



# Natural Science Graduate Student Career Opportunities at Sandia National Laboratories



**“Exceptional Service in the National Interest”**



**Information Session  
University of Texas at Austin  
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[www.sandia.gov](http://www.sandia.gov)

Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.

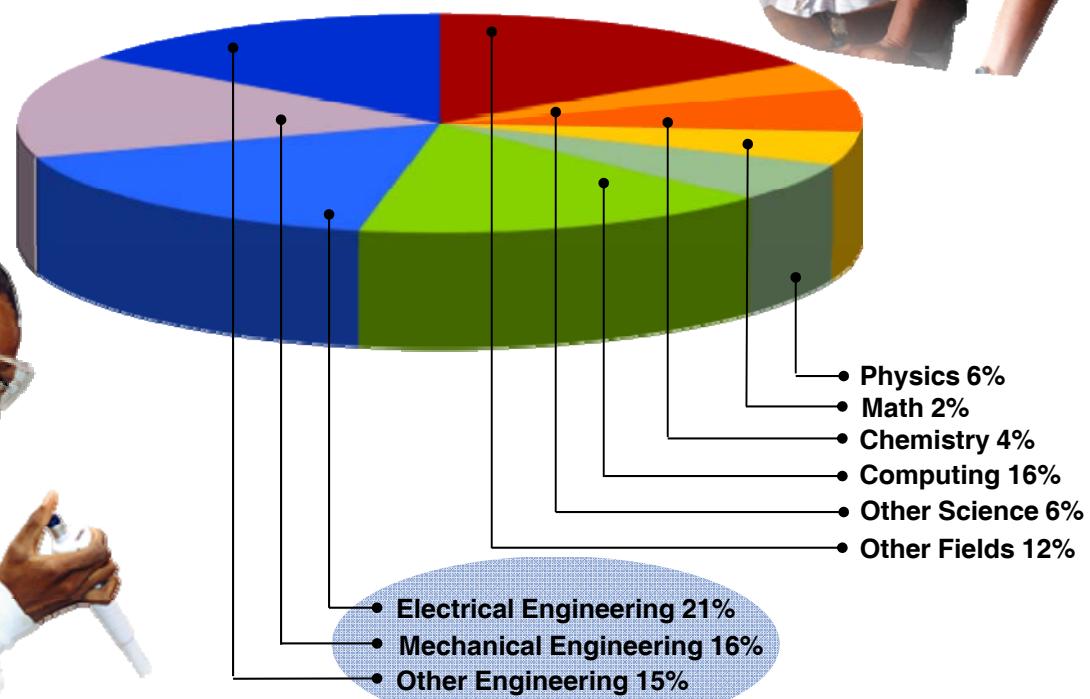




# Sandia's People

- On-site workforce: 11,677
- FY10 permanent workforce: 8,607
- FY10 gross payroll: \$898.7M
- FY10 budget: \$2.3B

**Technical Staff (4,277) by Degree**  
(End of FY10)





# Sandia's Primary R&D Organizations

## Activities involving Natural Sciences

- Chemistry
- Physics
- Mathematics
- Biological
- Geological

<b>1000</b> <b>Science &amp; Technology and Research Foundations</b>	<b>2000</b> <b>Weapons Engr &amp; Product Realization</b>	<b>5000</b> <b>Defense Systems &amp; Assessments</b>	<b>6000</b> <b>Energy, Nonproliferation &amp; High Consequence Security</b>	<b>8000</b> <b>California Laboratory</b>
<b>1100</b> <b>Physical, Chemical &amp; Nano Sciences</b>	<b>2100</b> <b>NM Wpns Systems Engineering</b>	<b>5200</b> <b>Defense Systems, Plans &amp; Strategy</b>	<b>6100</b> <b>Energy Tech &amp; Systems Solns</b>	<b>8100</b> <b>Homeland Scty &amp; Defense Systems</b>
<b>1200</b> <b>Nuclear Wpns S&amp;T</b>	<b>2200</b> <b>ST&amp;E Strategy</b>	<b>5300</b> <b>Electronic System</b>	<b>6200</b> <b>Energy Systems</b>	<b>8200</b> <b>CA Wpns Sys</b>
<b>1300</b> <b>Radiation Science</b>	<b>2300</b> <b>N Info Assurance</b>	<b>5400</b> <b>Integrated Mil Sys</b>	<b>6500</b> <b>Wpn &amp; FP</b>	<b>8300</b> <b>Trans Energy</b>
<b>1400</b> <b>Computing Research</b>	<b>2500</b> <b>Energetic Comp Realization</b>	<b>5500</b> <b>Systems Msn Engineering</b>	<b>6600</b> <b>Critical Asset Protection</b>	<b>8500</b> <b>Site Ops</b>
<b>1500</b> <b>Engineering Sciences</b>	<b>2600</b> <b>Engr Design &amp; Integration</b>	<b>5600</b> <b>Info Systems &amp; Analysis</b>	<b>6800</b> <b>Nonproliferation &amp; Cooperative TR</b>	<b>8600</b> <b>Biological &amp; Materials Science</b>
<b>1600</b> <b>Pulsed Power Sciences</b>	<b>2700</b> <b>Responsive NG Product Devel</b>	<b>5700</b> <b>Monitoring Systems</b>	<b>6900</b> <b>Geoscience Climate &amp; Conseq</b>	<b>8900</b> <b>Computer Science &amp; Info Systems</b>
<b>1700</b> <b>Microsystems S&amp;T and Components</b>	<b>2800</b> <b>NW Product Engr Program</b>	<b>5900</b> <b>System Research</b>		
<b>1800</b> <b>Materials Science &amp; Engineering</b>	<b>2900</b> <b>Stockpile Resource</b>			
<b>1900</b> <b>ST&amp;E Innovations &amp; Partnerships</b>				



# Some Activities involving Natural Sciences

## Chemistry

Materials  
Interfacial Science  
Chem dynamics/kinetics  
Combustion/Flames  
Chem imaging, M&S  
Nanotechnology  
Geochemistry  
Chem/Bio analysis  
Biochemistry  
Synthetic chem  
Reaction processes

## Physics

Materials  
Nanotechnology  
Lasers & optics  
Remote sensing  
High energy density physics  
Plasma & shockwave physics  
Solid-state physics  
Quantum computing  
Radiation & surface physics  
High-performance computing

## Biological Sciences

Biofuels  
Biochemistry  
Computational biology  
Medical diagnostics  
Photosynthesis  
Proteins  
Pathogen studies  
Therapeutics

## Geological Sciences

Energy production, storage & security  
Carbon capture, reuse and sequestration  
Geotechnical analysis  
Geothermal  
Resource exploration, extraction, development  
Hazardous waste storage & treatment  
Monitoring

## Mathematics

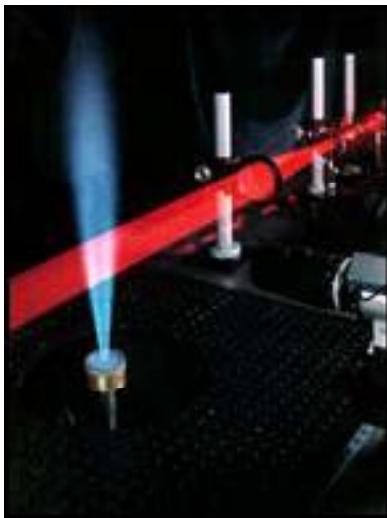
Computation science  
High-performance computing  
Algorithms for M&S  
Statistics



# Some Activities involving Natural Sciences



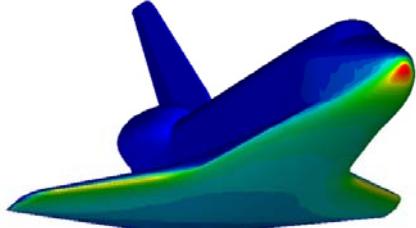
Nuclear Waste Management



Energy Research



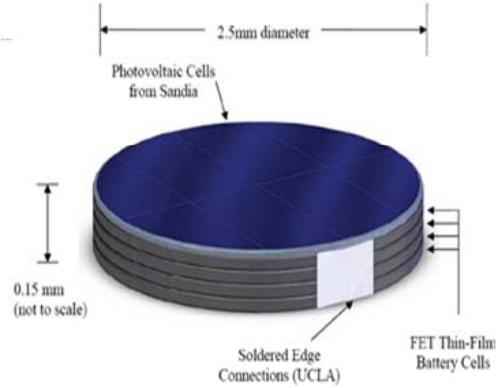
Materials and Processes



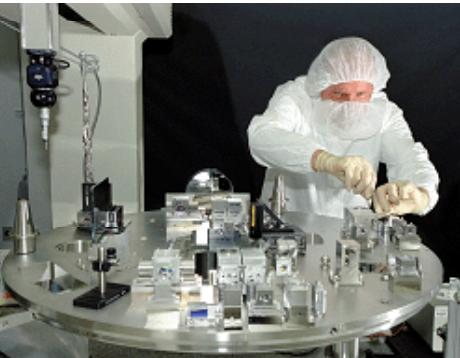
Investigation & Certification



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(not to scale)



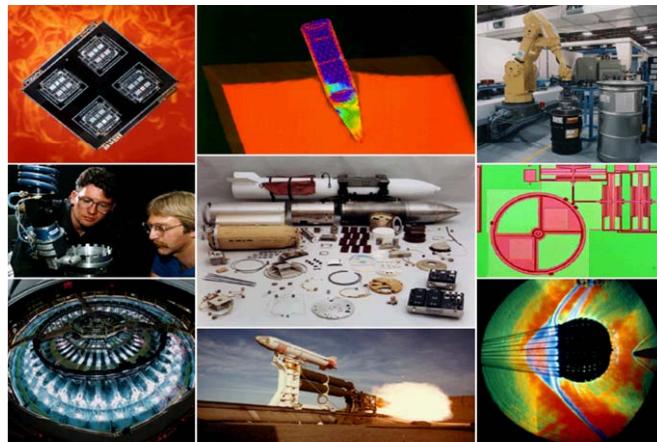
Power Sources



Extreme Ultraviolet Lithography



Microelectronics And Photonics



Responsible for R&D of >90% of the nuclear weapon components



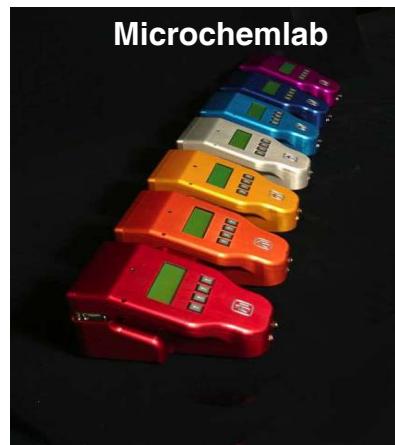
Sandia  
National  
Laboratories



# Some Activities involving Natural Sciences



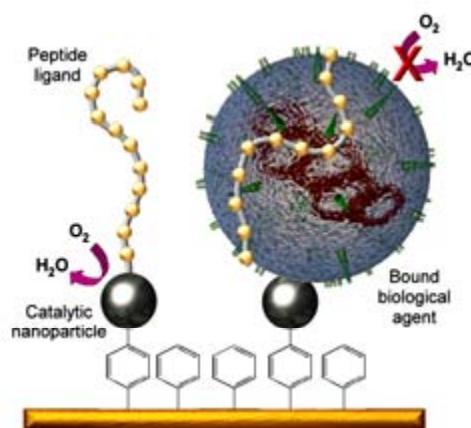
Biosensors



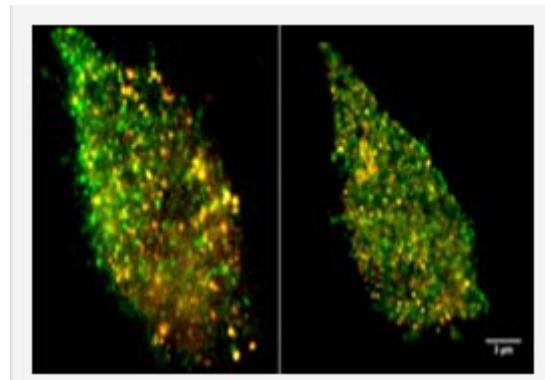
Micro ChemLab



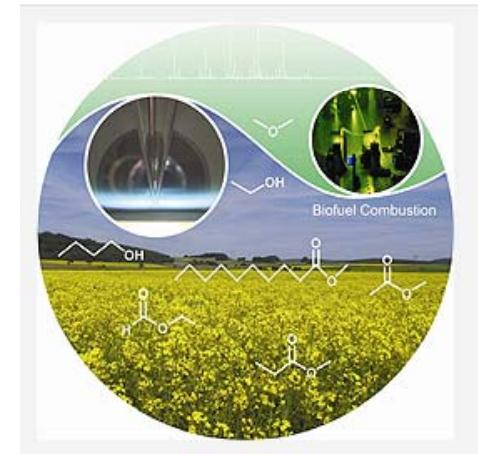
Pulsed Power



Electrochemical Biosensors



Cell Biology



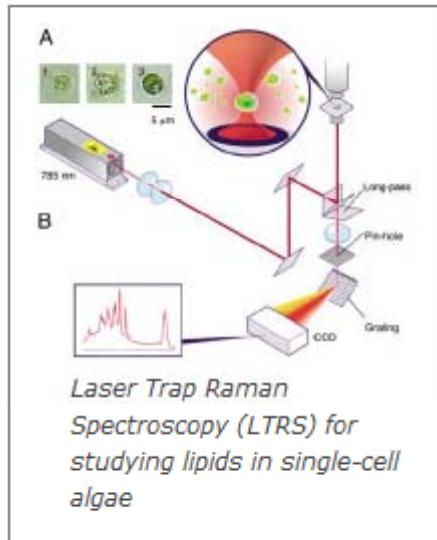
Bio Fuels



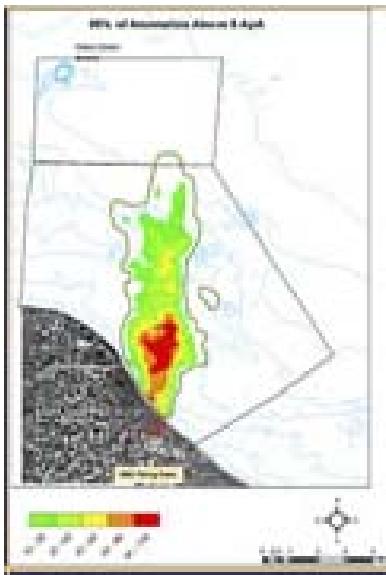
# Some Activities involving Natural Sciences



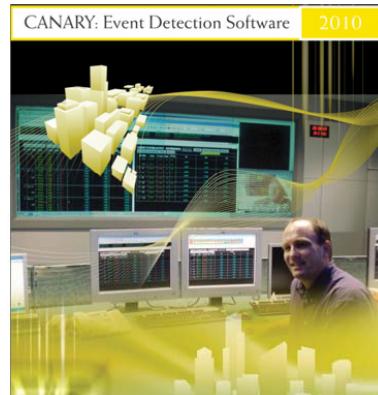
Remote sensing of greenhouse gases



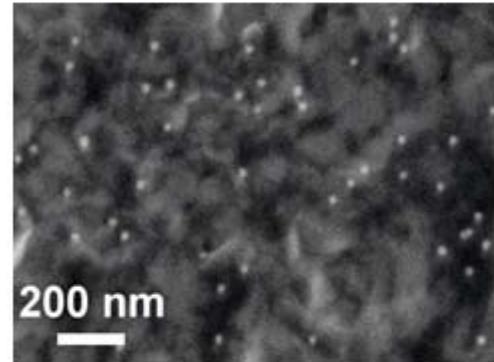
Algal Biomass for Fuels



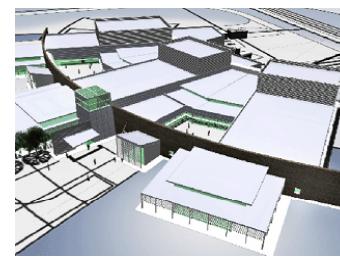
Fluid Dynamics



Modeling & Simulations



Nanoscience



Center for Integrated Nanotechnologies (CINT)



Decontamination Foam



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