



# “Cyber” Hiring Needs Across Sandia

Contents identified in this presentation are for the timeframe **September 24th – December 24<sup>th</sup>, 2009** and are subject to change at any time according to the discretion of Sandia National Laboratories.

# Center for Computation, Computers, Information & Mathematics (1400)

## Who We Are

- Computation, Computers, Information, and Mathematics (CCIM) Center does basic and applied research and development in computer science and math for high-performance computing (HPC)
  - ❖ Mathematics, computer science, and algorithms
  - ❖ Informatics/interactive analytics
  - ❖ HPC architectures and computing systems software
  - ❖ Computational science

## What We Need

- New staff (12), postdocs (15), summer student interns (40), and year round student interns (2) in FY10
  - ❖ Staff Positions: generally PhD level in computer science, math, informatics, high-performance computing, statistics, computational science and engineering, discrete math/algorithms, operations research/optimization, computer engineering, software development
  - ❖ Student Internship Opportunities: primarily college and graduate level

## How to Contact Us

- For job postings, please visit <http://www.sandia.gov/careers/index.html>

# Center for Engineering Sciences (1500)

## Who We Are

- Research, development, and application of high-fidelity computational engineering software on national security problems
  - ❖ Computational physics software development
  - ❖ High performance parallel computing
  - ❖ Computer model verification, validation, uncertainty quantification
  - ❖ Software engineering and design
  - ❖ Applications: thermal/fluid/solid/structural mechanics, shock physics

## What We Need

- About 5-10 new staff and 10 student interns in FY10
  - ❖ Expertise in Engineering and Physics (computational focus), Math, Statistics, and Computer Science: mostly M.S and Ph.D. level, but will consider exceptional B.S. level graduates
  - ❖ Typically hire about 10 undergrad /grad students as summer interns

## How to Contact Us

- For job postings, please visit <http://www.sandia.gov/careers/index.html>

# Center for Engineering Design & Integration (2600)

## Who We Are

- Design, develop and field electronic and mechanical systems for satellites, space reentry vehicles, aircrafts and earth penetrators.
  - ❖ Reliable integrated software and hardware systems
  - ❖ Real time navigation control and command systems
  - ❖ Telemetry data analysis and visualization
  - ❖ System verification and validation

## What We Need

- About 20 new staff and 10 student interns in FY10
  - ❖ CS, CE, EE and ME with computer hardware, operating system, systems analysis, and network expertise: mostly M.S., some Ph.D., and will consider exceptional B.S. (Job Posting # 63245, 63246, 63247)
  - ❖ Also will hire about 10 undergrad and grad students internship program (Job Posting # TBD)

## How to Contact Us

- For job postings, please visit <http://www.sandia.gov/careers/index.html>

# Center for Systems Mission Engineering (5500)

## Who We Are

- We develop real-time information systems and analytical applications that process data from multiple space- and ground-based sensor systems to support nonproliferation and national security missions
  - ❖ Object-oriented analysis, design, & development
  - ❖ Large-scale systems architectures
  - ❖ Algorithm development and implementation
  - ❖ Modeling and simulation
  - ❖ Distributed computing

## What We Need

- 20 new staff in FY10 (Job Posting 63589)
  - ❖ MS CompSci grads
  - ❖ MS CompE grads with strong software design and development skills
  - ❖ Outstanding MFP candidates
  - ❖ Exceptional BS CompSci graduates
- 8 Interns (Job Postings 63611 and 63612)
  - ❖ Undergrad and grad CS students for classified software intern program

## How to Contact Us

- For job postings, please visit <http://www.sandia.gov/careers/index.html>

# Center for Information Systems Analysis (5600)

## Who We Are

- Involved in advanced information systems research and development to assess and secure critical national security systems
  - ❖ Cyber threat analysis
  - ❖ Red teaming
  - ❖ Vulnerability analysis
  - ❖ Failure analysis (joint with 1720) and reverse engineering
  - ❖ Network modeling and simulation
  - ❖ Control system security research
  - ❖ Security technology development

## What We Need

- About 30 new staff and 30 student interns in FY10
  - ❖ CS, CE, and EE with computer hardware, operating system, and network expertise: mostly M.S., some Ph.D., and will consider exceptional B.S. (63674)
  - ❖ Undergrad and grad students with same background for Center for Cyber Defenders internship program (63593, 63592)

## Who to Contact

- For job postings, please visit <http://www.sandia.gov/careers/index.html>

# Group for Systems Engineering & Analysis (6320)

## Who We Are

- The Systems Engineering and Analysis Group focuses on modeling and analysis and on Computer Science -- collaborative environments, knowledge management, and distributed systems.
  - ❖ Modeling/Simulation
  - ❖ Operations Research
  - ❖ Knowledge Management
  - ❖ Validation/Verification
  - ❖ Chem/Bio Decon and Restoration

## What We Need

- About 15 new staff in FY10
  - ❖ CS, CE, systems analysis, and network expertise: mostly M.S., some Ph.D., and will consider exceptional B.S. (Job Posting # TBD)
  - ❖ Also will hire undergrad and grad students to work on existing projects within the group. Summer or Full year students (Job Posting # TBD)

## Who to Contact

- For job postings, please visit <http://www.sandia.gov/careers/index.html>

# Center for Computer Sciences & Information Systems (8900)

## Who We Are

### Computer Sciences and Information Systems

- Mission Computing - HW/SW/Infrastructure
- Scientific Computing Environments – Algorithms and Architectures
- Informatics and Decision Science
- Cyber Security - Science-based Cyber Security,
- Applied Information Security R&D (joint with 5600)

## What We Need in FY10:

- About 15 new staff
  - ❖ CS, CE, & EE with computer hardware, operating system, systems analysis, and network expertise: mostly M.S., some Ph.D., and will consider exceptional B.S.
- About 5 Interns
  - ❖ Undergrad and grad students for Center for Cyber Defenders internship program
- Job Postings: 63974

## Who to Contact

- For job postings, please visit <http://www.sandia.gov/careers/index.html>

# Center for Computing Network Services (9300)

## Who We Are

- Cyber Security researches, develops and deploys tools, processes and methodologies necessary to defend the information of Sandia Labs. A leader across the NNSA and DOE complex, Cyber Security expertise includes:
  - ❖ Cyber Forensics
  - ❖ Reverse Engineering
  - ❖ Penetration Testing
  - ❖ Advanced Cyber R & D
  - ❖ Secure Data Transmission
  - ❖ Identity and Access Management

## What We Need

- Cyber Security seeks approximately 10 individuals with technical curiosity, critical analysis skills and the ability to create innovative solutions
  - ❖ Candidates with CS and CE Master level degrees. Will consider exceptional Bachelor candidates. Student internships are available. (Job Posting #63595)
  - ❖ Individuals who possess, or have an interest in learning the following: use of automated forensic tools, the ability to identify and model attack vectors/patterns, reverse engineering of malware, spyware and rootkit programs

## Who to Contact

- For job postings, please visit <http://www.sandia.gov/careers/index.html>

# Group for Science & Engineering Information Systems (9510)

## Who We Are

- We provide leadership and excellence in integrated information solutions and services enabling the SMUs to realize mission success.
  - ❖ Software Engineering
  - ❖ Vulnerability Analysis
  - ❖ Cyber Security Research
  - ❖ Enterprise Architecture
  - ❖ Software Architecture
  - ❖ Analysis and Design
  - ❖ Information Assurance

## What We Need

- About 8 - 10 new staff in FY10
  - ❖ CS, CE, and EE with computer hardware, operating system, systems analysis, and information assurance and M.S. and some Ph.D. (Job Posting: #62597)
  - ❖ Masters Fellowship Program with exceptional B.S. (Job Posting: #63581)

## Who to Contact

- For job postings, please visit <http://www.sandia.gov/careers/index.html>