

Claudia Ziegler Acemyan, Ph.D.

Post Hoc, LLC

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EDUCATION

Ph.D., Psychology, Human Factors and Human-Computer Interaction, Rice University, 2014

M.A., Architecture, University of California Los Angeles, 2011

M. Arch., Rice University, 2007

B.A., Psychology, University of Michigan, 2002

NON-ACADEMIC WORK EXPERIENCE

2014-present **Post Hoc, LLC d/b/a Claudia Ziegler Acemyan**, Houston, TX

Founding Principal

Human Factors, Human-computer Interaction, and Safety Consultant

1998-present **Edward R. Ziegler LLC**, Houston, TX

Human Factors and Safety Consultant

2018-2019 **KBRwyle at NASA, Johnson Space Center**, Houston, TX

Human Factors Engineer; NASA Habitability Discipline Scientist and Subject Matter Expert for the Human Factors and Behavioral Performance Element in the Human Research Program

2011 **Moore Ruble Yudell Architects & Planners**, Santa Monica, CA

Architectural Designer

2007-2008 **Carlos Jimenez Studio**, Houston, TX

Architectural Designer

2004 **Hill Swift Architects**, Houston, TX

Architectural Intern

ACADEMIC APPOINTMENTS

2018-present **Adjunct Assistant Professor**

Department of Psychological Sciences, Rice University

2020-2022 **Lecturer**

Department of Psychological Sciences, Rice University

2020 **Research Scientist**

Department of Psychological Sciences, Rice University

- 2019 **Director of Human Factors**
Rice 360° Institute for Global Health, Rice University
- 2014-2018 **Postdoctoral Research Fellow**, Human Factors Research Lab,
Department of Psychology, Rice University

RESEARCH GRANTS

- 2019-2021 **Houston Solutions Lab**, Co-Investigator, \$59,202
How Can a Human Factors Approach to System Design Make the Houston METRORail Safer?
- 2020-2021 **National Science Foundation**, Collaborator, \$200,000
Optimizing Vote-by-mail Implementations On Consumer Grade Equipment
- 2018-2020 **Ford Motor Company**, Co-Investigator, \$100,000
Measuring Customers' Trust in Autonomous Vehicles
- 2020 **Rice University COVID-19 Research Fund**, Co-Project Investigator, \$43,300
Making Voting Safe For Voters and Poll Workers: Meeting the Challenge of the COVID-19 Pandemic
- 2020 **Rice University BRIDGE COVID-19 Research Fund**,
Co-Project Investigator, \$3750
Measuring Polling Station Waits In Pandemic Voting
- 2018-2019 **NASA**, Primary-Investigator, \$50,000
VR Requirements for Human Factors Assessments and Human-in-the-loop Evaluations
- 2018-2019 **NASA**, Primary-Investigator, \$75,600
Human Factors Vehicle/Habitat Design Assessment Rubric

PUBLICATIONS

Peer Reviewed Journal Articles

- Acemyan, C.Z., Kortum, P., and Oswald, F.L. (2022). The Trust in Voting Systems (TVS) measure. *International Journal of Technology and Human Interaction*, 18(1), 1-23.
- Anderson, A., Boppana, A., Wall, R., Acemyan, C.Z., Adolf, J., & Klaus, D. (2021). Framework for developing alternative reality environments to engineer large, complex systems. *Virtual Reality*, 25, 147-163.
- Johnston, J., Asma, E., Acemyan, C.Z., Oden, M., Richards-Kortum, R., & Kortum, P. (2021). Development and use of heuristics to evaluate neonatal medical devices for use in low-resource settings. *Journal of Usability Studies*, 17(1).
- Kortum, P. and Acemyan, C.Z. (2021). How does keyboard type impact password strength perceptions? User assessments of password security across onscreen and desktop keyboards. *International Journal of Technology and Human Interaction*.

- Kortum, P., Acemyan, C. Z., & Oswald, F. L. (2021). Is it time to go positive? Assessing the positively worded System Usability Scale (SUS). *Human Factors*.
- Sharman, J., Acemyan, C., Kortum, P., & Wallach, D. (2021). Good Examples Help; Bad tools hurt: Lessons for teaching computer security skills to undergraduates. *International Journal of Computer Science Education in Schools*, 5(2), 74-92.
- Kortum, P., Stein, R., Acemyan, C. Z., Wallach, D. S., & Vann, E. (2020). How Human Factors Can Help Preserve Democracy in the Age of Pandemics. *Human Factors*, 62(7).
- Xiong, J., Acemyan, C.Z., & Kortum, P. (2020). SUSapp: A free mobile application that makes the SUS easier to use in research. Submitted to *Journal of Usability Studies*.
- Kortum, P., & Acemyan, C. Z. (2019). The impact of geographic location on the subjective assessment of system usability. *International Journal of Human-Computer Interaction*, 35(2), 123-130.
- Kortum, P. and Acemyan, C.Z. (2019). Usability assessments of mobile applications as a function of geographic location. *International Journal of Mobile Human Computer Interaction*, 11(1), 1-15.
- Acemyan, C.Z., & Kortum, P. (2018). Does the type of presentation medium impact assessments of the built environment? An examination of environmental usability ratings across three modes of presentation. *Journal of Environmental Psychology*, 56, 30-35.
- Acemyan, C.Z., Kortum, P., Byrne, M.D. & Wallach, D. (2018, 2022). Summative usability assessments of STAR-vote: A cryptographically secure e2e voting system that has been empirically proven easy to use. *Human Factors*.
- Kortum, P., & Acemyan, C. Z. (2018) The impact of geographic location on the subjective assessment of system usability. *International Journal of Human-Computer Interaction*, 1-8.
- Acemyan, C. Z., Kortum, P., Byrne, M. D., & Wallach, D. S. (2015). From error to error: Why voters could not cast a ballot and verify their vote with Helios, Prêt à Voter, and Scantegrity II. *Journal of Election Technology and Systems (JETS)*, 3, 1-25.
- Belton, M. G., Kortum, P., & Acemyan, C. Z. (2015). How hard can it be to place a ballot into a ballot box? Usability of ballot boxes in tamper-resistant voting systems. *Journal of Usability Studies*, 10, 129- 139.
- Acemyan, C. Z., Kortum, P., Byrne, M. D. & Wallach, D. (2014). Usability of voter verifiable end-to-end voting systems: Baseline data for Helios, Prêt à Voter, and Scantegrity II. *Journal of Election Technology and Systems (JETS)*, 2, 26-56.
- Kortum, P. & Acemyan, C. Z. (2013). How low can you go? Is the system usability scale range restricted? *Journal of Usability Studies*, 9(1), 14-24.
- Ziegler, C. J. (2009). Out of ashes and rubble: The Pirelli Tower. *Places*, 21, 14-17.

Peer Reviewed Conference Proceedings

- Peres, S. C., Acemyan, C. Z., Bass, E. J., Brunsen, E., Jacinto, R. F., Trippe, J., & Wagner, R. B. (2021). Embedding ethical principles into the Human Factors and Ergonomics Society: Interactive discussion with the Code of Ethics Task Force. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 65(1), 317-320.
- Shanklin, R., Kortum, P., & Acemyan, C. (2020). Adaptation of heuristic evaluations for the physical environment. *Proceedings of the Human Factors and Ergonomics Society*.

- Roscoe, R., Acemyan, C., Jacobs, K., Robertson, M., Yoo, A., & Mitchell, D. (2020). Media and public engagement for societal impact: Getting the word out about human factors and ergonomics. *Proceedings of the Human Factors and Ergonomics Society*.
- Robertson, I.W., Kortum, P., Oswald, F.L., & Acemyan, C.Z. (2020). Novices do not perform like experts on an Open Card Sort but do approximate expert performance on a Closed Card Sort. *Proceedings of the Human Factors and Ergonomics Society*.
- Bernhard, M., Sharman, J., Acemyan, C.Z., Kortum, P., Wallach, D., & Halderman, J. (2019). On the Usability of HTTPS Deployment. *Proceedings of the 2019 ACM Conference on Human Factors in Computing Systems (CHI 2019)*, Glasgow, Scotland: ACM.
- Kortum, P. and Acemyan, C.Z. (2019). An examination of the effort hypothesis for the perceived strength of passwords. *Proceedings of the Human Factors and Ergonomics Society* 63(1).
- Madathil, K. C., Acemyan, C. Z., Bartha, M. C., D'Souza, M., Edwards, R., Gmitro, S. C., & Harper, C. (2019). How to Succeed In Industry (As A UX Researcher): Strategies and Skills to Maximize Your Impact. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* 63(1).
- Acemyan, C.Z. and Kortum, P. (2018). 2FA might be secure, but it's not usable: A summative usability assessment of Google's two-factor authentication (2FA) methods. *Proceedings of the Human Factors and Ergonomics Society*.
- Grier, R. A., Allanson, K., Bangor, A., Kortum, P., Acemyan, C.Z., & Oswald, F.L. (2018). Using the SUS: Lessons learned & forward-looking research. *Proceedings of the Human Factors and Ergonomics Society*.
- Acemyan, C. Z., & Kortum, P. (2017). Assessing the usability of the Hart InterCivic eSlate during the 2016 Presidential Election. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 61(1), 1404-1408.
- Acemyan, C. Z., & Kortum, P. (2016). Can voters tell when their voting method is secure? Effects of end-to-end security and security theater on perceptions of voting systems. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 60, 1220-1224.
- Kortum, P., & Acemyan, C. Z. (2016). The relationship between user mouse-based performance and subjective usability assessments. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 60, 1174-1178.
- Acemyan, C. Z., & Kortum, P. (2015). Does the polling station environment matter? The relation between voting machine layouts within polling stations and anticipated system usability. *Proceedings of the Human Factors and Ergonomics Society*, 59, 1066-1070.
- Acemyan, C. Z., Kortum, P., Byrne, M. D., & Wallach, D. S. (2015). Users' mental models for three end-to-end voting systems: Helios, Prêt à Voter, and Scantegrity II. *Human Aspects of Information Security, Privacy, and Trust – Lecture Notes in Computer Science*, 9190, 463-474.
- Acemyan, C. Z., & Kortum, P. (2014). To verify or not to verify, that is the question: Voters' use and expectations of voting verification methods. *Proceedings of the Human Factors and Ergonomics Society*, 58, 1295-1299.
- Acemyan, C. Z., Kortum, P. & Payne, D. (2013). Do voters really fail to detect changes to their ballots? An investigation of voter error detection. *Proceedings of the Human Factors and Ergonomics Society*, 57, 1405-1409.

Acemyan, C. Z. & Kortum, P. (2012). The relationship between trust and usability in systems. *Proceedings of the Human Factors and Ergonomics Society*, 56, 1842-1846.

NASA Papers and Research Reports

Acemyan, C.Z., & Adolf, J. (September 2018). *Low-, Medium-, or High-fidelity? Defining Levels of Fidelity for the Design and Evaluation of Environments*. NASA, Lyndon B. Johnson Space Center. Houston, Texas.

Anderson, A., Wall, R., Boppana, A., Acemyan, C.Z., Adolf, J., & Klaus, D. (May 2018). *Framework for Spacecraft Habitat Design Evaluation Using Alternative Reality Technologies*. NASA, Lyndon B. Johnson Space Center. Houston, Texas.

AWARDS AND HONORS

- 2019 Cletis Booher Service Award from the Human Factors and Ergonomics Society Houston Chapter
- 2015 Best Research Presentation at the Houston Human Factors and Ergonomics Society Annual Meeting
- 2015 Best Research Poster at Houston Human Factors and Ergonomics Society Annual Meeting
- 2014 23rd USENIX Security Symposium Grants for Women Award
- 2011-2014 Rice University Research Assistantship and Tuition Waiver
- 2012 Best Student Paper Presentation at Houston Human Factors and Ergonomics Society Annual Meeting
- 2010 Society of Architectural Historians Study Tour Fellowship
- 2010 UCLA Graduate Summer Research Mentorship Award
- 2008-2010 UCLA Nonresident Tuition Fellowship and Full Tuition Waiver
- 2003-2007 Rice School of Architecture Full Tuition Waiver

INVITED TALKS

- 2017 *Assessing and Measuring System Usability*. Human Factors Research Groups, Human Research Program, NASA Johnson Space Center. Houston, Texas.
- 2017 *Usable and Secure Systems for Everyone*. The Polytechnic School, Ira A. Fulton Schools of Engineering, Arizona State University. Mesa, AZ.
- 2017 *Making Secure Systems Usable*. Department of Behavioral Sciences and Leadership, United States Air Force Academy. Colorado Springs, CO.
- 2015 *Users' Mental Models for Three End-to-end Voting Systems: Helios, Prêt à Voter, and Scantegrity II*. International Conference on Human-Computer Interaction. Los Angeles, CA.

2006 *A Waste Water Treatment Plant as a Contemporary Public Space in Florence, Italy*. New York University. Florence, Italy.

CONFERENCE TALKS AND POSTERS (not in proceedings)

Talks

- Acemyan, C. (2021). *The Role of Human Factors in Workplace Safety and Health*. Texas Workers' Compensation Conference, Texas Department of Insurance. Online due to COVID.
- Greene, M., Thaxton, S., Adolf, J. (2019). *ISS Habitability*. Presented by C.Z. Acemyan. Human Research Program (HRP) Investigators Workshop Series (IWS). Galveston, TX.
- Robertson, I., Acemyan, C. Z., Kortum, P., Oswald, F. (2017). *Detecting Voting Errors—What's Personality Got to Do With It?* 2017 Southwest Regional Human Factors & Ergonomics Society Symposium. San Antonio, TX.
- Acemyan, C.Z, Kortum, P & Wallach, D. (2015). *How secure is your vote? Perceptions of voting system security*. 11th Houston Human Factors and Ergonomics Conference. Houston, TX.
- Acemyan, C.Z. (2014). *Is It Too Much to Ask for a Voting System to Be Both Secure and Usable?* Rice University 2nd Annual 90-second Thesis Competition. Houston, TX.
- Ziegler, E.R. and Acemyan, C.Z. (2013). *Case Study of a High-Fatality Gas Pipeline Rupture (August 2000): Factors Impacting Process Safety and Regulations*. 25th Annual Occupational Ergonomics and Safety Conference. Atlanta, GA.
- Acemyan, C.Z. and Kortum, P. (2012). *Does the Voting Environment Affect Perceived System Usability and Trust? The relationship between DRE placement within a polling station and voters' perceptions of usability, trust, and preference*. 9th Houston Human Factors and Ergonomics Conference. Houston, TX.
- Acemyan, C.Z. and Kortum, P. (2012). *The Relationship Between Trust and Usability in Voting Systems*. Southwestern Psychological Association Conference. Oklahoma City, OK.
- Ziegler, C.J. (2010). *Splitting the Artistic Atom: Prouns as a Mediation of the Fourth-Dimension in Relativity*. Getty Research Institute Architecture and Design Graduate Student Seminar. Los Angeles, CA.
- Nguyen, V., Megasari, A., Amos, A., Romine, A., Peres S.C., Akladios, M., Kortum, P. and Ziegler, C. (2008). *Software Ergonomics Assessment Using Subjective and Objective Tools: A Literature Review*. 1st Texas Regional Human Factors and Ergonomics Society Conference. Austin, TX.

Posters

- Acemyan, C.Z., Adolf, J. (2019). *Low-, Medium-, or High-Fidelity? Defining Levels of Fidelity for the Design and Evaluation of Environments*. 2019 NASA Human Research Program Investigators Workshop (IWS). Galveston, TX.
- Xiong, J., Acemyan, C.Z., & Kortum, P. (2018). *SUSapp: A free mobile application that makes the SUS easier to use in research*. 14th Houston Human Factors and Ergonomics Conference. Houston, TX.

- Belton, G., Acemyan, C.Z., Kortum, P., Calan, A., Wallach, D. & Byrne, M.D. (2015). A Usability assessment of STAR-Vote, a new high security voting system. 11th Houston Human Factors and Ergonomics Conference. Houston, TX.
- Acemyan, C.Z. and Kortum, P. (2014). *How Hard Can It Be to Vote? A Live Demonstration of Two End-to-End, Verifiable Voting Systems: Prêt à Voter and Scantegrity II*. Human Factors and Ergonomics Society Regional Meeting. College Station, TX.

CAMPUS AND DEPARTMENTAL TALKS

- 2020 *Dr. Acemyan's career path in human factors and safety: Education, training, experience, and knowledge*. Rice University Human Factors and Ergonomics Society Student Chapter, Rice University. Houston, TX.
- 2018 *Factors Impacting Grade Outcomes in an Undergraduate Computer Science/Java Course*. Rice University Center for Teaching Excellence, Rice University. Houston, TX.
- 2018 *Usable Security* (Guest Lecture). Introduction to Computer Security, Department of Computer Science, Rice University. Houston, TX.
- 2018 *Assessing the Usability of Google's 2FA Methods*. Human Factors and Human Computer Interaction Research Interest Group, Department of Psychology, Rice University. Houston, TX.
- 2017 *Usability and Security* (Guest Lecture). Introduction to Computer Security, Department of Computer Science, Rice University. Houston, TX.
- 2017 *Usable Security*. Human Factors and Human Computer Interaction Research Interest Group, Department of Psychology, Rice University. Houston, TX.
- 2016 *The Usability of Voting Systems*. World Usability Day, Rice University. Houston, TX.
- 2016 *System Usability of STAR-Vote*. Human Factors and Human Computer Interaction Research Interest Group, Department of Psychology, Rice University. Houston, TX.
- 2015 *How Secure Is Your Vote? Perceptions of Voting System Security*. Human Factors and Human Computer Interaction Research Interest Group, Department of Psychology, Rice University. Houston, TX.
- 2014 *System Usability of Three End-to-end Voting Systems: Helios, Prêt à Voter, and Scantegrity II*. Human Factors and Human Computer Interaction Research Interest Group, Department of Psychology, Rice University. Houston, TX.
- 2012 *Does the Voting Environment Affect Perceived System Usability and Trust? The relationship between DRE placement within a polling station and voters' perceptions of usability, trust, and preference*. Human Factors and Human Computer Interaction Research Interest Group, Department of Psychology, Rice University. Houston, TX.

2012 *The Relationship Between Trust and Usability in Voting Systems*. Human Factors and Human Computer Interaction Research Interest Group, Department of Psychology, Rice University. Houston, TX.

TEACHING EXPERIENCE

Rice University

2022 *Cognitive Psychology*, Lecturer
2021 *Advanced Graduate Statistics*, Lecturer
2021 *Human Computer Interaction* (graduate and undergraduate levels), Lecturer
2021 *Human Factors and Ergonomics*, Lecturer
2020 *Research Methods-Psychology*, Lecturer
2012, 2013 *Introduction to Human Factors and Ergonomics*, Teaching Assistant
2011 *Social Psychology*, Teaching Assistant

University of California Los Angeles

2009, 2010 *History of Architecture – Mannerism to Present*, Teaching Associate
2010 *Architecture and Modernism: Theories, Technology, and Representation* (graduate level), Teaching Associate
2008, 2009 *Introduction to Architectural Studies*, Teaching Associate
2009 *History of Architecture - Pre-history to Mannerism*, Teaching Assistant

SERVICE

2019-present Elections Director, Houston Chapter of the Human Factors and Ergonomics Society
2019-present Ad Hoc Reviewer, Human Factors: The Journal of the Human Factors and Ergonomics Society
2014-present Ad Hoc Reviewer, Human Factors and Ergonomics Society Annual Meeting Ad Hoc Reviewer
2021-2022 Cub Scouts Den Leader, Pack 46, Houston, Texas
2020-2021 Member and Communications Officer, Society of Petroleum Engineers, Human Factors Technical Section
2020-2021 Member, Ethics Task Force, Human Factors and Ergonomics Society
2018-2021 Committee Member, Societal Impact Committee, Human Factors and Ergonomics Society
2020 Ad Hoc Reviewer, Election Law Journal
2019-2020 President-past, Houston Chapter of the Human Factors and Ergonomics Society

- 2018-2019 President, Houston Chapter of the Human Factors and Ergonomics Society
- 2019 Posters with Fellows Session Co-Chair, Human Factors and Ergonomics Society Annual Meeting
- 2016-2019 Ad Hoc Reviewer, Journal of Environmental Psychology
- 2019 Habitability Assessment for Future Spaceflight Vehicles Session Co-chair, NASA Human Research Program Investigators Workshop (IWS)
- 2018-2020 Troop Co-leader, Girl Scouts, San Jacinto Council
- 2018 Safety Session Chair, Human Factors and Ergonomics Society Annual Meeting
- 2017-2018 President-elect, Houston Chapter of the Human Factors and Ergonomics Society
- 2015-2017 Program Director, Houston Chapter of the Human Factors and Ergonomics Society
- 2017 Improving Safety Compliance of Human Operators and Service Users Session Chair, Human Factors and Ergonomics Society Annual Meeting
- 2017 Human-centered Analysis and Design in System Development Session Co-chair, Human Factors and Ergonomics Society Annual Meeting
- 2014 Ad Hoc Reviewer, Southwest Regional Human Factors and Ergonomics Society Symposium
- 2014 Ad Hoc Reviewer, Association of Collegiate Schools of Architecture International Conference: OPEN CITIES—The New Post-Industrial World Order
- 2013 Judge, Science Engineering Fair of Houston Behavioral & Social Sciences
- 2012-2013 Psychology Department Representative, Rice University Graduate Student Association
- 2012 Reviewer, Association for Psychological Science RISE Research Award Competition
- 2010-present Board Member (various positions and years), Simpler Times Museum
- 2009-2010 Doctoral Student Representative, UCLA Department of Architecture and Urban Design
- 2009 Co-founder and Co-leader, Architecture and Design Graduate Student Seminars and Symposium at the Getty Research Institute
- 2005 Graduate Student Representative, Rice Design Alliance
- 2001-2002 Co-team Captain, University of Michigan Collegiate Synchronized Skating Team

PROFESSIONAL MEMBERSHIPS

- 2011-present Human Factors and Ergonomics Society, Member (includes membership in technical groups)
- 2011-present Houston Human Factors and Ergonomics Society, Member and Elections Director
- 2019-present Society of Petroleum Engineers, Human Factors Technical Section, Member
- 2020-present Board of Certified Safety Professional, ASP Credential Holder

TRAINING AND CERTIFICATIONS

Various	CITI Social and Behavioral Responsible Conduct and Research Basic Course, Rice University
2020	Associate Safety Professional (ASP), Board of Certified Safety Professionals
2019	OSHA 30-Hour Outreach for General Industry
2018	NASA and Johnson Space Center (JSC) Safety Training, Various Topics
2018	KBRwyle Safety Training, Various Topics
2018	CITI Social and Behavioral Research-Biomedical Research Basic/Refresher Course, NASA-National Aeronautics and Space Administration