References of papers included in SLR after coarse-grained inclusion exclusion step

[1] Z. Micskei, Z. Szatmári, J. Oláh, and I. Majzik, "A Concept for Testing Robustness and Safety of the Context-Aware Behaviour of Autonomous Systems," in Agent and Multi-Agent Systems. Technologies and Applications, 2012, pp. 504–513.

[2] M. P. Webster et al., "An Assurance-based Approach to Verification and Validation of Human-Robot Teams," ArXiv, vol. abs/1608.07403, 2016.

[3] J. Morse, D. Araiza-Illan, K. Eder, J. Lawry, and A. Richards, "A fuzzy approach to qualification in design exploration for autonomous robots and systems," IEEE Int. Conf. Fuzzy Syst., 2017.

[4] A. Gambi et al., "A hybrid method of assurance and testing for improved confidence in autonomous space systems," IEEE Conf. Intell. Transp. Syst. Proceedings, ITSC, vol. 2018-March, no. 209989, pp. 1–12, 2018.

[5] G. A. Martin and C. E. Hughes, "A scenario generation framework for automating instructional support in scenario-based training," Spring Simul. Multiconference 2010, SpringSim'10, no. 1998, pp. 1–6, 2010.

[6] C. Rotondo, "A Survey for Testing Self-organizing , Adaptive Systems in Industry 4 . 0," no. March, 2019.

[7] A. M. Nascimento et al., "A Systematic Literature Review about the impact of Artificial Intelligence on Autonomous Vehicle Safety," arXiv Prepr. arXiv1904.02697, 2019.

[8] J. F. Leathrum, R. R. Mielke, Y. Shen, and H. Johnson, "Academic/Industry Educational Lab for Simulation-Based Test & Evaluation of Autonomous Vehicles," in Proceedings of the 2018 Winter Simulation Conference, 2018, pp. 4026–4037.

[9] G. E. Mullins, A. G. Dress, P. G. Stankiewicz, J. D. Appler, and S. K. Gupta, "Accelerated Testing and Evaluation of Autonomous Vehicles via Imitation Learning," Proc. - IEEE Int. Conf. Robot. Autom., pp. 5636–5642, 2018.

[10] I. R. Jenkins, L. O. Gee, A. Knauss, H. Yin, and J. Schroeder, "Accident Scenario Generation with Recurrent Neural Networks," IEEE Conf. Intell. Transp. Syst. Proceedings, ITSC, vol. 2018-Novem, pp. 3340–3345, 2018.

[11] G. E. Mullins, P. G. Stankiewicz, R. C. Hawthorne, and S. K. Gupta, "Adaptive generation of challenging scenarios for testing and evaluation of autonomous vehicles," J. Syst. Softw., vol. 137, pp. 197–215, 2018.

[12] J. D'Ambrosio et al., "An MBSE Approach for Development of Resilient Automated Automotive Systems," Systems, vol. 7, no. 1, p. 1, 2019.

[13] A. Kasoju, K. Petersen, and M. V. Mäntylä, "Analyzing an automotive testing process with evidence-based software engineering," Inf. Softw. Technol., vol. 55, no. 7, pp. 1237–1259, 2013.

[14] C. B. S. T. Molina, J. R. De Almeida, L. F. Vismari, R. I. R. Gonzalez, J. K. Naufal, and J. B. Camargo, "Assuring Fully Autonomous Vehicles Safety by Design: The Autonomous Vehicle Control (AVC) Module Strategy," Proc. - 47th Annu. IEEE/IFIP Int. Conf. Dependable Syst. Networks Work. DSN-W 2017, pp. 16–21, 2017.

[15] I. Y. Noy, D. Shinar, and W. J. Horrey, "Automated driving: Safety blind spots," Saf. Sci., vol. 102, no. March 2017, pp. 68–78, 2018.

[16] G. E. Mullins, P. G. Stankiewicz, and S. K. Gupta, "Automated generation of diverse and challenging scenarios for test and evaluation of autonomous vehicles," Proc. - IEEE Int. Conf. Robot. Autom., pp. 1443–1450, 2017.

[17] D. Loiacono, L. Cardamone, and P. L. Lanzi, "Automatic track generation for high-end racing games using evolutionary computation," IEEE Trans. Comput. Intell. AI Games, vol. 3, no. 3, pp. 245–259, 2011.

[18] A. Gambi, M. Mueller, and G. Fraser, "Automatically testing self-driving cars with search-based procedural content generation," Proc. 28th ACM SIGSOFT Int. Symp. Softw. Test. Anal. - ISSTA 2019, pp. 318–328, 2019.

[19] A. J. Alnaser, M. I. Akbas, A. Sargolzaei, and R. Razdan, "Autonomous Vehicles Scenario Testing Framework and Model of Computation." Dec-2019.

[20] N. Rungta et al., "Aviation safety: Modeling and analyzing complex interactions between humans and automated systems," ACM Int. Conf. Proceeding Ser., no. May, pp. 27–37, 2013.

[21] D. O. T. Hs, "Basis of Design for Advanced Crash-Avoidance Technology Test Course," no. March, 2014.

[22] J. B. Lyons, M. A. Clark, A. R. Wagner, and M. J. Schuelke, "Certifiable trust in autonomous systems: Making the intractable tangible," AI Mag., vol. 38, no. 3, pp. 37–49, 2017.

[23] F. Dinmohammadi et al., "Certification of Safe and Trusted Robotic Inspection of Assets," Proc. - 2018 Progn. Syst. Heal. Manag. Conf. PHM-Chongqing 2018, pp. 276–284, 2019.

[24] C. Muhlbacher, G. Steinbauer, M. Reip, and S. Gspandl, "Constraint-based testing of an industrial multi-robot navigation system," Proc. - 2019 IEEE Int. Conf. Artif. Intell. Testing, AITest 2019, pp. 129–137, 2019.

[25] C. S. Timperley, A. Afzal, D. S. Katz, J. M. Hernandez, and C. Le Goues, “Crashing Simulated Planes is Cheap: Can Simulation Detect Robotics Bugs Early?,” Proc. - 2018 IEEE 11th Int. Conf. Softw. Testing, Verif. Validation, ICST 2018, pp. 331–342, 2018.
[26] S. Noh, “Decision-Making Framework for Autonomous Driving at Road Intersections: Safeguarding Against Collision, Overly Conservative Behavior, and Violation Vehicles,” IEEE Trans. Ind. Electron., vol. 66, no. 4, pp. 3275–3286, 2019.
[27] S. Ulbrich, T. Menzel, A. Reschka, F. Schuldt, and M. Maurer, “Defining and Substantiating the Terms Scene, Situation, and Scenario for Automated Driving,” IEEE Conf. Intell. Transp. Syst. Proceedings, ITSC, vol. 2015-Octob, pp. 982–988, 2015.
[28] W. G. Najm et al., “Description of Light-Vehicle Pre-Crash Scenarios for Safety Applications Based On Vehicle-to-Vehicle Communications,” no. May, 2013.
[29] J. M. James, D. W. Miller, and A. Saenz-Otero, “Development of a Verification and Validation Framework for Autonomous Soft-Docking of Spacecraft with Uncertain Dynamic Properties,” 2016.
[30] P. Junietz, W. Wachenfeld, K. Klonecki, and H. Winner, “Evaluation of Different Approaches to Address Safety Validation of Automated Driving,” IEEE Conf. Intell. Transp. Syst. Proceedings, ITSC, vol. 2018-Novem, pp. 491–496, 2018.
[31] C. D. Nguyen, A. Perini, P. Tonella, S. Miles, M. Harman, and M. Luck, “Evolutionary testing of autonomous software agents,” Proc. Int. Jt. Conf. Auton. Agents Multiagent Syst. AAMAS, vol. 1, pp. 364–371, 2009.
[32] C. D. Nguyen, A. Perini, and P. Tonella, “Experimental Evaluation of Ontology-Based Test Generation for Multi-Agent Systems,” in Agent-Oriented Software Engineering IX: 9th International Workshop, AOSE 2008 Estoril, Portugal, May 12-13, 2008 Revised Selected Papers, Berlin, Heidelberg: Springer-Verlag, 2009, pp. 187–198.
[33] G. J. Uriagereka, R. Lattarulo, J. P. Rastelli, E. A. Calonge, A. Ruiz Lopez, and H. Espinoza Ortiz, “Fault injection method for safety and controllability evaluation of automated driving,” IEEE Intell. Veh. Symp. Proc., no. Iv, pp. 1867–1872, 2017.
[34] C. Torens and F.-M. Adolf, “Formal Requirements and Model-Checking for V&V Automation of a RPAS Mission Management System,” 2015.
[35] N. Li, D. W. Oyler, M. Zhang, Y. Yildiz, I. Kolmanovsky, and A. R. Girard, “Game theoretic modeling of driver and vehicle interactions for verification and validation of autonomous vehicle control systems,” IEEE Trans. Control Syst. Technol., vol. 26, no. 5, pp. 1782–1797, 2018.
[36] S. Toma, E. Swanson, J. D. Smith, W. G. Najm, C. Volpe National Transportation Systems, and A. National Highway Traffic Safety, “Heavy Truck Pre-Crash Scenarios for Safety Applications Based on Vehicle-to-Vehicle Communications,” no. June, p. 86p, 2014.
[37] G. Bagschik, A. Reschka, T. Stolte, and M. Maurer, “Identification of potential hazardous events for an Unmanned Protective Vehicle,” IEEE Intell. Veh. Symp. Proc., vol. 2016-Augus, no. Iv, pp. 691–697, 2016.
[38] J. S. Brar and B. Caulfield, “Impact of autonomous vehicles on pedestrians’ safety,” IEEE Conf. Intell. Transp. Syst. Proceedings, ITSC, vol. 2018-March, pp. 714–719, 2018.
[39] D. Araiza-Illan, A. G. Pipe, and K. Eder, “Intelligent agent-based stimulation for testing robotic software in human-robot interactions,” ACM Int. Conf. Proceeding Ser., pp. 9–16, 2016.
[40] M. Wood et al., Safety First For Automated Driving (SaFD), “Safety first for automated driving,” 2019.
[41] J. Guo, U. Kurup, and M. Shah, “Is It Safe to Drive? An Overview of Factors, Metrics, and Datasets for Driveability Assessment in Autonomous Driving,” IEEE Trans. Intell. Transp. Syst., pp. 1–17, 2019.
[42] Tolk, Andreas, "Merging Two Worlds: Agent-Based Simulation Methods for Autonomous Systems" (2015). Computational Modeling and Simulation Engineering Faculty Publications. 32. https://digitalcommons.odu.edu/msve_fac_pubs/32
[43] M. Lindvall, A. Porter, G. Magnusson, and C. Schulze, “Metamorphic Model-based Testing of Autonomous Systems,” Proc. - 2017 IEEE/ACM 2nd Int. Work. Metamorph. Testing, MET 2017, pp. 35–41, 2017.
[44] J. Bach, S. Otten, and E. Sax, “Model based scenario specification for development and test of automated driving functions,” IEEE Intell. Veh. Symp. Proc., vol. 2016-Augus, no. Iv, pp. 1149–1155, 2016.
[45] D. Araiza-Illan, A. G. Pipe, and K. Eder, “Model-based Test Generation for Robotic Software: Automata versus Belief-Desire-Intention Agents,” pp. 1–16, 2016.
[46] A. L. Svenson, “NHTSA Update : Connected Vehicles V2V Communications for Safety V2V Overview,” 2015.
[47] A. Knauss, J. Schroder, C. Berger, and H. Eriksson, “Paving the roadway for safety of automated vehicles: An empirical study on testing challenges,” IEEE Intell. Veh. Symp. Proc., no. Iv, pp. 1873–1880, 2017.
[48] P. Koopman, “Practical Experience Report: Automotive Safety Practices vs. Accepted Principles,” Lect. Notes Comput. Sci. (including Subser. Lect. Notes Artif. Intell. Lect. Notes Bioinformatics), vol. 11093 LNCS, pp. 3–11, 2018.
[49] E. Galin, A. Peytavie, N. Maréchal, and E. Guérin, “Procedural generation of roads,” Comput. Graph. Forum, vol. 29, no. 2, pp. 429–438, 2010.
[50] F. Taal, “Procedural Generation of Traffic Signs,” pp. 1–7, 2016.

[51] F. Taal, “Procedural Generation of Traffic Signs,” (Masters’ Thesis), Delft University of Technology, Netherlands, 2016.
[52] A. Afzal, “Quality assurance automation in autonomous systems,” ESEC/FSE 2018 - Proc. 2018 26th ACM Jt. Meet. Eur. Softw. Eng. Conf. Symp. Found. Softw. Eng., pp. 948–951, 2018.
[53] D. Araiza-Illan and K. Eder, “Safe and Trustworthy Human Robot Interaction,” Humanoid Robot. A Ref., pp. 1–23, 2017.
[54] T. Winkle, “Safety Benefits of Automated Vehicles: Extended Findings from Accident Research for Development, Validation and Testing,” in Autonomous Driving: Technical, Legal and Social Aspects, M. Maurer, J. C. Gerdes, B. Lenz, and H. Winner, Eds. Berlin, Heidelberg: Springer Berlin Heidelberg, 2016, pp. 335–364.
[55] T. Menzel, G. Bagschik, and A. M. Maurer, “Scenarios for Development, Test and Validation of Automated Vehicles,” IEEE Intell. Veh. Symp. Proc., vol. 2018-June, pp. 1821–1827, 2018.
[56] R. Alexander, H. Hawkins, and D. Rae, “Situation coverage – a coverage criterion for testing autonomous robots,” pp. 1–20, 2015.
[57] A. Knauss, J. Schroder, C. Berger, and H. Eriksson, “Software-related challenges of testing automated vehicles,” Proc. - 2017 IEEE/ACM 39th Int. Conf. Softw. Eng. Companion, ICSE-C 2017, pp. 328–330, 2017.
[58] A. Pütz, A. Zlocki, J. Bock, and L. Eckstein, “System validation of highly automated vehicles with a database of relevant traffic scenarios,” 12th ITS Eur. Congr., no. June, pp. 1–8, 2017.
[59] D. Araiza-Illan, D. Western, A. G. Pipe, and K. Eder, “Systematic and Realistic Testing in Simulation of Control Code for Robots in Collaborative Human-Robot Interactions,” in Towards Autonomous Robotic Systems, 2016, pp. 20–32.
[60] A. C. Serban, E. Poll, and J. Visser, “Tactical safety reasoning. A case for autonomous vehicles,” IEEE Veh. Technol. Conf., vol. 2018-June, no. 1, pp. 1–5, 2018.
[61] E. Rocklage, “Teaching self-driving cars to dream: A deeply integrated, innovative approach for solving the autonomous vehicle validation problem,” IEEE Conf. Intell. Transp. Syst. Proceedings, ITSC, vol. 2018-March, pp. 1–7, 2018.
[62] J. Shin and J. Woo, “Test and evaluation for the autonomous multi-zone navigation coverage test in IEC 62885-7,” Int. Conf. Control. Autom. Syst., vol. 2017-Octob, no. Iccas, pp. 1949–1951, 2017.
[63] F. Wotawa, “Testing Autonomous and Highly Configurable Systems: Challenges and Feasible Solutions,” in Automated Driving: Safer and More Efficient Future Driving, D. Watzenig and M. Horn, Eds. Cham: Springer International Publishing, 2017, pp. 519–532.
[64] H. Altinger, F. Wotawa, and M. Schurius, “Testing Methods Used in the Automotive Industry: Results from a Survey,” in Proceedings of the 2014 Workshop on Joining AcadeMiA and Industry Contributions to Test Automation and Model-Based Testing, 2014, pp. 1–6.
[65] P. Helle, W. Schamai, and C. Strobel, “Testing of Autonomous Systems - Challenges and Current State-of-the-Art,” INCOSE Int. Symp., vol. 26, no. 1, pp. 571–584, 2016.
[66] A. Gaujens, A. Benini, A. Mancini, and S. Longhi, “Testing of cooperative tasks for Unmanned Aerial and ground platforms,” MESA 2014 - 10th IEEE/ASME Int. Conf. Mechatron. Embed. Syst. Appl. Conf. Proc., no. Mcdc, pp. 1–6, 2014.
[67] S. Feng, Y. Feng, C. Yu, Y. Zhang, and H. X. Liu, “Testing Scenario Library Generation for Connected and Automated Vehicles, Part I: Methodology,” ArXiv, vol. abs/1905.03419, 2019.
[68] S. Feng et al., “Testing Scenario Library Generation for Connected and Automated Vehicles, Part II: Case Studies,” pp. 1–12, 2019.
[69] R. D. Alexander, R. Ashmore, and A. Banks, “The State of Solutions for Autonomous Systems Safety,” 2018.
[70] G. Palmer, A. Selwyn, and D. Zwillinger, “The ``Trust V'': Building and Measuring Trust in Autonomous Systems,” in Robust Intelligence and Trust in Autonomous Systems, R. Mittu, D. Sofge, A. Wagner, and W. F. Lawless, Eds. Boston, MA: Springer US, 2016, pp. 55–77.
[71] P. Nitsche, “Safety-critical scenarios and virtual testing procedures for automated cars at road intersections,” 2018.
[72] A. Lamm and A. Hahn, “Towards critical-scenario based testing with maritime observation data,” 2018 Ocean. - MTS/IEEE Kobe Techno-Oceans, Ocean. - Kobe 2018, 2018.
[73] N. Baumgartner, W. Gottesheim, S. Mitsch, W. Retschitzegger, and W. Schwinger, “Towards duplicate detection for situation awareness based on spatio-temporal relations,” Lect. Notes Comput. Sci. (including Subser. Lect. Notes Artif. Intell. Lect. Notes Bioinformatics), vol. 6427 LNCS, no. PART 2, pp. 1097–1107, 2010.
[74] A. Andrews, M. Abdelgawad, and A. Gario, “Towards world model-based test generation in autonomous systems,” Model. 2015 - 3rd Int. Conf. Model. Eng. Softw. Dev. Proc., pp. 165–176, 2015.
[75] S. Ulbrich et al., “Towards a Functional System Architecture for Automated Vehicles,” pp. 1–16, 2017.
[76] L. Cardamone, P. L. Lanzi, and D. Loiacono, “TrackGen: An interactive track generator for TORCS and Speed-Dreams,” Appl. Soft Comput. J., vol. 28, pp. 550–558, 2015.
[77] M. R. Zofka et al., “Traffic Participants in the Loop: A Mixed Reality-Based Interaction Testbed for the Verification and Validation of Autonomous Vehicles,” IEEE Conf. Intell. Transp. Syst. Proceedings, ITSC, vol. 2018-Novem, pp. 3583–3590, 2018.

[78] D. Wilkie, J. Sewall, and M. C. Lin, “Transforming GIS data into functional road models for large-scale traffic simulation,” IEEE Trans. Vis. Comput. Graph., vol. 18, no. 6, pp. 890–901, 2012.
[79] M. Fränzle, T. Gezgin, H. Hungar, S. Puch, and G. Sauter, “Using Guided Simulation to Assess Driver Assistance System,” in FORMS/FORMAT 2010, 2011, pp. 195–205.
[80] V. Agaram et al., “Validation and Verification of Automated Road Vehicles,” in Road Vehicle Automation 3, G. Meyer and S. Beiker, Eds. Cham: Springer International Publishing, 2016, pp. 201–210.
[81] M. Paulweber, “Validation of Highly Automated Safe and Secure Systems,” in Automated Driving: Safer and More Efficient Future Driving, D. Watzenig and M. Horn, Eds. Cham: Springer International Publishing, 2017, pp. 437–450.
[82] T. Tettamanti, M. Szalai, S. Vass, and V. Tihanyi, “Vehicle-In-the-Loop Test Environment for Autonomous Driving with Microscopic Traffic Simulation,” 2018 IEEE Int. Conf. Veh. Electron. Safety, ICVES 2018, 2018.
[83] M. Fisher et al., “Verifiable Self-Certifying Autonomous Systems,” Proc. - 29th IEEE Int. Symp. Softw. Reliab. Eng. Work. ISSREW 2018, pp. 341–348, 2018.
[84] S. A. Redfield and M. L. Seto, “Verification Challenges for Autonomous Systems,” in Autonomy and Artificial Intelligence: A Threat or Savior?, W. F. Lawless, R. Mittu, D. Sofge, and S. Russell, Eds. Cham: Springer International Publishing, 2017, pp. 103–127.
[85] D. Meltz and H. Guterman, “Verification of safety for autonomous unmanned ground vehicles,” 2014 IEEE 28th Conv. Electr. Electron. Eng. Isr. IEEEI 2014, pp. 1–5, 2014.
[86] C. Pek, P. Zahn, and M. Althoff, “Verifying the safety of lane change maneuvers of self-driving vehicles based on formalized traffic rules,” IEEE Intell. Veh. Symp. Proc., no. Iv, pp. 1477–1483, 2017.
[87] T. Sotiropoulos, J. Guiochet, F. Ingrand, and H. Waeselynck, “Virtual Worlds for Testing Robot Navigation: A Study on the Difficulty Level,” Proc. - 2016 12th Eur. Dependable Comput. Conf. EDCC 2016, pp. 153–160, 2016.
[88] Waymo, “On the road to Fully Self-driving - Waymo Safety Report,” Waymo Saf. Rep., 2018.
[89] A. Andrews, M. Abdelgawad, and A. Gario, “World Model for Testing Autonomous Systems Using Petri Nets,” Proc. IEEE Int. Symp. High Assur. Syst. Eng., vol. 2016-March, no. October, pp. 65–69, 2016.