

GLORY EMMANUEL AVIÑA

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EDUCATION

- May 2015 **Doctorate of Philosophy in Experimental Psychology** (3.85 GPA on 4.0 scale)
Concentrations: Cognitive, Quantitative Psychology
Dissertation: "The Malleability of University Students' Beliefs, Values, and Attitudes in the Classroom Setting" - Successful Defense with High Distinction
The University of New Mexico, Albuquerque, NM
- July 2012 **Master of Science in Clinical Psychology** (3.83 GPA on 4.0 scale)
The University of New Mexico, Albuquerque, NM
- May 2009 **Master of Business Administration**
Concentration: International Management (3.83 GPA on 4.0 scale)
The University of New Mexico, Albuquerque, NM
- May 2008 The University of New Mexico, Albuquerque, NM
Bachelor of Arts in Psychology; University and Departmental Honors
Summa cum laude, Departmental & University Honors (4.05 GPA on 4.0 scale)
- May 2004 Cibola High School
Class Valedictorian, High School Diploma
Highest GPA out of 550 student (4.4 GPA on 4.0 scale)

PROFESSIONAL EXPERIENCE

Principal Member of Technical Staff, Data Science & Cyber Security

Sandia National Laboratories, Livermore, California

- Principal Investigator for wearable devices research project (entitled WATCH) for chemical and biological threats DTRA program
- Wrote successful full proposal to DTRA BAA call
- Collected physiological and cognitive data from 500+ wearable devices
- Developed and executed experimental design at Grand Canyon
- Nurtured positive collaborations DTRA, DARPA, SOCOM, IARPA, and University of New Mexico Emergency Medicine team
- Communicated and developed partnerships with over 30+ Special Operations Forces military groups
- Project manager for Avondale: intelligent web crawling & text analytics program
- In 7 years, grew project from \$50K to \$1.2M, 1 customer to 6+
- Developed program to better meet NW needs
- Principal Investigator of Adoption of Cybersecurity Technologies (ACT)
 - Designed and executed Sandia-hosted workshop to gather data on adoption of cybersecurity technologies
 - Analyzed data to identify paths for decision-making and barriers for adoption
 - Met weekly with multiple OGAs to design research experiment and understand

Glory Emmanuel Aviña

- government cybersecurity needs
 - Executed psychosocial space research project with W80-4 and W88 NW projects to increase communication, collaboration, and productivity
 - Promoted from Senior to Principal technical staff January 2018
 - Currently hold Q & SCI security clearances
- 2015-2016 **Senior Member of Technical Staff, Cognitive Science & Systems**
Sandia National Laboratories, Albuquerque, NM
- Designed/executed research to quantify human dimension in engineered systems through human subject research projects
 - Obtain funding and manage projects funded by internal and external customers
- 2014 **Manager (Acting Position), Data-drive and Neural Computing Department**
Sandia National Laboratories, Albuquerque, NM
- Built strategic plan in 2 weeks of being acting manager for newly re-organized department and group
 - Lead a team of 12 technical staff with expertise in computational neuroscience, machine learning, and computer science
- 2012-14 **Member of Technical Staff, Cognitive Science Researcher**
Sandia National Laboratories, Albuquerque, NM
- Obtained PhD in experimental psychology while working full-time as lead data analyst on multiple cognitive science projects
 - Designed and analyzed data collected from human subject studies
 - Organized and executed external advisory board reviews of Cognition program
- 2008, 2014 **Part-time University Professor**
University of New Mexico, Albuquerque, NM
- Designed and taught 200-level and 400-level university level courses in Psychology & Honors departments
 - 400 level: “An Empirical Approach to the Psychology of Religion”
 - 200 level: “Freud vs. Lewis: Sexuality, Suffering, & the Meaning of Life”
- 2007-12 **Business Analyst, Partnerships Development**
Sandia National Laboratories, Albuquerque, NM
- Developed internal and external partnerships for technical work related to cognition, cyber, and brain-inspired computing
 - Business development for the Cognitive Science and Technologies Program to develop key strategies, internal and external partnerships for technical research
 - Coordinated and facilitated annual External Advisory Board, customer visits
 - Business support provided to Nanotechnology, Cyber Security, Systems Analysis Technologies, High Performance Computing
 - Coordinated the National Institute for Nano Engineering Summer Student Program for 3yrs, received a \$3 million earmark through 2009 Omnibus Bill.
 - Facilitated visits and composed legal documents for industry and academic partners interested in partnering with Sandia.
 - Converted from student intern to staff in 2009
- 2011-12 **Student Researcher and Clinical Therapist**
The Mind Research Network, Albuquerque, NM
- Studied the effects of cognitive beliefs and values on behavior change
 - Instructed participants on their involvement in a study for smoking cessation
 - Provided clinical support using motivational interviewing to encourage success
- 2007-08 **NIMH National Research Service Fellow, Career Opportunities in Research, Education and Training Minority Fellowship**
Center for Addictions, Alcoholism & Substance Abuse, Albuquerque, NM

PUBLICATIONS AND PRESENTATIONS

- Emmanuel-Aviña, G.**, Divis, K., Abbott, R. (in press). Physiological and cognitive state in extreme environments. *Journal of Pervasive and Mobile Computing*.
- Emmanuel-Aviña, G.** (2018). Novel method to monitor physiological, cognitive, and biological markers: Determining origin of change. *HDIAC Biosciences*.
- [Invited Talk] **Emmanuel-Aviña, G. (2018)**. Wearables for Physiological Monitoring and the DoD. Homeland Defense & Security Information Analysis Center Webinar.
- Divis, K.D., Anderson-Bergman, C., Abbott, R., Newton, V., **Emmanuel-Aviña, G.** (2018). Physiological and Cognitive Factors Related to Human Performance During the Grand Canyon Rim-to-Rim Hike. *Journal of Human Performance in Extreme Environments*.
- [Accepted Talk] **Emmanuel-Aviña, G.**, Anderson-Bergman, C. (2017, November). Wearables At The Canyon for Health (WATCH). Chemical & Biological Defense DTRA Workshop.
- [Invited Talk] Femling, J., Pearce, E., Branda, C., & **Emmanuel-Aviña, G.** (2017, November). Rim-to-Rim Wearables At The Canyon for Health. Albuquerque Academy Science Night.
- Emmanuel-Aviña, G.**, et al. (Submitted, July 2017). The Science of Science: Apply Scientific Principles to the Artful Practice of Research. Springer International Publishing.
- Emmanuel-Aviña, G.**, Abbott, R. Anderson-Bergman, C., Divis, K. M., Jelinkova, L., Newton, V., Pearce, E., & Femling, J. K. (2017, July). Rim-to-Rim Wearables At the Canyon for Health (R2R WATCH): Experimental Design and Methodology. *HCI International 2017 Conference Proceedings*.
- Newton, V., Solis, I., **Emmanuel-Aviña, G.**, McClain, J.T., King, C., Cisielski, K. T. R. (2017, July). Analysis of Social Interaction Narratives in Unaffected Siblings of Children with ASD through Latent Dirichlet Allocation. *HCI International 2017 Conference Proceedings*.
- [Invited Talk] **Emmanuel-Aviña, G.** (2017, March). Assessing Human Health Through Real-time Data Collection at the Grand Canyon. Omics NASA Workshop. Houston, TX.
- [Invited Talk] Anderson-Bergman, C., & **Emmanuel-Aviña, G.** (2017, March). Rim-to-Rim Wearables At The Canyon for Health (R2R WATCH). Human Systems Conference. National Defense Industrial Association. Springfield, VA.
- [Invited Talk] **Emmanuel-Aviña, G.** (2016, July). Collaboration Between Cognitive Science and Business Management to Benefit the Government Sector. In *International Conference on HCI in Business, Government and Organizations* (pp. 131-139). Springer International Publishing.
- Emmanuel-Aviña, G.** (2016). The malleability of university students' beliefs, values, and attitudes in the classroom setting. *Dissertation, University of New Mexico Repository*.
- Silva, A. R., **Emmanuel-Aviña, G.**, & Tsao, J. Y. (2016, July). The art of research: Opportunities for a science-based approach. In *International Conference on Augmented Cognition* (pp. 431-441). Springer International Publishing.
- Kittinger, R., Kittinger, L., & **Emmanuel-Aviña, G.** (2016, July). Job Analysis and Cognitive Task Analysis in National Security Environments. In *International Conference on Augmented Cognition* (pp. 341-347). Springer International Publishing.
- McClain, J. T., **Emmanuel-Aviña, G.**, Trumbo, D., & Kittinger, R. (2016, July). Improving Analysis and Decision-Making Through Intelligent Web Crawling. In *International Conference on Augmented Cognition* (pp. 414-420). Springer International Publishing.
- [Invited Talk] **Emmanuel-Aviña, G.** (2016, February). Enhancing the Analyst and Decision Maker Through Text Analytics. Human Systems Conference. National Defense Industrial Association.
- [Poster] **Emmanuel, G.**, Silva, A., Odumosu, T...Tsao, J. (2015) Art and science of science and technology: A workshop review. *Poster Presentation, Atlanta Conference on Science & Innovation Policy*.

- [Invited Paper] **Emmanuel, G.**, Kittinger, R., & Speed, A. (2015) "A quantitative methodology for identifying attributes which contribute to performance for officers at the Transportation Security Administration," *Conference Paper*, HCI International 2015.
- [Invited Paper] Silva, A., **Emmanuel, G.**, McClain, J. T., Matzen, L., Forsythe, J. C. (2015) "Measuring expert and novice performance within computer security incident response teams," *Conference Paper*, Human-Computer Interaction International 2015.
- Smith, B., Vicuna, B., & **Emmanuel, G.** (2015). Spiritual development and calling. J. Wade, L. Marks, & R. Hetzel (Eds). Positive psychology on the college campus. New York, NY: Oxford University Press.
- Emmanuel, G.**, & Delaney, H. D. (2014). Professors' influence on students' beliefs, values, and attitudes in the university classroom. *Journal of College and Character* 15(4), 245 - 257.
- Emmanuel, G.**, & Silva, A. R. (2014) "Connecting the Physical and Psychosocial Space to Sandia's Mission," *Sandia Report*, SAND2014-16421.
- Tsao, J. F., **Emmanuel, G.**, Odumosu, T...Sun, R. (2013). Art and Science of Science and Technology: Proceedings of the forum and roundtable." June 5–7, 2013, Sandia National Laboratories, Albuquerque, New Mexico. *Science, Technology, and Public Policy Program, Belfer Center for Science and International Affairs, Harvard Kennedy School*.
- Emmanuel, G.**, & Delaney, H. (2013). The mentorship model: Guiding adolescents in their journey of spiritual development. Paper Presentation at the International Association for the Psychology of Religion Conference. Aug 31 – Sept 3, 2013. Lausanne, Switzerland.
- Emmanuel, G.**, & Delaney, H. (2013) "Keeping faith: Factors contributing to spiritual transformation, identity, and maturity in adolescents," *Advances in the Study of Information and Religion*, 3(4).
- Emmanuel, G. R.**, & Delaney, H. D. (2013). Social and personal factors relating to spiritual transformation, identity, maturity in adolescents. National Multicultural Conference and Summit 2013. January 17 - 18, 2013. Houston, Texas.
- Emmanuel, G.**, & Delaney, H. (2013). An initial study on spiritual development and the role of devotional activities and social support. Veljanova, I., Mills, C., & **Emmanuel, G.** (Eds). *21st century science: Health, agency, and well-being*. Oxford, UK: Interdisciplinary.net.
- [Poster] **Emmanuel, G.**, & Delaney, H. D. (2012). Social support and mentorship for religiously-oriented adolescents. Mentoring Institute Conference 2012. Albuquerque, New Mexico.
- Vineyard, C. M., **Emmanuel, G.**, Verzi, S. J., & Heileman, G. L. (2012). A game theoretic model of neurocomputation. In *Biologically Inspired Cognitive Architectures*, pp. 373-374. Springer: Berlin.
- Vineyard, C. M., Aimone, J. B., & **Emmanuel, G.** (2013). Neurogenesis in a high resolution dentate gyrus model. In *Biologically Inspired Cognitive Architectures 2012* (pp. 371-372). Springer: Berlin.
- [Poster] **Emmanuel, G.**, & McClain, J.T. "Document Discovery through data fusion and web crawling." (2012) Psychology Research Day. Albuquerque, NM.
- [Poster] **Emmanuel, G.**, & Delaney, H. (2012). "Keeping faith: Factors contributing to spiritual transformation, identity, and maturity in adolescents." Psychology Research Day. Albuquerque, NM.
- Emmanuel, G.**, & Delaney, H. (2012). "A modified study on the effects thematic meditation has on personal well-being and altruistic behavior." The Annual Biomedical Conference for Minority Students. Orlando, FL.

AWARDS

- May 2018 DOE Award: Recognition of Excellent Work, Avondale Program
- July 2017 Center 1400 Employee Recognition Award: Avondale Team

Glory Emmanuel Aviña

July 2017	Employee Recognition Nomination: WATCH Team
Aug 2016	Invited Participant Special Operations Forces Program Management Training, 2-4 Sandians per year
Aug 2016	SPOT Award for Document Discovery Extraordinary Performance
May 2016	Center 1400 Peer-Recognized Exemplary Citizen Employee Demonstrating Exceptionally Nice Work (PRECEDENT) Award
Feb 2016	SPOT Award for Transportation Security Administration Technical Excellence
Mar 2015	Employee Recognition Award: Excellent Support as Acting Manager
Mar 2015	Employee Recognition Award: Document Discovery Team Excellence
Mar 2014	Employee Recognition Award: Work Enhancement Team
Mar 2014	Employee Recognition Award: Document Discovery Team Excellence
May 2013	Diversity Organization Research Award
Dec 2011	Certificate of Excellence: Upstanding Cyber Engineering Research Institute
Dec 2011	Certificate of Excellence: Support of Cognitive Science Program

COMMUNITY INVOLVEMENT, SKILLS, & LEADERSHIP ACTIVITIES

2018	Invited Subject Matter Expert for DoD-sponsored Homeland Defense Information & Analysis Center (HDIAC)
2018	Accepted into highly competitive UC Berkeley Coding Boot Camp
2016-18	Leader in New Marrieds community group, Walnut Creek, CA
2012-18	Career/Academic Mentor: Invited speaker to 4 academic mentorship events; have helped 20+ students write college applications/resumes. Currently mentoring Sandia student interns.
2010-15	Maintained a full-time technical staff and acting management role while full-time doctoral degree student
2014	Acting manager for Data-driven and Neural-inspired Computer department at Sandia National Laboratories
2014	Designed and taught new 400-level undergraduate university course, part-time professor at the University of New Mexico
2012	Community group leader. Host weekly meetings with young professionals, provide goods to the homeless population and aid to underprivileged individuals
2011-12	Graduate Association of Students in Psychology (GASP) Treasurer
2011-12	UNM Psychology Diversity Organization (DO!)
Ongoing	Globe-trekker: International Experience and Cultural Competence <i>Traveled to 32 different countries across six continents</i>

REFERENCES

Karim Mahrous, *Senior Manager*
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LeAnn Miller, *Senior Manager, Mentor*
Sandia National Laboratories
(505) 844-3772 -- lamille@sandia.gov

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