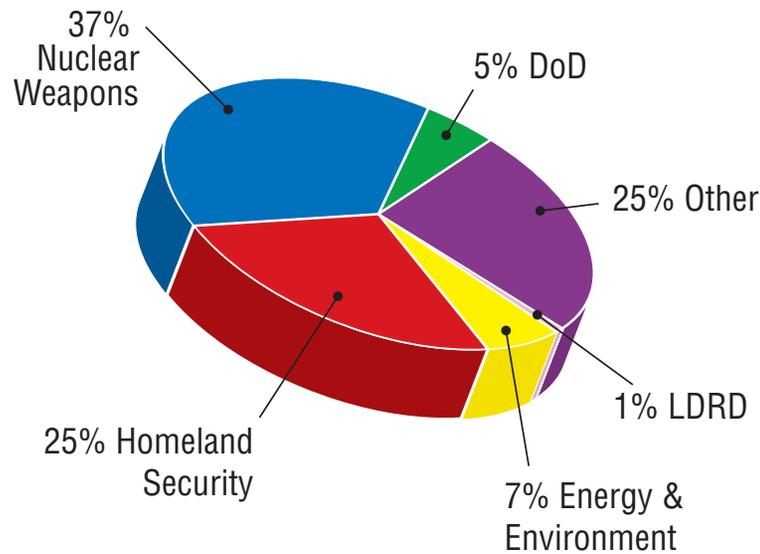


Decision Applications Division

Appendix

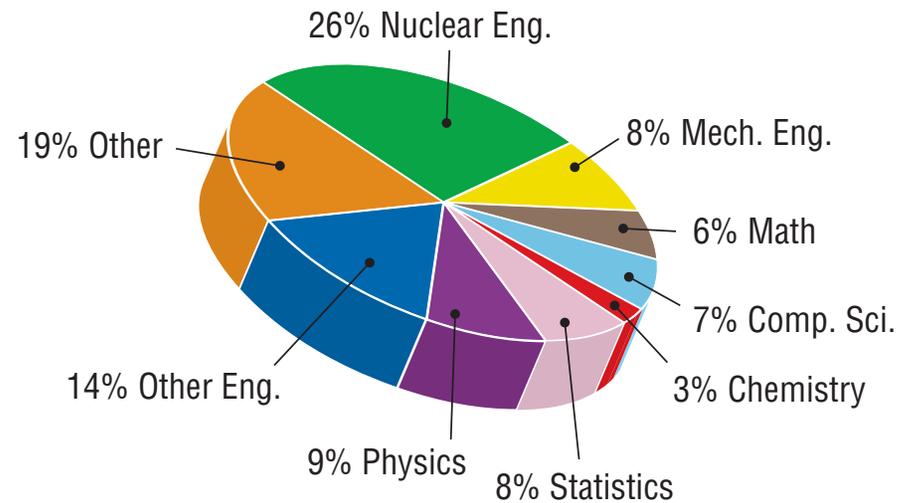
Decision Applications Division Statistics

Fiscal Year 2004 (FY04) projected budget by focus area—\$69.7 million in total.



Focus Area	Percentage	Amount (\$M)
Nuclear Weapons	37%	\$25.8 M
DoD	5	3.5
Other	25	17.4
LDRD	1	0.7
Energy & Environment	7	4.9
Homeland Security	25	17.4

Technical staff members (TSMs) in the division by discipline—183 TSMs in total.



Discipline	Percentage	Count
Nuclear Engineering	26%	48
Mechanical Engineering	8	15
Mathematics	6	11
Computer Science	7	13
Chemistry	3	5
Statistics	8	15
Physics	9	16
Engineering Other	14	26
Other Disciplines	19	34

Acronyms and Abbreviations

A

ACTD Advanced Concepts Technology Development
AFLP amplified fragment length polymorphisms
AL Albuquerque
api application program interface
AR approximate reasoning
ARPA Advanced Research Projects Agency
ASCI Accelerated Strategic Computing Initiative
AWSIM air warfare simulation

B

BASIS Biological Aerosol Sentry and Information System
BDA battle damage assessment

C

C Chemistry Division
C2 command and control
CB chemical or biological
CDC Centers for Disease Control
CFD computational fluid dynamic
CINT Center for Integrated Nanotechnology
CIP/DSS Critical Infrastructure Protection Decision Support System
CMR Chemistry Metallurgy Research
ConOps concepts of operations

D

D Decision Applications Division
DELTA Development of Lead-alloy Target Applications
DHS Department of Homeland Security
DoD Department of Defense
DOE Department of Energy
DTRA Defense Threat Reduction Agency
DX Dynamic Experiment Division

E

ECSS emergency core cooling system
EITAC Energy Infrastructure Training and Analysis Center
EIS Enterprise information security
EP Enterprise Project
EPRI Electric Power Research Institute
ESA Engineering Sciences and Applications Division
ESBWR enhanced simplified boiling water reactor

F

FCS Future Combat System
FMU Facilities Management Unit
FWO Facility and Waste Management Operations

G

GDS Genis Data System
GIAC Graphical Integrated Aggregated Control
GIS geographical information system
GUI graphical user interface

H

HE high explosive

I

ICAP Incident Characterization Action Plan
IEISS Interdependent Energy Infrastructure Simulation System
IIT information integration technology
INP integrated nuclear planning
ISI Infrastructure Security Initiative
ISR International, Space, and Response Technologies Division

J K

J Nuclear Nonproliferation Division
JIMO Jupiter Icy Moons Orbiter Project
JVB Joint Virtual Battle Laboratory

L

LANL Los Alamos National Laboratory
LANSCE Los Alamos Neutron Science Center
LDRD Laboratory directed research and development
LED logic evolved decision
LEP Life Extension Project
LOCA loss of coolant accident
LOS line of sight

M

MC02 Millenium Challenge 2002
MCMC Markov chain Monte Carlo
MCNPX Monte Carlo Neutron Photon Extended
MDA Missile Defense Agency
MISREPS mission history for mission reports
MPF Modern Pit Facility
MPI Message passing interface
MST Material Science Technology Division

N

N Nuclear Nonproliferation Division
NASA National Aeronautics and Space Administration
NATO North American Treaty Organization
NEPP Nuclear Earth Penetrator Project
NIMA National Imagery and Mapping Agency
NIMS National Incident Management System
NIS Nonproliferation and International Security
NISAC National Infrastructure Simulation and Analysis Center
NMT Nuclear Materials Technology Division
NNSA National Nuclear Science Administration
NRC Nuclear Regulatory Committee

O

OR/SA operations research/systems analysis

P

P Physics Division
PC personal computer
P&G Procter and Gamble
PM Project Management Division

PMBR Pebble Bed Modular Reactor
PF-4 Plutonium Facility
PRA Probabilistic Risk Assessment
PVM Parallel virtual machine

Q

QMU Quantification of margins and uncertainties
QUIC Quick Urban and Industrial Complex

R

rdd radiological dispersion device
RF radio frequency
RNEP robust nuclear earth penetrator
RTBF readiness in technical base and facilities

S

S Security Division

T

TCP/IP Internet communications protocol
TITANS LANL Theoretical Institute of Thermonuclear and Nuclear Studies
TR Threat Reduction Directorate
TRAC Transient Reactor Analysis Code
TRACE TRAC/RELAP Advanced Computational Engine
TRANSIMS transportation simulator
TTD Tunnel Target Defeat

U

UC University of California
UNM University of New Mexico
UNWD Unconventional Nuclear Warfare Defense Program

V W

WEM weapons engineering and manufacturing
WMD weapons of mass destruction
WP weapons program

X Y Z

X Applied Physics Division
YADAS Yet Another Data Analysis System ▲

Professional Organizations

D Division is represented in the following professional organizations:

Air and Waste Management Association
American Anthropological Association
American Association for Rhetoric of Science and Technology
American Association for the Advancement of Science
American Chemical Society Association for Women in Science
American Economic Association
American Institute of Aeronautics and Astronautics
American Institute of Chemical Engineers
American Mathematical Society
American Nuclear Society
American Physical Society
American Rock Mechanics Association
American Society of Civil Engineers
American Society of Mechanical Engineers
American Society of Nuclear Engineers (ASNE)
American Society for Photogrammetry and Remote Sensing
American Society for Testing and Materials
American Sociological Association
American Statistical Association (ASA)
Association of Aviation Psychologists
Association for Computing Machinery
Association for Women in Science
Health Physics Society
Human Factors and Ergonomics Society
Institute of Electrical and Electronics Engineers (IEEE), APS, ACM
Institute of Mathematical Statistics
Institute for Operations Research and the Management Sciences (INFORMS)
Institute of Nuclear Material Management
Interface Foundation of North America
International Association of Energy Economists
International Society for Analytical Cytology
International Society for Bayesian Analysis (ISBA)
International Society for Optical Engineering (SPIE)

International Society for Rock Mechanics
International Society of Soil Mechanics and Foundation Engineering
International Test and Evaluation Association
LANL Reactor Safety Committee
Mathematical Association of America
Military Operations Research Society
National Academy of Sciences Panel on Estimating
New Mexico Network for Women in Science and Engineering
Operations Research Society of America
Phi Beta Kappa
Program Committee for the 2004 Congress on Evolutionary Computation
Project Management Institute
Rhetoric Society of America
Sigma Pi Sigma Physics Honor Society
Sigma Xi
Society of Environmental Toxicology and Chemistry
Society for the History of Technology
Society for Industrial and Applied Mathematics (SIAM)
Society of Mining Engineers of AIME
Society of Professional Engineers
Society for Risk Analysis
Society for Social Studies of Science
Tau Beta Pi

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- J.F. Lime and J. Zhang, "A TRAC Model of the Los Alamos National Laboratory DELTA Loop Facility," AccApp'03: Accelerator Applications in a Nuclear Renaissance, American Nuclear Society Annual Meeting, San Diego, CA, June 1-5, 2003.
- C. Linkletter, D. Bingham, R. Sitter, D.M. Higdon, and N.W. Hengartner, "Comparing Designs of Experiments for Screening and Prediction in Computer Experiments," Third JANNAF Modeling and Simulation Subcommittee (MSS) meeting, Colorado Springs, CO, December 2003.

- H.F. Martz and M.S. Hamada, "Uncertainty in Counts and Operating Time in Estimating Poisson Occurrence Rates," ICRSA 2003 Conference, Columbia, SC, May 2003.
- H.F. Martz and R.L. Parker, "A Tutorial Introduction to Genetic Algorithms," American Statistical Association Meeting, San Francisco, CA, August 3-7, 2003.
- McKay, M.D., "About Prediction Uncertainty," Workshop on the Elements of Predictability, Baltimore, MD (November 2003).
- McKay, M.D., "Emerging Issues in Quantification of Prediction Uncertainty," 3rd Modeling and Simulation Subcommittee (MSS), Colorado Springs, CO, (December 2003).
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- S.E. Michalak, "Using Parallel Game Scenarios to Gain Better Information about Responses to Emerging Situations," American Statistical Association Meeting, San Francisco, CA, August 3-7, 2003.
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- L.M. Moore, "Computer Experiments: Designs to Achieve Multiple Objectives," 2003 Quality & Productivity Research Conference, Yorktown Heights, NY, May 2003.
- L.M. Moore and T. Stephens, "Factors Controlling the Aging of S5370," Thirty-third Annual Polymac Conference, Amarillo, TX, 2003.
- M. Morris, L.M. Moore, and M.D. McKay, "Large Incomplete Factorial Designs and Uncertainty Analysis of Computer Models," American Statistical Association Meeting, San Francisco, CA, August 3-7, 2003.
- M. Morris, L.M. Moore, and M.D. McKay, "Incomplete Factorial Designs with Random Levels for Evaluating the Importance of Inputs in Computer Experiments," American Statistical Association Meeting, San Francisco, CA, August 3-7, 2003.
- C.W. Nakhleh, "Probability, Prediction, and Certification (U)," Nuclear Explosives Design Physics Conference, Los Alamos, NM, October 2003.
- K.M. Omberg "Alternative Career Paths of ACS Congressional Fellows," Invited Speaker, 226th American Chemical Society National Meeting, New York, NY, September 7-11, 2003.
- K.M. Omberg "BASIS/BioWatch," Invited Speaker, SPIE International Workshop: Optics and Photonics in Global Homeland Security, December 2-4, 2003.
- K.M. Omberg, "Counterterrorism Efforts at the 2002 Winter Olympics and Beyond", Invited Speaker, 226th American Chemical Society National Meeting, New York, NY, September 7-11, 2003
- D.K. Parsons, "Diffusion and Transport Analysis of Higher Mode Eigen-systems," American Nuclear Society Mathematical and Computational Sciences Topical Meeting, Gatlinburg, Tennessee, April 2003.
- D.K. Parsons "Approximations to the Dominance Ratio Using Effective and Infinite Multiplication Results," American Nuclear Society Mathematical and Computational Sciences Topical Meeting, Gatlinburg, Tennessee, April 2003.
- R.R. Picard, "Monitoring Syndromic Data for Detection of Clandestine Events," 2003 Annual Meeting of WNAR and IMS, Golden, CO, June 2003.
- B.H. Sims, "Science vs. Bureaucracy? Safety and Institutional Culture at Los Alamos," Twenty-seventh Annual Meeting of Society for Social Studies of Science Annual Meeting, Atlanta, GA, October 15-18, 2003.
- B.H. Sims, "The Eternal and the Ephemeral: Bridges, Disposable Diapers, and the Limits of Technological Change," Society for the History of Technology Annual Meeting, Atlanta, GA, October 16-19, 2003.
- T.S. Stephens and L.M. Moore, "Factors Controlling the Aging of S5370," Enhanced Surveillance Annual Review, Livermore, CA, April 2003.
- L.O. Ticknor, P. Jackson, K. Hill, and C. Helma, "Amplified Fragment Length Polymorphism (AFLP) Analysis of Bioforensics Demonstration and Application Program (BDAP) Samples," Bioforensics Round Robin Workshop, Arlington, VA, November 2003.
- L.O. Ticknor, P. Jackson, K. Hill, and R. Okinaka "Developing AFLP Signatures for Sample Identification and to Provide a Phylogenetic Context for Advanced Signature Development," Annual Review, Arlington, VA, (June 2003).
- J.R. Wendelberger, "Collaborations That Work!," Spring Research Conference on Statistics in Industry and Technology, Dayton, OH, June 4-6, 2003.
- Wendelberger, J.R., "Prediction and Bounding of Degradation Paths," American Statistical Association Meeting, San Francisco, CA, August 3-7, 2003.
- J.R. Wendelberger, S.A. Keller-McNulty, T.L. Graves, L.M. Moore, R. Hanrahan, L. Wang, C. Necker, J. Bremser, and J. Phillips, "Corrosion and Aging II: Statistical Studies Impact for CSAs (U)," poster presented at the 2003 Enhanced Surveillance Conference by Sallie Keller McNulty.
- T.R. Wehner, L. Waits, M. May, J. Brown, M.D. Williams, and Gerald E. Streit, "Outdoor Biological Aerosol Sampling for a Biological Agent Detection System," Health Physics Society 48th Annual Meeting, San Diego, CA, July 20-24, 2003.

- B. Williams, T. Santner, and W. Notz, "Sequential Experimental Design of Computer Experiments," Third JANNAF Modeling and Simulation Subcommittee (MSS), Colorado Springs, CO, December 2003.
- A.G. Wilson, "Information Integration for Stockpile Surveillance. Contributed paper at U.S. Army Conference on Applied Statistics (ACAS), Napa, CA, October 2003.
- A.G. Wilson, "Beyond Batting Averages: Statistics and Big Science," National Youth Science Group, Bartow, WY, July 2003.
- A.G. Wilson and M. Harris, "Control Charts and Trees," Student Seminar at North Carolina State University, Lexington, NC, September 2003.
- A.G. Wilson, N.W. Hengartner, and S.A. Keller-McNulty, "Munitions Stockpile Reliability Assessment," TCG-XIV of Joint DoD/DOE Munitions Technology Development Program, Albuquerque, NM, May 2003.
- A.G. Wilson and S.A. Keller-McNulty, "Uncertainty Quantification for Complex Engineered Systems," Third JANNAF Modeling and Simulation Subcommittee (MSS), Colorado Springs, CO, December 2003.
- A.G. Wilson, A.C. Koehler, D.A. Leishman, and N.W. Hengartner, "Munitions Stockpile Reliability Assessment: May 2003 Progress Update," TCG-XIV of Joint DoD/DOE Munitions Technology Development Program, Albuquerque, NM, May 2003.
- A.G. Wilson, and L. McNamara, "Assessing Risks for Complex Systems: A Case Study in Missile Defense," American Statistical Association Meeting, San Francisco, CA, August 3–7, 2003.
- A.G. Wilson and L. McNamara, "Combining Bayesian Networks and System Reliability to Meet Missile Defense Agency Needs," Student Seminar at North Carolina State University, Raleigh, NC, September 2003.
- G.D. Wilson, "Boundary Objects and Persuasion Across Discourse Communities," Project on the Rhetoric of Inquiry (POROI), University of Iowa, Iowa City, IA, November 2003.
- G.D. Wilson, "Studying the Incommensurability that Unites Us: Persuasion Across Discourse Communities, Persuasion via Boundary Objects," American Association for the Rhetoric of Science and Technology/ National Communication Association Meetings, Miami, FL, November 19–23, 2003.
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- G.D. Wilson, D.A. Leishman, L. McNamara, A.C. Koehler, and B.H. Sims, "Knowledge Modeling and Integration at Los Alamos National Laboratory," American Statistical Association Meeting, San Francisco, CA, August 3–7, 2003.
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