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RESEARCH INTERESTS

Programmer Productivity, including Software Engineering, Search-driven Development, and Domain Analysis.

EDUCATION

Ph.D. Computer Science, University of California Santa Cruz, *Expected August, 2015.*

Dissertation: “Source Code Curation Tooling for the Code Forager.”

Committee: Jim Whitehead (ADVISOR), Luca de Alfaro, Cormac Flanagan.

M.S. Software Engineering, San Jose State University, 2006.

Thesis: “Building Systems Using Patterns: Creating Knowledge Maps.”

Advisor: M.E. Fayad.

B.S. Information Systems Engineering, Catholic University, Nicaragua, 2001.

EMPLOYMENT

Graduate Research Assistant, UC Santa Cruz (Santa Cruz, CA), 2010 - Present.

Research Assistant, Jim Whitehead, Fall 2013–Present.

Project: “Xylem: Crowdsourced Program Verification Game.”

Research Assistant, Jim Whitehead, Fall 2011–Fall 2012.

Project: “Botprint: A Mixed Initiative Robot Design Tool.”

Research Assistant, Neoklis Polyzotis, Fall 2010–Fall 2011.

Project: “Automatic Index Tuning: Tools for Online Index Tuning.”

Consultant, Infomotor Inc. (San Francisco, CA), 2010 - 2012.

Consultant, Vergencemedia Inc. (San Francisco, CA), 2007 - 2008.

Software Engineer, Pearson VUE (Bloomington, MN), 2006 - 2009.

TEACHING

University of California Santa Cruz

Teaching Assistant, Brenda Laurel, CMPM 178: Human-Centered Design Research, Winter 2015.

Teaching Assistant, Luca de Alfaro, CMPS 121: Mobile Applications, Spring 2012.

Teaching Assistant, Terry Allen, TIM 50: Business Information Systems, Fall 2011.

San Jose State University

Teaching Assistant, M.E. Fayad, CMPE 296G: Software Architectures, Spring 2005.

Teaching Assistant, M.E. Fayad, CMPE 195G: Software Patterns, Spring 2004.

Teaching Assistant, M.E. Fayad, CMPE 132: Software Engineering II, Fall 2004.

BOOKS

Fayad, M. E., **Sanchez, H. A.**, Hegde, S. G. K., Basia, A., & Vakil, A. (2014). *Software Patterns, Knowledge Maps, and Domain Analysis*. CRC Press, 2014. ISBN 9781466571433.

RESEARCH

Publications

Sanchez, H., Whitehead, J. (2015). Source Code Curation on StackOverflow: The Vesperin System. 37th International Conference on Software Engineering. ICSE, 2015. (to appear).

Logas, H., Whitehead, J., Mateas, M., Vallejos, R., Scott, L., Shapiro, D., Murray, J., Compton, K., Osborn, J., Salvatore, O., Lin, Z., **Sanchez, H.**, Shavlovsky, M., Cetina, D., Clementi, S., and Lewis, C. Software Verification Games: Designing Xylem, The Code of Plants. Presented at the 9th International Conference on the Foundations of Digital Games (FDG 2014). Ft. Lauderdale, FL, USA, April 3-7, 2014.

Sanchez, H. (2013). SNIPR: Complementing Code Search with Code Retargeting Capabilities. Presented at ICSE'13: Proceedings of the 35th International Conference on Software Engineering. ICSE, 1423–1426.

Jimenez, I., **Sanchez, H.**, Tran, Q. T., & Polyzotis, N. (2012). Kaizen: A Semi-Automatic Index Advisor. Presented at SIGMOD '12: Proceedings of the 2012 ACM SIGMOD International Conference on Management of Data. SIGMOD, 685–688.

Jimenez, I., LeFevre, J., Polyzotis, N., **Sanchez, H.**, & Schnaitter, K. (2011). Benchmarking Online Index-Tuning Algorithms. *IEEE Data Eng. Bull.*, 34(4), 28–35.

Fayad, M. E., **Sanchez, H. A.**, & Singh, S. K. (2010). Knowledge Maps - Fundamentally Modular Approach to Software Architecture, Design, Development and Deployment. *SEDE*, 127–133.

Sanchez, H. A., & Fayad, M. E. (2006). The Branding Analysis Pattern. Presented at AICCSA'06: Proceedings of the IEEE International Conference on Computer Systems and Applications. AICCSA, 361–364.

Fayad, M. E., Hamza, H. S., & **Sanchez, H. A.** (2005). Towards Scalable and Adaptable Software Architectures. Presented at IRI-2005: IEEE International Conference on Information Reuse and Integration. IRI, 102–107.

Gresh, J., McKim, J., **Sanchez, H.** (2005). The Dynamic Mapping Design Pattern. Presented at the 12th Pattern Language of Programs (PLOP 2005). Allerton Park, Monticello, IL, USA, September 7-10, 2005.

Fayad, M. E., Hamza, H. S., & **Sanchez, H. A.** (2003). A Pattern Language for an Effective Class Responsibility Collaborator (CRC) Cards. Presented at IRI-2003: IEEE International Conference on Information Reuse and Integration. IRI, 584–587.

Posters

Sanchez, H. SNIPR: Complementing Code Search with Code Retargeting Capabilities. ICSE: Doctoral Symposium, May 2013.

Lin, Z., **Sanchez, H.**, Whitehead, J. Botprint: A Mixed Initiative Robot Design Tool. UC Santa Cruz *Research Review Day*, October 18, 2012.

Work in Progress

Sanchez, H., Whitehead, J. (2015). Multi-staging StackOverflow Code Examples via Method Slicing.

Sanchez, H., Whitehead, J. (2015). Code Example Summarization Model based on The Precedence-constrained Knapsack Problem.

PROFESSIONAL AFFILIATIONS

Member, Association of Computing Machinery (ACM), 2005–Present.

Member, IEEE, 2013–Present.

REFERENCES

Available upon request.

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