**Claire Le Goues**

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**Professional Preparation**

Harvard College

University of Virginia

University of VirginiaComputer Science

Computer Science

Computer Science

B.A. 2006

M.S. 2009

Ph.D. 2013

**Appointments**

2019—present Associate Professor, School of Computer Science, Carnegie Mellon University

2013—2019 Assistant Professor, School of Computer Science, Carnegie Mellon University

**Relevant Products**

1. Rijnard van Tonder and Claire Le Goues. 2019. Lightweight multi-language syntax transformation with parser parser combinators. In Proceedings of the 40th ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI 2019). ACM, New York, NY, USA, 363-378. DOI: <https://doi.org/10.1145/3314221.3314589>
2. Xuan-Bach D. Le, Duc-Hiep Chu, David Lo, Claire Le Goues, and Willem Visser. 2017. S3: syntax- and semantic-guided repair synthesis via programming by examples. In Proceedings of the 2017 11th Joint Meeting on Foundations of Software Engineering (ESEC/FSE 2017). ACM, New York, NY, USA, 593-604. DOI: <https://doi.org/10.1145/3106237.3106309>
3. Rijnard van Tonder and Claire Le Goues. 2018. Static automated program repair for heap properties. In Proceedings of the 40th International Conference on Software Engineering (ICSE '18). ACM, New York, NY, USA, 151-162. DOI: https://doi.org/10.1145/3180155.3180250
4. Christopher Steven Timperley, Susan Stepney, and Claire Le Goues. “An investigation into the use of mutation analysis for automated program repair”. In: Proceedings of the 9th International Symposium on Search Based Software Engineering (SSBSE). Vol. 10452. Lecture Notes in Computer Science. Paderborn, Germany: Springer, Sept. 2017, pp. 99–114. DOI: 10.1007/978-3-319-66299-2\_7.
5. Zhen Yu Ding, Yiwei Lyu, Christopher S. Timperley, and Claire Le Goues. 2019. Leveraging program invariants to promote population diversity in search-based automatic program repair. In Proceedings of the 6th International Workshop on Genetic Improvement (GI '19). IEEE Press, Piscataway, NJ, USA, 2-9. DOI: https://doi.org/10.1109/GI.2019.00011

**Other Significant Products**

1. Yalin. Ke, Kathryn T. Stolee, Claire Le Goues, and Yuriy Brun. Repairing programs with semantic code search. In Proceedings of the 30th IEEE/ACM International Conference On Automated Software Engineering (ASE), Lincoln, NE, USA, November 2015.
2. Sunghun Kim, Claire Le Goues, Michael Pradel, and Abhik Roychoudhury. Automated Program Repair (Dagstuhl Seminar 17022). Dagstuhl Reports, 7(1):19–31, 2017.
3. Edward K. Smith, Earl T. Barr, Claire Le Goues, and Yuriy Brun. 2015. Is the cure worse than the disease? overfitting in automated program repair. In Proceedings of the 2015 10th Joint Meeting on Foundations of Software Engineering (ESEC/FSE 2015). ACM, New York, NY, USA, 532-543. DOI: <https://doi.org/10.1145/2786805.2786825>
4. Xuan Bach D. Le, David Lo, and Claire Le Goues. History Driven Program Repair, In IEEE 23rd International Conference on Software Analysis, Evolution, and Reengineering (SANER), 2016, pp. 213-224.
5. Claire Le Goues, Neal Holtschulte, Edward K. Smith, Yuriy Brun, Premkumar Devanbu, Stephanie Forrest, and Westley Weimer, The ManyBugs and IntroClass Benchmarks for Automated Repair of C Programs, IEEE Transactions on Software Engineering (TSE), 2015.

**Synergistic Activities**

1. Co-founder and co-director, REUSE summer program (reuse.cs.cmu.edu)
2. PC Co-Chair, ASE 2020
3. Member Undergraduate Review Committee at CMU’s School of Computer Science, the school-wide curriculum committee for undergraduate CS education at Carnegie Mellon University.
4. Mentor, Girls of Steel, all-girls High School First Robotics Competition Team, hosted at CMU.
5. Organization: SC member (2014—2017), ICSE program board (2019), IEEE TSE Review Board (2017—present)