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Cynthia M Nikolai
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EDUCATION
- B.S. in iPhone Programming, Expected Aug 2021
- B.S. in Android Programming, Expected Dec 2021
- M.S. in Data Science, May 2021
- M.S. in Applied and Computational Mathematics and Statistics, 2018
- PhD in Computer Science, University of Notre Dame, 2015
- M.S. in Computer Science, University of Massachusetts - Amherst, 2006
- B.S. in Mathematics, Villanova University, 2000

APPOINTMENTS

Jun 2015-present	CEO, Nikolai Consulting
Jan 2015 – Jun 2015	Visiting Scholar, University of Notre Dame
Jul 2005 – Dec 2015	PhD Candidate, University of Notre Dame. Notre Dame, Indiana.
May 2009-Feb 2010	EOC IT & Systems Support; Emergency Management Specialist, Miami-Dade Emergency Operations Center, Miami, FL
May 2009-Dec 2015	GAANN Fellow, US Department of Education
Jan 2008 – May 2008	Teaching Assistant, Computer Science & Engineering, University of Notre Dame, Indiana.
Oct 2004 – Jul 2005	ICBM Combat Crew Commander, Alternate Command Post (ACP), 490th Missile Squadron, Malmstrom AFB, MT
Apr 2004 – Oct 2004	ICBM Combat Crew Commander, 490th Missile Squadron, Malmstrom AFB, MT
Apr 2003 – Apr 2004	ICBM Combat Crew Instructor Deputy Commander, 341st Operations Support Squadron, Malmstrom AFB, MT
Feb 2003 – Apr 2003	ICBM Combat Crew Flight Deputy Commander, 490th Missile Squadron, Malmstrom AFB, MT
Jan 2003 – Apr 2004	ICBM Combat Crew Deputy Commander, Alternate Command Post (ACP), 490th Missile Squadron, Malmstrom AFB, MT
Jan 2002 – Jan 2003	ICBM Combat Crew Deputy Commander, 490th Missile Squadron, Malmstrom AFB, MT
Apr 2001 – Jan 2002	ICBM Operations Crew Scheduler, 490th Missile Squadron, Malmstrom AFB, MT
May 2000	Distinguished Graduate, AFROTC Detachment 750, Philadelphia, PA

PROFESSIONAL EXPERIENCE

Nikolai Consulting (Jun 2015 – Present) – Develops mobile and web applications. Teaches classes for seniors at the Forever Learning Institute. Collaborates on research with the University of Notre Dame, when needed.

Visiting Scholar (Jan 2015 – June 2015) – Assisted in research at the University of Notre Dame. Worked on journal papers.

Emergency Management Specialist (May 2009-Feb 2010) - Responsible for maintaining equipment at the EOC in an activation readiness state, developing and maintaining WebEOC boards for the staff and department liaisons, and coordinating with adjacent regions. I also am a project consultant for various readiness and training applications. Finally, I assist with Geographic Information Systems analysis as well.

Military Service (May 2000-Mar 2007) - Developed training materials used to train 300+ combat-ready crew members and staff officers. Conducted launch control center (LCC), missile procedures, simulator, and classroom training. Assumed command of wing combat assets in emergency environments. Assisted flight commander in leading flight of missile crew members. Supervised activities of nine operations, security, and support personnel at the missile alert facility (MAF). Ensured professional development of other officers.

TEACHING
Experience

Winter 2019, Spring 2019	Teacher, Puzzle Time, at the Forever Learning Institute
Winter 2019, Spring 2019	Teacher, Meet the Internet, at the Forever Learning Institute
Fall 2018	Teacher, Create Your Own Website, at the Forever Learning Institute
Spring 2015	Teacher, Introduction to Computing, at the Forever Learning Institute
Spring 2013	Co-Teacher, Introduction to Computing, at the Forever Learning Institute
Spring 2007	Teaching Assistant, C++ Programming, University of Notre Dame
2000-2005	Tutoring, USAF
2003-2004	Instructor, USAF
1996-2000	Tutoring, Villanova University

Certifications

Excellence in Teaching, University of Notre Dame

Teaching Well Using Technology, University of Notre Dame

Fellowships

I was a GAANN teaching fellow at the University of Notre Dame

RESEARCH/PUBLICATIONS
- **Nikolai**, C., Njoroge, S., and Madey, G. (2018, April). Integrating Agent-based Simulation into Emergency Operations Center Training Command and Control Systems. *Proceedings of the Agent-Directed Simulation Symposium (ADS '18)*, Baltimore, MD.

- **Nikolai**, C., Njoroge, S., and Madey, G. (2017, April). SimEOC: A Virtual Emergency Operations Center Simulator for Training and Research. Poster & Presentation, *Preparedness Summit 2017*, Atlanta, GA.
- **Nikolai**, C., Treboniak, C., Heller, P., & Madey G. (2016). About Emergency Managers And Their Tools: What Emergency Managers Want From A Business Perspective. *International Journal of Information Systems for Crisis Response and Management*, 8(4), p1-16.
- **Nikolai**, C., Wright, T., Johnson, T., and Prietula, M., & Madey, G. (2015, April). Ensayo: A Virtual Emergency Operations Center Simulator for Training and Research. Poster & Presentation, *Preparedness Summit*, Atlanta, GA.
- **Nikolai**, C., Johnson, T., Prietula, M., Becerra-Fernandez, I., & Madey G. (2015). SimEOC: a distributed web-based virtual emergency operations center simulator for training and research. *International Journal of Information Systems for Crisis Response and Management*, 7(1), p1-21.
- **Nikolai**, C., Johnson, T., Prietula, M., Becerra-Fernandez, I., & Madey G. (2015). Design principles for crisis information management systems: from closed local systems to the web and beyond. *International Journal of Information Systems for Crisis Response and Management*, 7(4), p26-45.
- **Nikolai**, C. (2014, December). SimEOC: A virtual emergency operations center (vEOC) simulator for training and research. *PhD Dissertation*, Department of Computer Science and Engineering, University of Notre Dame, Notre Dame, IN.
- **Nikolai**, C., Johnson, T., Becerra-Fernandez, I., & Madey, G. (2010). Leveraging WebEOC in support of the haitian relief effort: insights and recommendations. *The 7th International Community on Information Systems for Crisis Response and Management (ISCRAM) Conference*, Seattle, WA.
- **Nikolai**, C., Madey, G., Becerra-Fernandez, I., & Prietula, M. (2010). Ensayo: a distributed, web-based virtual emergency operations center for training and research. *The 7th International Community on Information Systems for Crisis Response and Management (ISCRAM).* Conference PhD Colloquium and Poster Session, Seattle, WA.
- **Nikolai**, C., Madey, G., Becerra-Fernandez, I., and M. Prietula (2010). Ensayo: a virtual emergency operations center simulator for training and research. *Winter Simulation Conference*, Ph.D. Colloquium and Poster Session, Baltimore, MD.
- **Nikolai**, C. (2010, June). Miami-Dade Emergency Operations Center Field Research Report. *Field Research Report*, University of Notre Dame Zahm Grant.
- Madey, G., Becerra-Fernandez, I., **Nikolai**, C., & Prietula, M. (2010). A training and research simulator for emergency management. *Institute for Operations Research and the Management Sciences (INFORMS)*, Austin, Texas.
- **Nikolai**, C., and Madey, G. (2009, March). Tools of the trade: a survey of various agent based modeling platforms, *Journal of Artificial Societies and Social Simulation*, 12(2)2.
- **Nikolai**, C., Becerra-Fernandez, I., Prietula, M., & Madey, G. (2009). Project ensayo: designing a virtual emergency operations center. *Proceedings of the IEEE International Conference on Systems, Man, and Cybernetics*, San Antonio, Texas.

LANGUAGE PROFICIENCIES
German: *EXCELLENT* - I lived in Germany for 7 years as a child, and I passed the intensive intermediate German proficiency language examination at Notre Dame.

ADDITIONAL TRAINING
Satellite Theological Education *Program* (*STEP*) from Notre Dame
Code Platoon, Full Stack Developer Bootcamp
UCLA Full Stack Developer Bootcamp
OpenClassrooms Android Development Program
OpenClassrooms iPhone Development Program

BOOKS WRITTEN
Lilies in the Field (in press)
Beyond Reality and Back Again, Book of Wisdom (in press)

SYNERGISTIC ACTIVITIES

- **Process Improvement Team Member** for the Forever Learning Institute, Fall 2018-present

- **Mentor** for University of Notre Dame's Research Experiences for Undergraduates students, Summer 2010

- ***Emergency Operations Center (EOC) Activations:***
  - Miami-Dade EOC Activation in support of the Super Bowl XLIV, Feb 2010
  - Miami-Dade EOC Activation in support of the Probowl, Jan 2010
  - Miami-Dade EOC Activation in support of the Haitian Relief Effort, Jan 2010

- ***Miami-Dade Emergency Operations Center Exercises:***
  - Miami-Dade Emergency Operations Center (EOC) Terrorism Response Drill, July 2009
  - Miami-Dade Emergency Operations Center (EOC) Annual Exercise, June 2009
  - Miami-Dade Emergency Operations Center (EOC) Annual Exercise, June 2008
  - Miami-Dade Emergency Operations Center (EOC) Annual Exercise, June 2007

- **Professional Development Series Certification,** FEMA