

Gursimran Singh Walia

Associate Professor of Computer Science;
Graduate Coordinator of Software Engineering
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PROFESSIONAL PREPARATION

2009. Ph.D. Computer Science, Mississippi State University, Starkville, MS, USA
2009. Information Assurance Professional, Mississippi State University, Starkville, MS, USA
2007. M.S. Computer Science, Mississippi State University, Starkville, MS, USA
2004. B.Tech. Computer Science, Punjab, INDIA

APPOINTMENTS

2017 - present. Graduate Coordinator of Software Engineering. North Dakota State University - Fargo, USA
2015 - present. Associate Professor of Computer Science. North Dakota State University - Fargo, USA
2009 – 2015. Assistant Professor of Computer Science. North Dakota State University- Fargo, USA

RESEARCH INTERESTS

Empirical software engineering, Software and Human errors; Software reviews and Software quality improvement, Requirements engineering, Human Cognition in Software Engineering, Machine Learning and Big Data, Information Assurance, Software Engineering for computer security, Computer Science Education.

AWARDS AND HONORS

- Best Research Paper Award titled “An Empirical Study of the Effect of Learning Styles on the Faults found During the Software Inspection” at 24th IEEE International Symposium on Software Reliability Engineering - ISSRE'2013, Research Track. Pasadena, CA, USA.
- Best Industry Paper Award titled “Using Capture-Recapture Models for Make Objective Post-Inspection Decisions” at 24th IEEE International Symposium on Software Reliability Engineering - ISSRE'2013, Industry Track. Pasadena, CA, USA.
- Excellence in Teaching Award, College of Science and Mathematics, NDSU, 2015
- Peltier Award for Teaching Innovation Nominee for the NDSU Development Foundation, 2015.
- Odney Excellence in Teaching Award Nominee for the NDSU Development Foundation, 2015-2016.
- Best Industry Paper Award Nominee titled “Using Learning Styles to Staff and Improve Software Inspection Team Performance” at 27th IEEE International Symposium on Software Reliability Engineering - ISSRE'2016, Industry Track. Ottawa, Canada.
- Exemplary CS Educational Research Paper Award “Incorporating Human Error Education into Software Engineering Courses via Error-based Inspections” at 48th ACM Technical Symposium on Computer Science Education, SIGCSE 2017, Washington, USA
- Odney Excellence in Teaching Award Nominee for the NDSU Development Foundation, 2017-2018.

RESEARCH FUNDING

- NSF DUE-1225972 (\$600K); *PI: Walia at NDSU*; Effective Dates (8/15/2012 – 7/31/2015); *Type 2 Collaborative Project: Integrating Testing into Advanced CS/IT Courses Supported by a Cyber Learning Environment*. [This was a collaborative grant with multiple institutions and NDSU share was \$78,959]

- NSF CCF- 1423279 (*\$450K*); *PI: Walia at NDSU*; Effective Dates (8/1/2014 – 7/31/2018); *Collaborative Project: Integrating Software Engineering and Human Error Models to Improve Software Quality* [This is a collaborative grant with 3 institutions and NDSU share is \$180,242]
- NSF CCF- 1423279 (*\$9K*); *PI: Walia*; Effective Dates (8/1/2014 – 7/31/2018); *Community Workshop on Application of Human Error Research to Improve Software Engineering*
- NSF DUE – 1525414 (*\$1.84M*); *PI: Walia at NDSU*; Effective Dates (8/1/2015 - 7/31/2019); *Collaborative Research: Engaged Student Learning - Design and Development Level II: Using a Cyber Learning Environment to Improve Student Learning and Engagement in Software Courses* [This is a collaborative grant with 8 institutions and NDSU share is \$180K]
- NSF CBET - 1401507; *Consultant: Walia*; Effective Dates (07/15/2014 - 06/30/2019); *GARDE: Design Projects to Enable Veteran Reintegration in an Educational System*
- NDSU CSM Seed Grant (*\$40K*); *PI/PM: Walia*; Effective Dates (07/15/2018 - 06/30/2019); *Online Software Engineering Professional Master's Program Improvement*
- NDSU Graduate School Recruitment Enhancement Award (*\$5K*); *PI/PM: Walia*; Effective Dates (07/15/2018 - 06/30/2019)

PEER-REVIEWED PUBLICATIONS REVERSE CHRONOLOGICAL ORDER

(* - GRADUATE STUDENTS)

2018

1. Anu, V. K.*, Hu, W., Carver, J., **Walia, G.**, and Bradshaw, G. "Development of a Human Error Taxonomy for Software Requirements: A Systematic Literature Review", accepted to appear in IST journal 2018.
2. Hu, W., Carver, J., Anu, V. K.*, **Walia, G.**, and Bradshaw, G. "Using Human Error Information for Error Prevention", accepted to appear in EMSE Journal 2018.
3. Singh, M.*, Anu, V.*, **Walia, G.**, "A Vertical Breadth-First Multilevel Path Algorithm to Find All Paths in a Graph" International Symposium on Big Data Management and Analytics, BIDMA 2018 Calgary, Canada, April 24-25, 2018.
4. Reddy, M.*, **Walia, G.**, and Radermacher, A. "Gamification in Computer Science Education – A Systematic Literature Review" 125th Annual ASEE Conference, June 24 - 27, 2018, Salt Lake City, Utah
5. Reddy, M.*, **Walia, G.**, and Radermacher, A. "Using Gamification and Cyber Learning Environment to Improve Student's Learning in an Introductory Computer Programming Course —an empirical case study" 125th Annual ASEE Conference, June 24 - 27, 2018, Salt Lake City, Utah
6. Reddy, M.*, **Walia, G.**, Borchert, O., and Radermacher, A. "Evaluating Learning Engagement Strategies in a Cyber Learning Environment during Introductory Computer Programming Courses-- An Empirical investigation" 125th Annual ASEE Conference, June 24 - 27, 2018, Salt Lake City, Utah
7. Singh, M.*, Vaibhav, A.*, **Walia, G.**, and Goswami, A. "Validating Requirements Reviews by Introducing Fault-Type Level Granularity: A Machine Learning Approach" ACM SIGSOFT Innovations in Software Engineering (ISEC 2018), Feb 9-11, Hyderabad, India.

2017

8. Singh, M.*, **Walia, G.**, and Goswami, A. "An Empirical Investigation to Overcome Class-imbalance in Inspection Reviews", IEEE International Conference on Machine Learning and Data Science (ICMLDS-2017), Dec 14-15 Dec, India.
9. Singh, M.*, **Walia, G.**, and Goswami, A. "Validation of Inspection Reviews over Variable Features Set Threshold", IEEE International Conference on Machine Learning and Data Science (ICMLDS-2017), Dec 14-15 Dec, India.
10. Anu, V.*, **Walia, G.**, Hu, W., Carver, J., and Bradshaw, G. "Issues and Opportunities for Human Error-based Requirements Inspections: An Exploratory Study", ACM/IEEE International Symposium on Empirical Software Engineering and Measurement, 2017, November 9-10, Toronto, Canada.

11. Clarke, P., Davis, D., Lau C. R., Fu P.E. Y., Kiper, J., Walia, G., "Using WReSTT Cyberlearning Environment in the Classroom", 124th Annual ASEE Conference, June 25 - 28, 2017, Columbus, Ohio
12. Hu, W., Carver, J., Anu, V. K.*, **Walia, G.**, and Bradshaw, G. "Understanding Human Errors in Software Requirements: An Online Survey", 23rd International Working Conference on Requirements Engineering: Foundation for Software Quality. REFSQ 2017. Essen, Germany. Feb. 27 - March 2, 2017
13. Anu, V., **Walia, G.**, Bradshaw, G., Hu, W., and Carver, J. "Usefulness of a Human Error Identification Tool for Requirements Inspection: An Experience Report", 23rd International Working Conference on Requirements Engineering: Foundation for Software Quality. REFSQ 2017. Essen, Germany. Feb. 27 - March 2, 2017
14. Anu, V., **Walia, G.**, Bradshaw, G., Hu, W., and Carver, J. "Using Human Error Abstraction Method for Detecting Requirement Errors: A Live Study", 23rd International Working Conference on Requirements Engineering: Foundation for Software Quality. REFSQ 2017. Essen, Germany. Feb. 27 - March 2, 2017
15. Hu, W., Carver, J., Anu, V. K.*, **Walia, G.**, and Bradshaw, G. "Defect Prevention in Requirements using Human Error Information: A Study", 23rd International Working Conference on Requirements Engineering: Foundation for Software Quality, REFSQ'2017.
16. Clarke, P., Fu, Yujian., Kiper, J., **Walia, G.** "Workshop: Using Learning and Engagement Strategies in Software Engineering and Programming Courses (LESSEP17-2)" 124th Annual ASEE Conference, June 25 - 28, 2017, Columbus, Ohio
17. Alomari, H., Kiper, J., and **Walia, G.** "Using Web-Based Repository of Testing Tutorials (WReSTT) with a Cyber Learning Environment to Improve Testing Knowledge of Computer Science Students", 124th Annual ASEE Conference, June 25 - 28, 2017, Columbus, Ohio
18. Goswami, A.*, **Walia, G.**, McCourt, M., and Padmanabhan, G. "Improving the Requirements Inspection Abilities of Computer Science Students through Analysis of their Reading and Learning Styles", 124th Annual ASEE Conference, June 25 - 28, 2017, Columbus, Ohio
19. Anu, V.*, **Walia, G.**, and Bradshaw, G. "Incorporating Human Error Education into Software Engineering Courses via Error-based Inspections", The 48th ACM Technical Symposium on Computer Science Education, SIGCSE 2017. March 8 – 11, 2017, Seattle, Washington, USA [Acceptance Rate = 105/350 papers (30%)]. **EXEMPLARY CS EDUCATIONAL RESEARCH PAPER**

2016

20. Goswami, A.*, Walia, G. "Teaching Software Inspections to Software Engineering Students through Practical Training and Reflection," Accepted to appear in Special Issue on Computers in Education Journal, CoED'2016. (Accepted)
21. Anu, V.*, **Walia, G.**, Hu, W., Carver, J., and Bradshaw, G. "Error Abstraction Accuracy and Fixation during Error-based Requirements Inspections", Fast Abstract Track at 27th International Symposium on Software Reliability Engineering, Ottawa, Canada 2016.
22. Goswami, A.*, **Walia, G.**, and Rathod, U. "Using Learning Styles to Staff and Improve Software Inspection Team Performance", Industry Track at 27th IEEE International Symposium on Software Reliability Engineering, Ottawa, Canada (ISSRE 2016). [Acceptance Rate = 34% (45/130)] **(Accepted) BEST INDUSTRY PAPER AWARD NOMINEE**
23. Vaibhav Anu, Gursimran Walia, Wenhua Hu, Jeffrey Carver and Gary Bradshaw, "Using A Cognitive Psychology Perspective on Errors to Improve Requirements Quality: An Empirical Investigation", Research Track at 27th IEEE International Symposium on Software Reliability Engineering, ISSRE 2016. [Acceptance Rate = 34% (45/130)]
24. Goswami, A.*, **Walia, G.**, McCourt, M., and Padmanabhan, G. "Using Eye Tracking to Investigate Reading Patterns and Learning Styles of Software Requirement Inspectors to Enhance Inspection Team Outcomes", 10th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement. ESEM 2016. [Acceptance Rate = 22% (27/122)]
25. Hu, W., Carver, J., Anu, V. K.*, **Walia, G.**, and Bradshaw, G. "Detection of Requirement Errors and Faults via a Human Error Taxonomy: A Feasibility Study", 10th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement. ESEM 2016 [Acceptance Rate = 22% (27/122)]
26. Anu, V. K.*, **Walia, G.**, Hu, W., Carver, J., and Bradshaw, G. "Effectiveness of Human Error Taxonomy during Requirements Inspection: An Empirical Investigation", 2016 International Conference on Software Engineering and Knowledge Engineering. SEKE 2016

27. Goswami, A. *, **Walia, G.** "Teaching Software Inspections to Software Engineering Students through Practical Training and Reflection," 123rd Annual Society of Engineering Education Conference on Computer Education, June 26-29, ASEE 2016, New Orleans, LA.
28. Clarke, P., Davis, D., Fu, Y., Kiper, J., **Walia, G.** "Integrating Testing into CS/IT Courses Supported by a Cyberlearning Environment," Envisioning the Future of Undergraduate STEM Education: Research and Practice, Washington, DC, 2016.

2015

29. Goswami, A. *, **Walia, G.**, and Singh, A. "Using Learning Styles of Software Professionals to Improve their Inspection Team Performance," International Journal of Software Engineering and Knowledge Engineering. 2015.
30. Lacher, L., **Walia, G.**, Fagerholm, F., Pagels, M., Nygard, E. K., Münch, J. "A Behavior Marker tool for measurement of the Non-Technical Skills of Software Professionals: An Empirical Investigation," International Journal of Software Engineering and Knowledge Engineering. 2015.
31. Radermacher, A. *, **Walia, G.**, and Knudson, K. "Missed Expectations: Where CS Students Fall Short in the Software Industry," Accepted to Appear in the Special Issue (entitled 'Software Education Today') of 'CrossTalk – The Journal of Defense Software Engineers, January 2015.
32. Goswami, A. *, **Walia, G.**, and Singh, A. "Using Learning Styles of Software Professionals to Improve their Inspection Team Performance," Proceedings of the 27th International Conference on Software Engineering and Knowledge Engineering. July 6- 8, SEKE 2015 Pittsburgh, USA. p. 680-685.
33. Lacher, L., **Walia, G.**, Fagerholm, F., Pagels, M., Nygard, E. K., Münch, J. "A Behavior Marker tool for measurement of the Non-Technical Skills of Software Professionals: An Empirical Investigation," Proceedings of the 27th International Conference on Software Engineering and Knowledge Engineering. July 6-8, SEKE 2015, Pittsburg, USA. p. 409-414
34. Carver, J., **Walia, G.**, and Bradshaw, G. "First International Workshop on Applications of Human Error Research to Improve Software Engineering (WAHESE 2015)" The 37th International Conference on Software Engineering, ICSE 2015, Florence Italy. May 23, 2015. <http://humanerrorinse.org/workshops/WAHESE15/index.htm>

2014

35. Roudaki, A. *, Kong, J., **Walia, G.**, and Zheng, H. "A Framework for Bimanual Inter-Device Interaction," Accepted to appear in the December 2014 Special Issue of Journal of Visual Languages and Computing (JVLC), December 2014
36. Roudaki, A. *, Kong, J., **Walia, G.**, and Roudaki, A. * "PhoneLens: A Low-Cost Spatially Aware, Mobile Interaction Device", IEEE Transactions on Human-Machine Systems, Volume 44, Issue 3, June 2014, Pages 301-314
37. Roudaki, A. *, Kong, J., and **Walia, G.** "A Framework for Bimanual Inter-Device August 27-29, DMS 2014 Pennsylvania, USA. [Acceptance Rate = 39%]
38. Sharma, S. *, **Walia, G.** and Magel, K. "Does Domain Knowledge Increase Creativity during Requirements Development: An Empirical Study," Proceedings of 2014 International Conference on Software Engineering Research and Practice. July 21-24, SERP 2014 USA. [Acceptance Rate = 28%]
39. Khosla, S. *, Bender, L., **Walia, G.**, and Nygard, K. "Female Factor and Team Projects - A Social Sensitivity Perspective" Proceedings of 2014 International Conference on Software Engineering Research and Practice. July 21- 24, SERP 2014 USA. [Acceptance Rate = 28%]
40. Goswami, A. *, **Walia, G.**, and Abufardeh, S. "Using a Web-Based Testing Tool Repository in Programming Course: An Empirical Study" Proceedings of 2014 International Conference on Frontiers in Education: Computer Science and Computer Engineering. July 21- 24, FECS 2014 USA. [Acceptance Rate = 27%]
41. Radermacher, A. *, **Walia, G.**, Abufardeh, S., and Myronovych, O. "Guidelines for Implementing Pair Programming in Introductory CS Courses: Experience Report" Proceedings of 2014 International Conference on Frontiers in Education: Computer Science and Computer Engineering. July 21- 24, FECS 2014 USA. [Acceptance Rate = 27%]
42. Bender, L. *, **Walia, G.**, Fagerholm, F., Pagels, M., and Nygard, K. "Measurement of the Non-Technical Skills of Software Professionals: An Empirical Investigation" Proceedings of the 26th IEEE International Conference on Software Engineering and Knowledge Engineering. July 1- 3, SEKE 2014 Vancouver, Canada. [Acceptance Rate = 29.6%]

43. Goswami, A.* , **Walia, G.** "Improving the Cost Effectiveness of Software Inspection Teams: An Empirical Investigation" Proceedings of the 26th IEEE International Conference on Software Engineering and Knowledge Engineering. July 1- 3, SEKE 2014 Vancouver, Canada. [Acceptance Rate = 29.6%]
44. Hegde, R.* , **Walia, G.** "How to Enhance the Creativity of Software Developers: A Systematic Literature Review" Proceedings of the 26th IEEE International Conference on Software Engineering and Knowledge Engineering. July 1- 3, SEKE 2014 Vancouver, Canada. [Acceptance Rate = 29.6%]
45. Gupta, M.* , Aceituna, D.* , **Walia, G.**, Do, H. "Evaluating the Use of Model-Based Requirement Verification Method: An Empirical Study" Proceedings of the 26th IEEE International Conference on Software Engineering and Knowledge Engineering. July 1-3, SEKE 2014 Vancouver, Canada. [Acceptance Rate = 29.6%]
46. Aceituna, D.* , **Walia, G.**, Do, H., and Lee, Seok-Won. "Model-Based Requirements Verification Method: Conclusions from Two Controlled Experiments, Information and Software Technology Journal (JIST), Vol. 56, Issue 3, March 2014, Pages 321-344
47. Radermacher, A.* , **Walia, G.**, Knudson, D. "Investigating the Skill Gap Between Graduating Students and Industry Expectations", Proceedings of the 36th ACM International Conference on Software Engineering: Software Engineering Education and Training (SEET) Track, May 31 - June 7, ICSE 2014 Hyderabad, India. [Acceptance Rate = 16% (9/54)]
48. Clarke, P., Fu, Yujian., Kiper, J., **Walia, G.** "Workshop: Integrating Software Testing into Programming Courses" WISTPC 2014, Proceedings of the 45th ACM Technical on Computer Science Education - SIGCSE'2014. Atlanta, GA, USA.

2013

49. **Walia, G.**, and Carver, J. "Using Error Abstraction and Classification to Improve the Quality of Requirements: Conclusions from Family of Studies," International Journal of Empirical Software Engineering (ESE), Volume 18, Issue 4, Pages 625-658, August 2013
50. **Walia, G.**, Carver, J. "Using Capture-Recapture Models for Make Objective Post-Inspection Decisions" Proceedings of the 24th IEEE International Symposium on Software Reliability Engineering - ISSRE'2013, Industry Track. Pasadena, CA, USA. [Acceptance Rate = 35% (46/131)] **BEST INDUSTRY PAPER AWARD**
51. **Walia, G.**, Carver, J. "Using Error Information to Improve Software Quality" Proceedings of the 24th IEEE International Symposium on Software Reliability Engineering - ISSRE'2013, Industry Track. Pasadena, CA, USA. [Acceptance Rate = 35% (46/131)]
52. Goswami, A.* , **Walia, G.** "An Empirical Study of the Effect of Learning Styles on the Faults found During the Software Inspection" Proceedings of the 24th IEEE International Symposium on Software Reliability Engineering - ISSRE'2013, Research Track. Pasadena, CA, USA. [Acceptance Rate = 35% (46/131)] **BEST RESEARCH PAPER AWARD**
53. Radermacher, A.* , **Walia, G.** "Gaps Between Industry Expectations and the Abilities of Graduates: Systematic Literature Review Findings" Proceedings of the 44th ACM Technical Symposium on on Computer Science Educational - SIGCSE'2013: The Changing Face of Computing. March 6 - 9, 2013 Denver, Colorado, USA. [Acceptance Rate = 37.8% (111/293)]

2012

54. Potala, Y.* , Annadi, R.* , Kong, J., **Walia, G.**, and Nygard, K. "Adapting Web Page Tables on Mobile Devices," International Journal of Handheld Computing Research (IJHCR), Volume 3, Issue 1, Pages 1-22, January 2012
55. Radermacher, A.* , **Walia, G.** "Improving Student Learning Outcomes with Pair Programming" Proceedings of the 8th ACM International Conference on Computing Educational Research. September 10-12, ICER 2012 Auckland, New Zealand. pp. 87-92 [Acceptance Rate = 39% (21/53)]
56. Bender, L.* , **Walia, G.**, Kambhampaty, K.* , Nygard, K. E., and Nygard, T. E. "Social Sensitivity Correlations with the Effectiveness of Team Process Performance: An Empirical Study" Proceedings of the 8th ACM International Conference on Computing Educational Research. September 10-12, ICER 2012 Auckland, New Zealand. pp. 39-46 [Acceptance Rate = 39% (21/53)]
57. Mandala, N.* , **Walia, G.**, Carver, J. and Nagappan, N. "Application of Kusumoto Cost-Metric to Evaluate the Cost Effectiveness of Software Inspections" Proceedings of the 6th ACM-IEEE International Symposium on Empirical Software Engineering. Sep 19-20, ESEM 2012. Lund University, Sweden. pp. 221-230 [Acceptance Rate = 25% (24/95)]
58. Mandala, N.* , **Walia, G.** "Evaluating the Cost-Effectiveness of Inspecting the Requirement Documents: An Empirical Study," Proceedings of the 24th International Conference on Software Engineering and

Knowledge Engineering. July 1 - July 3, SEKE 2012 Redwood City, San Francisco Bay, USA. pp. 45-50 [Acceptance Rate = 33%]

59. Bender, L. *, **Walia, G.**, Kambhampaty, K. *, Nygard, K. E., and Nygard, T. E. "Strategies for Teaching Ideation and Ethics in Computer Science Classroom" Proceedings of the 8th International Conference on Frontiers in Education: Computer Science and Computer Engineering. July 16-19, FECS 2012 Nevada, USA. [Acceptance Rate = 29%]
60. Radermacher, A. *, **Walia, G.** and Rummelt, R., "Assigning Student Programming Pairs Based on Their Mental Model," Proceedings of the 43rd ACM Technical Symposium on Computer Science Education. February 29 – March 3, SIGCSE 2012: Teaching, Learning, and Collaborating. Raleigh, North Carolina, USA. [Acceptance Rate = 34.6% (100/289)]
61. Bender, L. *, **Walia, G.**, Kambhampaty, K. *, Nygard, K. E., and Nygard, T. E. "Social Sensitivity and Classroom Team Projects: An Empirical Investigation," Proceedings of the 43rd ACM Technical Symposium on Computer Science Education. February 29 – March 3, SIGCSE 2012: Teaching, Learning, and Collaborating. Raleigh, North Carolina, USA. [Acceptance Rate = 34.6% (100/289)]

2011

62. Aceituna, D. *, Do, H., **Walia, G.**, and Lee, Seok-Won. "Evaluating the Use of Model-Based Requirements Verification Method: A Feasibility Study" IEEE International Workshop on Empirical Requirements Engineering. August 30, Empire 2011 Trento, Italy. pp. 13-20. [Acceptance Rate = 30%(9/30)]
63. Nygard, K. E., Bender, L. *, **Walia, G.**, Kong, J., Gagneja, K., and LeNoue, M. "Collaboration Using Social Networks for Team Projects" Proceedings of the 7th International Conference on Frontiers in Education: Computer Science and Computer Engineering. July 18-21, FECS' 2011 Nevada, USA. [Acceptance Rate = 23%]
64. Radermacher, A. *, **Walia, G.** "Investigating Student-Instructor Interactions When Using Pair Programming: An Empirical Study," Proceedings of the 24th IEEE-CS Conference on Software Engineering Education and Training. May 22-24, CSEE&T 2011 Waikiki, Honolulu, Hawaii. pp. 41-50. [Acceptance Rate = 30%]
65. Radermacher, A. *, **Walia, G.** "Investigating the Effective Implementation of Pair Programming: An Empirical Investigation," Proceedings of the 42nd ACM Technical Symposium on Computer Science Education. March 9-12, SIGCSE 2011 Dallas, Texas, USA. pp. 655-660. [Acceptance Rate = 34% (107/315)]

2010

66. **Walia, G.**, Carver, J. "Evaluate the Use of Requirement Error Abstraction and Classification Method for Preventing Errors During Artifact Creation: A Feasibility Study." Proceedings of the 21st IEEE International Symposium on Software Reliability Engineering. November 1-4, ISSRE 2010. San Jose, California, USA. pp. 81-90. [Acceptance Rate =31% (40/130)]

2006-2009

67. **Walia, G.**, and Carver, J. "Evaluating the Effect of the Number of Naturally Occurring Faults on the Estimates Produced by Capture-Recapture Models," Proceedings of the 2nd IEEE International Conference on Software Testing, Verification, and Validation. April 1-4, ICST 2009. Denver, CO, USA. pp. 210-219. [Acceptance Rate = 23%]
68. **Walia, G.**, and Carver, J. "A Systematic Literature Review to identify a classify Software Requirement Errors" Information and Software Technology (JIST), Vol. 51, Issue 7, Pages 1087-1109, July 2009
69. **Walia, G.**, and Carver, J. "STUDENT PAPER: The Effect of the Number of Defects on Estimates Produced by Capture-Recapture Models," Proceedings of the 19th IEEE International Symposium on Software Reliability Engineering. November 10-14, ISSRE 2008. Seattle, WA, USA. p. 305-306. [Acceptance Rate = 30%]
70. **Walia, G.**, and Carver, J. "Evaluation of Capture-Recapture Models for Estimating the Abundance of Naturally Occurring Defects." Proceedings of the 2nd ACM-IEEE International Symposium of Empirical Software Engineering and Measurement. October 9-10, ESEM 2008. Kaiserslautern, Germany. pp. 158-167. [Acceptance Rate = 28% (28/100)]
71. **Walia, G.**, Carver, J. and Nagappan, N. "The Effect of the Number of Inspectors on the Defect Estimates Produced by Capture-Recapture Models." Proceedings of the 30th ACM/IEEE International Conference on Software Engineering. May 10-18, ICSE 2008. Leipzig, Germany. p. 331-340. [Acceptance Rate = 15% (56/371)]

72. **Walia, G.**, Carver, J. and Philip, T. "Requirement Error Abstraction and Classification: A Control Group Replicated Study." Proceedings of the 18th IEEE International Symposium on Software Reliability Engineering., November 5-9, ISSRE 2007. Trollhättan, Sweden. pp. 71-80. [Acceptance Rate = 30%]
73. **Walia, G.**, and Carver, J. "Requirements Error Abstraction and Classification: An Empirical Study." Proceedings of the 2006 International Symposium on Empirical Software Engineering. Sept. 21-22, ISESE 2006. Rio de Janeiro, Brazil. pp. 336-345. [Acceptance Rate = 46% (40/87)]

Teaching

- *Software Requirements Definition and Analysis* (CSCI 715)- Fall 2013, Fall 2014, Fall 2015, Fall 2016, Fall 2017
- *Software Complexity Metrics* (CSCI 847)– Fall 2013, Fall 2014
- *Theoretical Computer Science II* (CSCI 336)– Spring 2013, Spring 2014, Spring 2015, Spring 2016, Summer 2016, Spring 2017, Spring 2018, Summer 2018
- *Software Project Planning and Estimation* (CSCI 714)- Spring 2011, Summer 2013, Summer 2014, Spring 2014, Fall 2014, Fall 2015, Summer 2015, Summer 2016, Summer 2017, Summer 2018
- *Empirical Methods in Software Engineering* (CSCI 848)- Spring 2010, Spring 2011, Fall 2011, Fall 2013, Fall 2015, Spring 2017
- *System Analysis and Design using UML* (CSCI 315)- Fall 2009, Fall 2010, Fall 2011, Fall 2013, Fall 2014
- *Graduate Seminar – Empirical Software Engineering* (CSCI 790)– Fall 2010 and Fall 2011

Synergistic Activities

- National Science Foundation (NSF): Review Panelist (2009, 2011, 2016, 2017); Graduate Research Fellowship Proposals (GRFP);
- Manuscript Reviewer: Computing Reviews; Software Quality Journal (SQJ), Information Science Journal (ISJ), Annals of Nuclear Energy, International Journal of Empirical Software Engineering (EMSE), Journal of Information and Software Technology (JIST); International Journal of Library and Information Science (IJLIS); Transactions on Computing Education (TOCE); International Symposium on Empirical Software Engineering and Measurement (ESEM), International Conference on Software Engineering and Knowledge (SEKE), International Conference on Software Testing, Verification, and Validation (ICST), ACM Symposium on Computer Science Education (SIGCSE), ASEE Computers in Education Division, Innovation and Technology in Computer Science Education (ITICSE), Software Engineering Education and Training (CSEE&T); International Symposium on High Assurance Systems Engineering (HASE), International Conference on Advances and Trends in Software Engineering;
- Program Committee Member: International Symposium on High Assurance Systems Engineering (HASE – 2013, 2014, 2015, 2016, 2018), International Conference on Software Engineering and Knowledge (SEKE – 2012, 2013, 2014, 2015, 2016), World Congress on Computing and Communication Technologies (WCCCT), International Symposium on Empirical Software Engineering and Measurement (ESEM – 2013, 2014, 2015, 2016, 2017), ACM Symposium on Computer Science Education (SIGCSE – 2012, 2013, 2014, 2015, 2016); International Conference on IT Convergence and Security;
- Key notes- World Congress on Computing and Communication Technologies (WCCCT); International Conference on Emerging Research in Computing, Information, Communication and Applications (ERCICA'2018)
- Workshop Organizer: Third Workshop on Integrating Software Testing into Programming Courses (WISTPC 2013); First International Workshop on Applications of Human Error Research to Improve Software Engineering (WAHESE 2015); NSF Sponsored Workshops on Integrating Software Testing into Programming Courses (WISTPC-14-1, WISTPC-14-2, WISTPC-15, WISTPC-16, WISTPC-17, WISTPC-18);
- Affiliations: IEEE Member, International Software Engineering Research Network (ISERN), Advisory Board on NSF Collaborative Project to Integrate Testing into Advanced CS/IT Courses Supported by a Cyber Learning Environment, Empirical Software Engineering and Social Sensitivity Research Group at NDSU

- *NDSU Affiliations*: College of Science and Math Curriculum Committee (2015-current), CS Department Curriculum Committee (2016-current), University Technology and Instructional Service Standing Committee (2015-current), CS and SE Graduate Admission Committee, University Grade Appeal Committee (2015-current), CS Faculty Search Committee, SE Comprehensive Exam Chair,

Current Graduate Students

- Ishan Subedi; *MS (~2018)*
- Navneet Deosi; *MS (~2018)*
- Maninder Singh; *PhD (~2019)*
- Mourya Reddy; *PhD (~2019)*
- Alex Radermacher; *PhD (~2020)*
- Avijeet Tomar; *PhD (~2020)*
- Michael Henson; *PhD (~2020)*
- Tushar Aggarwal; *PhD (~2020)*
- James Willenbring; *PhD (~2020)*
- Tamaike Brown; *PhD (~2020)*

Graduated Students

PhD Students

- Vaibhav Kumar Anu; *PhD (2018) [Faculty at Montclair State University, USA]*
- Anurag Goswami; *PhD- 05/20/2017 [Faculty at Bennett University, India]*
- Lisa (Bender) Lacher; *PhD –12/19/2013 [Faculty at University of Houston, USA]*

MS Thesis and MS Project Students

- Kavitha Manjunath; *MS- 02/23/2018*
- Shishir Hegde; *MS- 04/13/2017*
- Pranay Kumar; *MS- 04/03/2017*
- Judi Simley; *MS- 12/02/2016*
- Ashish Singh; *MS- 11/09/2016*
- Bonnie Jan; *MS- 07/1/2016*
- Abhinav Singh; *MS- 05/11/2016*
- Zhou Lu; *MS – 4/13/2016*
- Keith Abeyratne; *MS - 08/25/2014*
- Nilukshi Fonseka; *MS - 05/16/2014*
- Sourabh Khosla; *MS - 05/04/2014*
- Sana Rehman; *MS - 04/10/2014*
- Sonu Sharma; *MS - 04/03/2014*
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