



# Human Centric Security (HuCS)

**Date:** 11/14/14

**Time:** 12:00–6:30 p.m.

**Location:**

Centennial Engineering Center,  
Room 1044 on UNM Campus

Join us for the kickoff of this  
Joint Cyber Security Institute!

*Technologies for Securing People*

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**Organized by:**

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UNM Computer Science

Alex Seazzu

UNM Anderson School of Management

Bob Hutchinson

Sandia National Labs

**Event Schedule:**

12:00-1:00	Lunch and keynote address
1:00 -1:30	Welcome and Vision
1:30 - 2:00	UNM CS research and activities
2:00 - 2:30	UNM Anderson research and programs
2:30 - 3:00	Break
3:00 - 3:30	Sandia National Labs research and activities
3:30 - 4:00	Panel: What are the nation pain-point in Cyber-security and how can HUCS help?
4:00-4:30	Industry and partners talks
4:30-5:00	Break
5:00- 6:30	Posters from students and Sandians

This joint institute will develop innovative and disruptive technologies, systems and processes to ensure that people are protected and empowered and train the next generation of security engineers, managers and researchers.

We frame cyber-security around humans in a holistic way that includes their well being, physical safety, and their fundamental rights. Systems, services, policies and tools should be focused on protecting people's: (a) data, (b) privacy, (c) physical and emotional well-being, and (d) fundamental rights.

**Goals:**

- Conducting cutting-edge human-centric research
- Establishing a problem-driven agenda
- Educating the next generation of ethical hackers
- Becoming a catalyst for technology transfer and societal impact

## Human Centric Security (HuCS) Initiative

"Technologies For Securing People" (™)

Revised: 2014-9-25

**The mission:** Develop innovative and disruptive technologies, systems and processes to ensure that people are protected and empowered and train the next generation of security engineers, managers and researchers.

**Approach:** We frame cyber-security around humans in a holistic way that includes their well being, physical safety, and their fundamental rights. Systems, services, policies and tools should be focused on protecting people's: (a) data, (b) privacy, (c) physical and emotional well-being, and (d) fundamental rights. Furthermore, we expand the concept of safety to include protection of human life against critical and industrial infrastructure, such as power-grid, water supplies and food chain, and biological threats.

**Goals:** The center has four key goals:

**a. Conducting cutting-edge human-centric research:** We will perform research to assess threats to basic human rights and develop game-changing technologies to ensure human safety. Our unique take on this issue is that security and privacy should consider "humans in the loop": we should protect people, not devices, and we should consider biological, human and psychological weaknesses in system design. Thus, the research here combines: (a) systems and network security, (b) data mining, (c) computational psychology, (d) human-computer interaction, (e) game theory, and (f) policy, management and decision making. Our defense-in-depth approach will combine the strengths and weaknesses of hardware, software, controls, and humans in symbiotic ways.

**b. Establishing a problem-driven agenda:** We will partner with industry, government, and human rights defenders around the world through a simple proposition: "Give us real-world problems to solve, and in exchange we'll give you innovative solutions and uniquely-trained and creative engineers". The scope of the problem could be anything from an undergraduate class project to a Ph.D. thesis.

**c. Educating the next generation of ethical hackers:** We want to help fill the gaping need for more information security engineers and managers. We will engage in: (a) outreach starting as early as middle-school, and (b) educational activities, including seminars, specialized courses, and specialty degrees to fulfill this need with the help of our partners. Apart from hacking skills, our program will stress ethics, management and the importance of security in society.

**d. Becoming a catalyst for technology transfer and societal impact:** We want to inspire, support, and lead technology transfer in the area of security, including IP licensing, staffing security companies, and fostering start-ups.

Executive Directors: Alex Seazzu, Michalis Faloutsos, Bob Hutchinson

Board of Directors: Greg Heilman, Bill Hart, Alex Seazzu and Michalis Faloutsos

Members: Steve Burd, Jared Saia, P. Kelley, C. Roman

Founding institutions: UNM CS/ECE, UNM Anderson, Sandia