes, C. Intel Research, Portland OR. (November 2008).

Lopes, C. The Podcar City Conference, Ithaca, New York. (September 2008).

Lopes, C. UCI Octane Panel on Virtual Worlds, Calit2. (April 2008).

Lopes, C. NASA Ames Workshop on Virtual Worlds. (January 2008).

Lopes, C. Dagstuhl Seminar on Mining Programs and Processes. (November 2007).

Lopes, C. Universidade Nova de Lisboa. (July 2006).

"Aspect-Oriented Programming and Beyond", **Lopes, C.** Northrop Grumman, Carson, CA. (April 2005).

- "Aspect-Specific Languages and An Economics-Based Model for Assessing Program Modularity", **Lopes, C.** IFIP WG 2.11 on Program Transformation, Houston, Texas. (March 2005).
- "An Analysis of Modularity in Aspect-Oriented Design", **Lopes, C.** International Conference on Aspect-Oriented Software Development (AODS'05), Chicago, IL. (March 2005).
- "Unit-Testing Aspectual Behavior", **Lopes, C.** Workshop on Testing Aspect-Oriented Programs, in conjunction with the International Conference on Aspect-Oriented Software Development (AODS'05), Chicago, IL. (March 2005).
- Lopes, C.** Informatics Seminar, University of California, Irvine, CA. (October 2004).
- "The last new language feature", **Lopes, C. (Panelist)**. OOPSLA'04. (October 2004).
- Lopes, C.** Workshop on Building Software for Pervasive Computing, in conjunction with OOPSLA'04, Vancouver, Canada. (October 2004).
- Lopes, C.** IFIP WG 2.11 on Program Generation, Saint Emilion, France. (May 2004).
- "Onward! track", **Lopes, C.** 18th Conference on Object-Oriented Programming Systems, Languages and Applications, Anaheim, CA. (October 2003).
- Lopes, C.** ACM Special Interest Group on Computer Human Interaction, Orange County Chapter, Costa Mesa, CA. (October 2003).
- Lopes, C.** Workshop on Ubicomp Education, in conjunction with the 5th International Conference on Ubiquitous Computing (Ubicomp), Seattle, WA. (October 2003).
- Lopes, C.** IFIP WG 2.4 on Software Implementation Technology, Santa Cruz, CA. (August 2003).
- Lopes, C.** Aerospace Corporation, El Segundo, CA. (January 2003).
- Lopes, C.** Northeastern University, Boston, MA. (January 2003).
- Lopes, C.** Oregon Graduate Institute, Portland, WA. (April 2002).
- Lopes, C.** University of California, Irvine, CA. (April 2002).
- Lopes, C.** Oxford University, Oxford, UK. (March 2002).
- Lopes, C.** Princeton University, Princeton, NJ. (March 2002).
- Lopes, C. (Speaker)**. Xerox PARC Forum, Palo Alto, CA. (November 2001).
- Lopes, C.** Conference on Technology of Object-Oriented Languages and Systems (TOOLS) USA, Santa Barbara, CA. (Tutorial presentation). (August 2000).
- Lopes, C.** Conference on Technology of Object-Oriented Languages and Systems (TOOLS) Europe, Mont-Saint-Michel, France. (Tutorial presentation). (June 2000).
- Lopes, C.** European Conference on Object-Oriented Programming (ECOOP), Cannes, France. (Tutorial presentation). (June 2000).

- Lopes, C..** International Conference on Software Engineering (ICSE), Limerick, Ireland. (June 2000).
- Lopes, C..** International Conference on Software Engineering (ICSE), Limerick, Ireland. (Tutorial presentation). (June 2000).
- Lopes, C..** London, UK. (Tutorial presentation). (June 2000).
- Lopes, C..** Conference on Object-Oriented Programming, Languages and Applications (OOPSLA), Denver, CO. (Tutorial presentation). (November 1999).
- Lopes, C..** International Symposium on the Foundations of Software Engineering (ESEC/FSE), Toulouse, France. (Tutorial presentation). (September 1999).
- Lopes, C..** Conference on Technology of Object-Oriented Languages and Systems (TOOLS) USA, Santa Barbara, CA. (Tutorial presentation). (August 1999).
- Lopes, C..** European Conference on Object-Oriented Programming (ECOOP), 1999, Lisboa, Portugal. (Tutorial presentation). (June 1999).
- Lopes, C..** Massachusetts Institute of Technology, Cambridge, MA. (May 1999).
- Lopes, C..** Practical Applications of Java (PAJava), London, UK. (Tutorial presentation). (April 1999).
- Lopes, C..** European Joint Conferences on Theory and Practice of Software (ETAPS), Amsterdam, The Netherlands. (Tutorial presentation). (March 1999).
- Lopes, C..** UBS Labs, Zurich, Switzerland. (January 1999).
- Lopes, C..** Conference on Object-Oriented Programming, Languages and Applications (OOPSLA), Vancouver, Canada. (Tutorial presentation). (October 1998).
- Lopes, C..** Smalltalk and Java (STJA), in conjunction with Net.ObjectDays, Erfurt, Germany. (Tutorial presentation). (October 1998).
- Lopes, C..** 12th European Conference on Object-Oriented Programming (ECOOP), Brussels, Belgium. (Tutorial presentation). (July 1998).
- Lopes, C..** Workshop on Aspect-Oriented Programming, in conjunction with the 12th European Conference on Object-Oriented Programming (ECOOP), Brussels, Belgium. (July 1998).
- Lopes, C..** 11th European Conference on Object-Oriented Programming (ECOOP), Jyväskylä, Finland. (June 1997).
- Lopes, C..** 2nd JSSST International Symposium (ISOTAS), Kanazawa, Japan. (March 1996).
- Lopes, C..** 8th European Conference on Object-Oriented Programming (ECOOP), Bologna, Italy. (June 1994).
- Lopes, C..** 8th European Conference on Object-Oriented Programming (ECOOP), Bologna, Italy. (Tutorial presentation). (June 1994).

Media Coverage

Bored with Zoom, Professor Teaches Computer Programming in a Virtual World, and Streams it to Her Twitch – Here's Her Advice for Other Educators. Appeared in: New World Notes.

Wagner James Au.

<https://nwn.blogs.com/nwn/2021/02/zoom-crista-lopes-uc-irvine-uc-irvine-virtual-world-opensim.html>

(February 2021)

- The DejaVu paper (J.24) was covered by several blogs and newspapers:
 - The Morning Paper, a popular blog that covers research papers: <https://blog.acolyer.org/2017/11/20/dejavu-a-map-of-code-duplicates-on-github/>
 - The Register, UK: https://www.theregister.com/2017/11/21/github_duplicate_code/
 - Slashdot: <https://developers.slashdot.org/story/17/11/23/2352233/more-than-half-of-github-is-duplicate-code-researchers-find/>
 - Bleeping Computer: <https://www.bleepingcomputer.com/news/software/82-percent-of-the-code-on-github-consists-of-clones-of-previously-created-files/>
 - Developpez (French): <https://www.developpez.com/actu/175363/GitHub-des-chercheurs-estiment-que-plus-de-la-moitie-des-codes-ecrits-en-Java-Python-C-Cplusplus-et-JavaScript-sont-dupliques/>
 - OpenNet (Russian): <https://www.opennet.ru/opennews/art.shtml?num=47596>
 - Toutiao (Chinese): <https://www.toutiao.com/a6491879685222302221/>
 - Sohu (Chinese): https://www.sohu.com/a/206363660_114760

OpenSim Pioneer Wins Prestigious Open Source Award, Appeared In: New World Notes.

Wagner James Au.

<http://nwn.blogs.com/nwn/2016/03/tides-foundation-opensim-crista-videira-lopes.html>

(March 30, 2016).

Hypergrid inventor wins \$10,000 prize, Appeared In: Hypergrid Business. Maria Korolov.

<http://www.hypergridbusiness.com/2016/03/hypergrid-inventor-wins-10000-prize/>

(March 27, 2016).

Code Watch: The best programming book of the decade, Appeared In: Software Development Times. Larry O'Brien.

<http://sdtimes.com/code-watch-the-best-programming-book-of-the-decade/>

(July 29, 2015).

Exercises in programming style, Appeared In: ACM Computing Reviews. D.T. Bernard.

http://www.computingreviews.com/review/review_reviewprint.cfm?review_id=143195

(February 19, 2015).

Strangeloop: Exercises in Programming Style, Appeared In: Eugene Wallingford, CS Department Head, University of Northern Iowa. Review of a talk I gave at Strangeloop 2013.
http://www.cs.uni.edu/~wallingf/blog/archives/monthly/2013-10.html#e2013-10-07T12_07_34.htm

(October 7, 2013).

Hypergrid inventor adds group support to OpenSim, Appeared In:

<http://www.hypergridbusiness.com/2013/02/hypergrid-inventor-adds-group-support-to-opensim/> Maria Korolov.

(February 22, 2013).

Coming Soon to OpenSim: Grid-to-Grid Messaging & Permission Sharing!, Appeared In: New World Notes. Wagner James Au.

<http://nwn.blogs.com/nwn/2011/06/opensim-instant-messaging.html>

(June 3, 2011).

Hypergrid to have friends, instant messaging, Appeared In: Hypergrid Business. Maria Korolov.

<http://www.hypergridbusiness.com/2011/05/hypergrid-to-have-friends-instant-messaging/>

(May 30, 2011).

Major OpenSim upgrade adds security, meshes, Appeared In: Hypergrid Business. Maria Korolov.

<http://www.hypergridbusiness.com/2011/05/major-opensim-upgrade-adds-security-meshes/>

(May 7, 2011).

Hypergrid permissions coming to OpenSim, Appeared In: Hypergrid Business. Maria Korolov.

<http://www.hypergridbusiness.com/2011/02/hypergrid-permissions-coming-to-opensim/>

(February 9, 2011).

Paper: hypergrid allows virtual world to grow without limit, Appeared In: Hypergrid Business. Maria Korolov.

<http://www.hypergridbusiness.com/2010/10/paper-hypergrid-allows-virtual-world-to-grow-without-limit/>

(October 25, 2010).

A hypergrid glossary, Appeared In: Hypergrid Business. Maria Korolov.

<http://www.hypergridbusiness.com/2010/10/a-hypergrid-glossary/>

(October 24, 2010).

OpenSim developers warn against patents, Appeared In: Hypergrid Business. Maria Korolov.

<http://www.hypergridbusiness.com/2010/02/opensim-developers-warn-against-patents/>

(February 3, 2010).

Challenges of OpenSim, Appeared In: YouTube. Intel Software Network.

<http://www.youtube.com/watch?v=KoL020NrrWA>

(December 17, 2009).

Dr. Crista Lopes Joins Intel CTO Justin Rattner at SC09, Appeared In: Supercomputing Online. Tyler O'Neal.

<http://supercomputingonline.com/20091123-dr-crista-lopes-joins-intel-cto-justin-rattner-at-sc09>

(November 23, 2009).

Over 300 grids running OpenSim, Appeared In: Hypergrid Business. Maria Korolov.
<http://www.hypergridbusiness.com/2009/11/over-300-grids-running-opensim/>
(November 20, 2009).

OpenSim in Intel spotlight, Appeared In: Hypergrid Business. Maria Korolov.
<http://www.hypergridbusiness.com/2009/11/opensim-in-intel-spotlight/>
(November 18, 2009).

Crista Lopes Creates Seamless OpenSim-to-OpenSim Teleportation, Appeared In: New World Notes. Wagner James Au. <http://nwn.blogs.com/nwn/2009/05/opensim-christa.html>
(June 1, 2009).

Will you miss the next Internet boom?, Appeared In: Hypergrid Business. Maria Korolov.
<http://www.hypergridbusiness.com/2009/05/will-you-miss-the-next-internet-boom/>
(May 26, 2009).

An Intro to HyperGrid, OpenSim's Hyperlink Architecture for the Metaverse, Appeared In: OStatic. Wagner James Au.
<http://ostatic.com/blog/an-intro-to-hypergrid-opensims-hyperlink-architecture-for-the-metaverse>
(January 19, 2009).

Contracts, Grants and Sponsored Research

Grants

Lopes, Cristina Videira (Co-Principal Investigator), Bell, Jonathan (Co-Principal Investigator), Pierce, Benjamin (Co-Principal Investigator) " RAPID: Virtual Conference Platform" NSF - National Science Foundation, \$160,000.00 (total). (June 15, 2020 - Present).

Lopes, Cristina Videira (Co-Principal Investigator), Baldi, Pierre (Co-Principal Investigator), "Principles of Deep Neural Network Software," Bren School of ICS Exploration Grant. Total: \$75,000. (March 2019 – March 2020).

Lopes, Cristina Videira (Co-Principal Investigator), Palsberg, Jens (Co-Principal Investigator), "NJR: A National Java Resource," NSF - National Science Foundation, \$500,000.00. Total: \$1,100,000. (August 7 2018 - 2021).

Lopes, Cristina Videira (Co-Principal Investigator), Palsberg, Jens (Co-Principal Investigator), "NJR: A National Java Resource," NSF - National Science Foundation, Planning grant, \$62,000.00. Total> \$120,000 (July 1, 2017 - 2018).

Lopes, Cristina Videira (Principal Investigator), "SHF: Small: An Aspect-Oriented Approach to Large-Scale Urban Simulations," NSF - National Science Foundation, \$465,040.00. (June 17, 2015 - 2019).

Lopes, Cristina Videira (Principal Investigator), "Programming Languages Mentoring Workshop at SPLASH," NSF - National Science Foundation, \$20,000.00. (August 7, 2015 - December 31, 2017).

Lopes, Cristina Videira (Principal Investigator), "SHF-Small: Automatic Software Architecture Recovery: A Machine Learning Approach," NSF - National Science Foundation, \$500,000.00. (July 1, 2012 - August 31, 2016).

- Lopes, Cristina Videira (Principal Investigator), "Spatial Augmented Reality Games for Post-Stroke Rehabilitation," American Heart Assn, \$140,000.00. (July 1, 2013 - June 30, 2015).
- Lopes, Cristina Videira (Principal Investigator), "CCF-Small: Open Source Software Components: Utilization Assessment and Automatic Retrieval," NSF - National Science Foundation, \$499,000.00. (August 2010 - August 2013).
- Lopes, Cristina Videira (Co-Principal Investigator), Scacchi, Walt (Principal Investigator), Taylor (Co-Principal Investigator), Kobsa (Co-Principal Investigator), Nardi (Co-Principal Investigator), Mark (Co-Principal Investigator), Redmiles (Co-Principal Investigator), "HCC-Large: Decentralized Virtual Activities and Technologies: A Socio-Technical Approach," NSF - National Science Foundation, \$2,997,936.00. (September 2008 - August 2011).
- Lopes, Cristina Videira (Principal Investigator), Baldi, Pierre (Co-Principal Investigator), "CCF: Large Scale Empirical Validation of the Aspect-Oriented Design Hypothesis," NSF - National Science Foundation, \$693,180.00. (September 2007 - August 2010).
- Lopes, Cristina Videira (Principal Investigator), Grant, S (Co-Principal Investigator), Goodrich, M (Co-Principal Investigator), "SDCI Data New: Trust Management for Open Collaborative Information Repositories: The CalSWIM Cyberinfrastructure," NSF - National Science Foundation, \$1,103,590.00. (September 2007 - August 2010).
- Lopes, Cristina Videira (Principal Investigator), "A Linguistic Approach to Software Development," NSF - National Science Foundation, \$400,000.00. (July 2004 - June 2009).
- Lopes, Cristina Videira (Co-Principal Investigator), Cramer, Steve (Co-Principal Investigator), "Effect of Internet-Enabled Intense Exercise Therapy on Motor Status after Spinal Cord Injury," Calit2 / Nicholas Foundation Award, \$80,000.00. (May 2005 - April 2006).
- Lopes, Cristina Videira, "The UCI Autonomous Car for the DARPA Grand Challenge," Calit2, \$15,000.00. (May 2005).
- Lopes, Cristina Videira (Principal Investigator), Givargis, Tony (Co-Principal Investigator), "Enabling Technologies for Location-Aware Handheld Devices in Interactive Ubiquitous Environments," University of California MICRO, in partnership with Microsoft Corporation, \$34,225.00. (August 2003 - December 2004).

Other

- Lopes, Cristina Videira (Co-Principal Investigator), Scacchi, Mark (Co-Principal Investigator), Northrop Grumman, \$15,000.00. (October 2009).
- Lopes, Cristina Videira (Principal Investigator), Intel, \$30,000.00. (January 2009).
- Lopes, Cristina Videira, Unimodal Inc, \$16,000.00. (July 2007).
- Lopes, Cristina Videira (Co-Principal Investigator), Grant, Stanley (Co-Principal Investigator), "The California Sustainable Watershed/Wetland Information Management," CalSWIM, \$80,000.00. (May 2005 - April 2006).

Subcontract

Lopes, Cristina Videira (Principal Investigator), "Software Analytics for Big Code," DARPA, \$563,000.00. (September 1, 2016 - 2018).

Lopes, Cristina Videira (Principal Investigator), "Engineering and Scientific Support of the Mining and Understanding Software Enclaves (MUSE) program," DARPA, \$599,365.00. (February 1, 2016 - July 31, 2016).

Lopes, Cristina Videira (Principal Investigator), "Engineering and Scientific Support of the Mining and Understanding Software Enclaves (MUSE) program," DARPA, \$299,482.00. (January 1, 2015 - March 31, 2016).

Intellectual Property

P.7 Triandopoulos, N., Goodrich, M., Nguyen, D., Ohrimenko, O., Papamanthou, C., Tamassia, R., Lopes, C. V., Patent, "Techniques for verifying search results over a distributed collection", 9152716, Regular, United States, EMC Corporation. (application: December 31, 2012, approve: October 6, 2015).

P.6 Cook, W., Lopes, C. V., Patent, "Searching for Virtual World Objects", U.S. Provisional Patent Application No. 20090144267, Regular, United States. (application: June 2009, approve: October 18, 2011).

P.5 Kiczales, G., Hilsdale, E., Lopes, C. V., Lamping, J., Hugunin, J., Patent, "Integrated Development Environment for Aspect-Oriented Programming", U.S. Patent No. 6,539,390, United States, Xerox Corporation. (license: March 25, 2003).

P.4 Lopes, C. V., Kiczales, G., Lamping, J., Hilsdale, E., Choppella, V., Haveliwala, T., Patent, "Aspect-Oriented System Monitoring and Tracing", U.S. Patent No. 6,473,895, United States, Xerox Corporation. (license: October 29, 2002).

P.3 Kiczales, G., Lamping, J., Lopes, C. V., Hugunin, J., Hilsdale, E., Boyapati, C., Patent, "Aspect-Oriented Programming", U.S. Patent No. 6,467,086, United States, Xerox Corporation. (license: October 15, 2002).

P.2 Lopes, C. V., Lippert, M., Hilsdale, E., Patent, "Design by Contract with Aspect-Oriented Programming", U.S. Patent No. 6,442,750, United States, Xerox Corporation. (license: August 27, 2002).

P.1 Balfanz, D., Lopes, C. V., Smetters, D., Stewart, P., Wong, H. C., Patent, "Systems and Methods For Authenticating Communications In A Network Medium", U.S. Application No. 10/066,699, United States, Xerox Corporation. (license: February 2002).

TEACHING

Teaching Innovations and Curriculum Development

New Degree Program, Self-Supporting Professional Master of Software Engineering (MSWE).

Submitted: 2016. Approved: 2018. First year of operation: AY 2019-2020.

Led the proposal to create a self-supporting professional (SSP) Master program in Software Engineering, designed to train Software Engineers coming from a variety of backgrounds.

SSPs are new kinds of programs at the University of California, allowed since 2015, and different from state-sponsored programs, in that they are specifically designed to train students for professional activities. The MSWE program started in AY 2019-2020, with an initial cohort of 37 students with a diverse background. The second cohort (AY 2020-2021) has 45 students. Both cohorts include over 30% of women.

Student outcomes: 94% of 1st cohort secured employment after graduation.

Finances: MSWE is debt-free after its first operating year.

New Degree Program, PhD and MS in Software Engineering. Submitted: 2010. Approved: 2011.

First year of operation: AY 2012-2013.

Led the proposal to create new doctoral and master degrees in Software Engineering, separate from Computer Science.

Student outcomes: 100% of our graduates have received jobs offers from Academia or industry.

Redesign Existing Course, "Information Retrieval", IN4MATX, 225 / IN4MATX 141.

Integrated a framework developed within the context of NSF-funded research into the projects of this course. This has allowed the crawler project to scale to the large number of students of this course, without stressing the ICS network -- a problem that had been getting worse every year.

The 2 versions of this course attract close to 700 graduate and undergraduate students every year.

Revise Existing Course, "Analysis of Programming Languages", IN4MATX, 212.

Course based explicitly on my new book, adapted for graduate students. I started writing my book started when I first taught this course in 2012, so the materials evolved during these 2 years. The course now features an entire new set of programming exercises and foundational readings that are the basis for the pedagogical approach to the material.

This course attracts close to 50 graduate students every year.

Special Pedagogical Activities

Invited lecturer, Korean University of Technology and Education, (January 2005).

1-week course on Ubiquitous Computing

Postdoctoral Research Supervision

May 2015 – May 2018, Pedro Martins

September 2006 - August 2007, Ricardo Morla

Doctoral Committees

September 2022 – Present, Iris Ma, **Chair**

September 2021 – Present, Ella Dodor, **Chair**

September 2021 – Present, Samyak Jhaveri, **Chair**
September 2021 – Present, Md. Rakib Hossein, **Chair**
September 2020 – Present, Vanessa Klotzman, **Chair**
June 2020 – 2021, Jun-Wei Lin, Member
June 2020 – December 2022, Blake Harrison-Lane, Member
June 2020 – 2022, Negar Ghorbani, Member
September 2017 – 2022, Farima Farahani, **Chair**
September 2017 – 2022, Maruf Zaber, **Chair**
April 2016 - 2020, Reyhaneh Behrouz, Member
January 2017 – August 2018, Mahmoud Hammad, Member
October 2017 – October 2019, Eric Albin, Member
September 2015 – May 20, 2020, Rohan Achar, **Chair**
September 2014 – June 5, 2019, Wen Shen, Chair
September 2014 – November 25, 2019, Di Yang, **Chair**
September 2012 – November 20, 2018, Vaibhav Saini, **Chair**
September 2011 - 2018, Eugenia Gabrielova, **Chair**
May 2014 - August 2017, Lee Martie, Member
September 2012 - May 2017, Vijay Palepu, Member
February 2015 - March 17, 2017, Alireza Sadeghi, Member
September 2011 - November 2016, Arthur Valadares, **Chair**
September 2011 - May 2016, Thomas Debeauvais, **Chair**
September 2010 - May 2016, Michael Gorlick, Member
September 2010 - March 2016, Hitesh Sajnani, **Chair**
September 2009 - March 2016, Gerald Bortis, Member
September 2012 - December 2015, Maryam Khademi, **Chair**
September 2009 - June 2015, Francisco Servant, Member
September 2010 - March 2015, Nic DiGiuseppe, Member
June 2014 - January 23, 2015, Raluca Diaconu, Member
September 2009 - December 2014, Nicolas Lopez, Member
September 2007 - February 2013, Joel Ossher, **Chair**
January 2010 - February 2012, Rosalva Gallardo, Member
Currently at Intel Corporation, San Francisco, CA
September 2007 - August 2011, Yasser Ganjisaffar, **Chair**
September 2006 - August 2011, Sara Javanmardi, **Chair**
2010, Alex Baker, Member
2010, Wiwat Ruengmee, Member
September 2004 - August 2010, Sushil Bajracharya, **Chair**
2009, Eugen Nistor, Member
2009, Roberto Fialho, Member
2006, Jessie Dedecker, Member, VUB, Belgium
2005, Jeff von Ronne, Member
August 2005, Raja Jurdak, **Co-Chair**

Doctoral Advancement to Candidacy Committees

June 2022, Vanessa Klotzman, Chair
May 2022, Canyang Shi, Member
May 2022, Ahmad Nahian, Member
June 2021, Arda Unal, Member
December 2020, Forough Mehralian, Member
August 18, 2020, Zhendong Wang, Member
October 16, 2019, Sumaya Almanee, Member
May 28, 2019, Yadong Lu, Member
May 23, 2019, Pedro Matias, Member

November 18, 2018, Negar Ghorbani, Member
March 12, 2018, Jun-Wei, Member
January 16, 2018, Eugenia Roh, Member
May 27, 2016, Taewoo Kim, Member
September 2013 - June 2015, Aftab Hussain, Advisor
Student switched to CS, with another advisor
September 2009 - June 2014, Huascar Sanchez, Member
Computer Science Department -- UCSC
September 2011 - June 2013, Jamshid Esmaelnezhad, Member
December 2011, Yingyi Bu, Member
September 2010, Gulfem Yeniceri, Member

Master's Thesis Committees

January 2021 – December 2022, Paridhi Sirohi, **Chair**
April 2020 – June 2021, Ziching Li, Member
April 2020 – June 2021, Xiaochen Yu, **Chair**
April 2020 – June 2021, Aishwariya Rao, **Chair**
April 2020 – March 2021, Saumitra Kadge, **Chair**
April 2020 – March 2021, Shrijit Venkatramana, **Chair**
January 2020 – December 2020, Anupryia Prasad, **Chair**
October 2019 - March 2020, Pritha Dawn, **Chair**
October 2019, Eric Albin, Member
August 2019, Felix Less, Member
February 18 2020, Armin Balalaie, Member
October 2015 - May 26, 2016, Andrea D'Souza, **Chair**
September 2014 - September 14, 2015, Rezvan Ghaderi, **Chair**
August 2014 - August 21, 2015, Matias Giorgio, Member
April 2014 - June 2015, Rohan Achar, **Chair**
June 2013, Pramit Choudhary, **Chair**
June 2013, Madhusdan Cheelangi, Member
June 2012, Praneet Mhatre, **Chair**
June 2011, Phitchayaphong Tantikul, Member
2009, Amy Henckel, **Chair**
2008, Jae Lee, **Chair**
2006, Amir Haghghat, **Chair**
2006, Trung Ngo, **Chair**

Undergraduate Honors Thesis

October 2013 - June 2014, Brian MacIntosh, Advisor
October 2013 - June 2014, Christopher Noel, Advisor

Undergraduate Research Supervision

June 2017 - 2019, Robert Maldonado, Advisor
CAMP Summer Scholars Program
2010, Ryan Hsu
2004, Adam Compton
2004, Anshuman Chadha

2004, Jeff Konshak
2004, Maybelle Tan

SERVICE

Department Service

Informatics Chair Advisory Committee Member. (September 2013 - Present).

Software Engineering Search Committee Chair, Appointed. (October 2014 - April 2015).

Principal proposer for new Ph.D./M.S. degree in Software Engineering. Approved. (October 1, 2010 - September 30, 2012).

Graduate Curriculum and Policy Member. (October 2007 - June 2011).

Informatics Recruiting Committee Member. (October 2004 - June 2005).

School/College Service

ICS Computing and Network Policy Committee (AY 2018-2019).

ICS Executive Committee Chair, Elected. (August 2015 - July 2016).

ICS Software Engineering Major Steering Committee Chair. (September 2012 - June 2014).

ICS Center for Computer Games and Virtual Worlds Interim Director. (September 2012 - June 2013).

ICS Undergraduate Policy Committee Member. (October 2011 - June 2013).

ICS Computer Game Science Major Steering Committee Member. (September 2011 - June 2013).

ICS Executive Committee Member. (October 2011 - June 2012).

First Year Task Force Member. (October 2010 - June 2011).

Executive Committee Member. (October 2009 - June 2011).

Center for Ubiquitous Computing and Interaction Founding Director. (January 2007 - June 2008).

Awards Committee Member. (October 2003 - June 2004).

Cryptography and Security Recruiting Committee Member. (2002 - 2003).

Graduate Admissions Committee Member. (October 2002 - June 2003).

University Service

Research Cyberinfrastructure Workgroup Member, Appointed. (September 2015 - 2018).

Academic Planning Group (AY 2015-2016)

Mobile Application Development Program -- UCI Extension Advisor, approximately 8 hours spent for the year, Appointed. (September 2011 - Present).

Academic Planning Group Member, Appointed. (September 2015 - June 2016).

UCI Research Computing and Networking Advisory Committee Member. (September 2014 - June 2015).

UCI Student Diversity Fellowship Review Committee Member. (January 2014 - June 2014).

UCI Faculty Assessment of the State of Research Computing (FASRC) Member. (September 2011 - June 2014).

Calit2 Irvine Division Council Member. (May 2005 - September 2011).

Ad Hoc Subcommittee on International Education Member. (2004 - 2005).

Professional Service

ETAPS' European Symposium on Programming (ESOP'22), Program Committee Member, (November—December 2021)

PACM PL (OOPSLA) Review Committee Member (April -- July 2021).

ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE'21), Program Committee Member. (March--June 2021).

ACM Presidential Task Force on What Conferences Can Do to Replace Face to Face Meetings, Co-Chair. Appointed by the ACM President. March – June, 2020.

- Co-authored a Guide for Virtual Conferences (<https://www.acm.org/virtual-conferences>)

ACM/IEEE International Conference on Software Engineering (ICSE 2020 and 2021).
Virtualization Chair (May 2020 – May 2021)

ACM Onward!, Program Committee Member. (2020).

SIGPLAN History of Programming Languages IV, Program Committee Member (2018 - 2021).

ACM SIGPLAN Ad-hoc Committee on Climate Change, Member, International, - Report on the issues, as well as the options for conferences going forward.

- CO2 estimator for conferences.

- Raised awareness at ACM level. (November 2016 – April 2020).

ACM Ad-hoc Committee on Conference Reclassification, Member - Creation of the Proceedings of the ACM journal series (2014 - 2017).

- Approval of 3 journals in this series.

ACM SIGPLAN, Treasurer, USA, Elected, International, (1) Under my lead, SIGPLAN developed an anti-harassment policy for its conferences. The policy was put in place in 2011. Early in 2014, this policy was adopted ACM-wide. (2) Along with the SIGPLAN Chair, raised the community awareness on the broken practices of scientific publication in our field. Namely, the issue of conferences vs. journals and the issue of open access at reasonable prices are now top priorities that SIGPLAN is discussing with the ACM leadership. (3) Oversaw the distribution of close of \$100,000 / year on travel grants (July 2012 – June 2018).

ACM International Conference on Software Engineering (ICSE), Reviewer. (May 2017 - May 2018).

Dynamic Languages Symposium Program Committee, Member. (April 2017 - October 2017).

ACM Distinguished Member Selection Committee, Member, Invited, International. (July 2017 - September 2017).

INRIA Review Committee, Member, Paris, France, Invited, National, Produced a report with assessment and recommendations. (September 1, 2016 - December 31, 2016).

National Science Foundation, Committee Member, Ad Hoc Reviewer. (2016).

ACM SIGPLAN Research Highlights Committee, Member, USA, Appointed, International. (September 2012 - July 2016).

Dynamic Languages Symposium, Program Committee Member. (October 2015).

ACM Systems, Programming, Languages and Applications: Software for Humanity (SPLASH), Steering Committee Chair, Elected, International. (July 1, 2013 - October 31, 2015).

14th International Conference on Modularity, Program Committee Member. (March 2015).

National Science Foundation, Committee Member, Ad Hoc Reviewer. (2014).

Overte Foundation, Co-founder and Treasurer. (2011 - December 2014).

European Conference on Object-Oriented Programming (ECOOP), Program Committee Member. (July 2014).

ACM International Conference on Software Engineering (ICSE), Program Board Member. (May 2014).

ACM Conference on Object-Oriented Programming, Systems, Languages and Applications (OOPSLA), Program Committee Chair, Appointed. (October 2013).

OpenSimulator Community Conference (OSCC), Member, International. (September 2013).

ACM Onward!, Steering Committee Member. (2008 - August 2013).

ACM Systems, Programming, Languages and Applications: Software for Humanity (SPLASH), Steering Committee Member and Chair. (2010 - July 1, 2013).

Software Practice and Experience, Reviewer. (May 2013).

Transactions on Parallel and Distributed Systems, Journal Article Reviewer. (May 2013).

ACM Conference on Object-Oriented Programming, Systems, Languages and Applications (OOPSLA), Program Committee Member. (October 2012).

IEEE International Conference on Software Maintenance, Program Committee Member. (September 2012).

ACM International Conference on Software Engineering (ICSE), Program Committee Member. (May 2012).

Aspect-Oriented Software Development (AOSD), Modularity Visions track, Program Committee Member. (2011).

European Conference on Object-Oriented Programming (ECOOP), Program Committee Member. (2011).

The ACM Conference on Systems, Programming, Languages and Applications: Software for Humanity (SPLASH'11), General Conference Chair. (October 2011).

Meta-Institute for Computational Astrophysics, Advisory Council. (2009 - September 2011).

Metaverse Ink, Advisor. (2008 - September 2011).

Portuguese Foundation for Science and Technology, Committee Chair, Extramural Funding Reviewer. (2008 - September 2011).

UBICOMP Conference series, Steering Committee. (2006 - August 2011).

ACM Transactions on Software Engineering and Methodology, Journal Article Reviewer. (2010).

IEEE Transactions on Software Engineering, Journal Article Reviewer. (2010).

24th Conference on Object-Oriented Programming Systems, Languages and Applications (OOPSLA). (2009).

Generative and Transformational Techniques in Software Engineering Summer School, Program Committee Member. (2009).

ICSE Workshop on Search-Driven Development: Users, Infrastructure, Tools, and Evaluation, Program Committee Member. (2009).

Journal of the Brazilian Computer Society, Journal Article Reviewer. (2009).

National Science Foundation, Committee Member, Ad Hoc Reviewer. (2009).

Aspect-Oriented Software Development (AOSD), Program Committee Member. (2007).

European Theory and Practice of Software (ETAPS), Compiler Construction (CC), Program Committee Member. (2007).

IEEE Percom, Program Committee Member. (2007).

National Science Foundation, Committee Member, Ad Hoc Reviewer. (2007).

OOPSLA Onward!, Chair. (2007).

- ACM Transactions on Computer-Human Interfaces, Journal Article Reviewer. (2006).
- The 8th International Conference on Ubiquitous Computing (UbiComp'06), General Conference Chair. (September 2006).
- 20th ACM Conference on Object-Oriented Programming Systems, Languages and Applications (OOPSLA), Program Committee Member. (2005).
- Dynamic Aspects Workshop (DAW'05), held in conjunction with the 4th International Conference on Aspect-Oriented Software Development (AOSD), Program Committee Member. (2005).
- IADIS Conference on Applied Computing, Program Committee Member. (2005).
- Net.ObjectDays, Program Committee Member, Erfurt, Germany. (2005).
- Summer School on Generative and Transformational Techniques in Software Engineering, Program Committee Member. (2005).
- UbiComp, Conference review. (2005).
- McGraw-Hill, Reviewer. (2004 - 2005).
- 19th ACM Conference on Object-Oriented Programming Systems, Languages and Applications (OOPSLA), Onward! Track, Program Committee Member. (2004).
- Dynamic Aspects Workshop (DAW'04), at the 3rd International Conference on Aspect-Oriented Software Development (AOSD), Program Committee Member. (2004).
- Eurographics Multimedia 2004 - 7th Eurographics Workshop on Multimedia, Program Committee Member. (2004).
- IADIS Conference on Applied Computing, Program Committee Member. (2004).
- Workshop on Aspects, Components and Patterns for Systems Infrastructure Software, at the 3rd International Conference on Aspect-Oriented Software Development (AOSD), Program Committee Member. (2004).
- Workshop on Building Software for Pervasive Computing, at OOPSLA'04, Chair. (2004).
- Workshop on Building Software for Pervasive Computing, at OOPSLA'04, Program Committee Member. (2004).
- Portuguese Foundation for Science and Technology, Committee Member, Extramural Funding Reviewer. (2003 - 2004).
- University of California MICRO Program, Committee Member, Extramural Funding Reviewer. (2003 - 2004).
- National Academy of Engineering, Frontiers of Engineering Symposium, Participant. (September 2004).
- ACM CHI, Conference review. (2003).
- IEEE Globecom, Conference review. (2003).

National Science Foundation, Committee Member, Ad Hoc Reviewer. (2002).

15th European Conference on Object-Oriented Programming, Program Committee Member. (2001).

Practical Applications of Java (PAJava), Program Committee Member. (2001).

Practical Applications of Java (PAJava), Program Committee Member. (2000).

Workshop on Aspects and Dimensions of Concerns, at ECOOP'00, Chair. (2000).

Workshop on Aspects and Dimensions of Concerns, at ECOOP'00, Program Committee Member. (2000).

1st International Symposium on Generative and Component-Based Software Engineering (GCSE), Program Committee Member. (1999).

European Conference on Object-Oriented Programming (ECOOP), Program Committee Member. (1999).

Workshop on Aspect-Oriented Programming, at ECOOP'99, Chair. (1999).

Workshop on Aspect-Oriented Programming, at ECOOP'99, Program Committee Member. (1999).

Workshop on Aspect-Oriented Programming, at ECOOP'98, Chair. (1998).

Workshop on Aspect-Oriented Programming, at ECOOP'98, Program Committee Member. (1998).

Workshop on Aspect-Oriented Programming, at ICSE'98, Chair. (1998).

Workshop on Aspect-Oriented Programming, at ICSE'98, Program Committee Member. (1998).

Workshop on Aspect-Oriented Programming, at ECOOP'97, Chair. (1997).

Workshop on Adaptable and Adaptive Software, at OOPSLA'95, Chair. (1995).

Workshop on Adaptable and Adaptive Software, at OOPSLA'95, Program Committee Member. (1995).

Public Service

Organizer, University Hills Girls Programming Club, Irvine. (March 2013 - June 2013).