



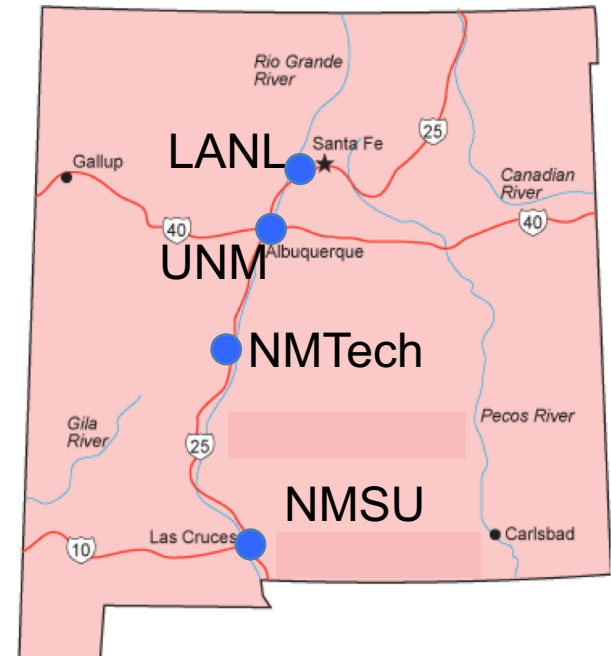
New Mexico Consortium Facilitating Collaborations with Los Alamos National Laboratory

**New Mexico Tech
March 3, 2021**

**Steven Buelow
CEO
New Mexico Consortium**

NMC – Background

- **Initiated by a Teaming Agreement between the University of California and the three New Mexico Research Universities to enhance research and education collaborations.**
 - University of New Mexico
 - New Mexico Institute of Mining and Technology
 - New Mexico State University
- **Incorporated in 2006 as a non-profit 501(c)(3).**
 - Board Of Directors - 2 members from each University and 2 voting members from LANL.
 - Financial support provided by Los Alamos National Laboratory(LANL). 100% of budget in 2006.
- **Institutional Agreement signed August, 2010 formalizing relationship, renewed in 2014 and 2018.**



NMC- Activities

- **Research - Focus Areas**
 - Advanced Computing
 - Modeling and Analysis
 - Plant Biology
 - Biomedical Technology and Engineering
- **Education**
 - Mentored Research (Postdocs, Students, Interns)
 - Summer Schools (15 LANL Programs)
- **Outreach**
 - Conferences/Workshops
 - Public Lectures
 - Facility Tours
- **Economic Development**
 - Incubator
 - Start-up Support
 - 8 start-ups



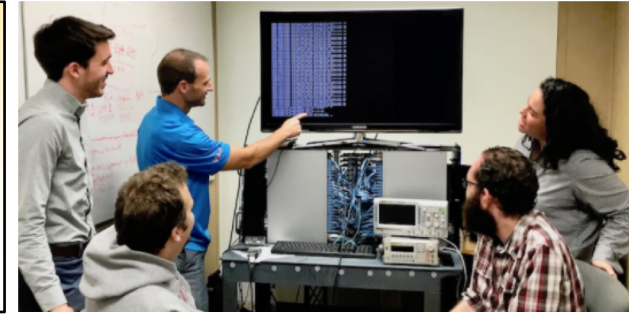
LANL Benefits: Recruit, Retain, Revitalize

- **Broader Research Support and Industrial Participation through Dual and Joint Appointments**
 - NSF, USDA, DOE, AFOSR, etc.
 - Foundations: Gates, Mellon, LANL, Fellowships
 - International Internet Preservation Consortium (IIPC)
 - NIH (low overhead restricts LANL)
- **Facilities**
 - Open computing

- **Spouse/Partner Employment Opportunities**
 - Research/Administrative positions
 - Affiliation – Proposal prep support
 - Skills development
- **Support for Developing Collaborations**
 - Faculty sabbaticals
 - Student interns
- **Conference & Workshop support**



Results: LANL Staff
151 Funded proposals
22 Funded proposals with
Industry collaboration
18 Current projects



University Benefits: Support for Collaborations

- **Faculty/Staff Visits**
 - Identify possible collaborators
 - Arrange seminars and discussions
- **Workshop/Conference Support**
 - Faculty/student travel & registration
 - Organization and logistics
- **Proposal Preparation**
 - Travel support for faculty
 - Faculty T&E & logistic support for large initiatives
- **Student visits & internships**
 - University faculty and LANL staff mentors
 - Seed projects for proposals
- **Faculty sabbaticals**
 - New faculty hires – 3 to 12 months at LANL before starting at Univ.
 - Summer/year-long sabbaticals
- **Curriculum Support and Development**
 - Courses taught by LANL staff
 - New course content developed in collaboration

Results-University Collaborations with LANL

108 Funded proposals in collaborations with Universities

27 Funded proposals In collaboration with New Mexico Universities

LANL Benefits: Update 2019-2020

- **Broader Research Support and Industrial Participation through Dual and Joint Appointments**

- 36 Proposals Submitted (\$14.9M)
- 5 Projects (~\$275K) Funded, 22 Pending
- 28 Publications and Presentations
- Support from NSF, NIH, AFOSR, DOE, NASA, Gates Foundation, IIPC, LANLF
- \$213K NMC support for Joint Appointments

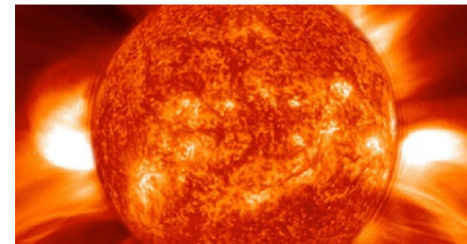
- **Ultrascale Systems Research Center**

- 38 LANL Staff Working at NMC
- 23 Students



- **HIV Phase I Vaccine Trial-CECI Supplement, HTVN106**

- Bette Korber, LANL Staff, NMC JA
- Elena Giorgi, Postdoc, LANL



- **Electron Acceleration and Emissions from Solar Flare Termination Shock**

- Fan Guo, LANL Staff, NMC JA

University Benefits: Update 2019-2020

- **Support for Students and Interns in Los Alamos**
 - 26 Total
 - 5 from NM Schools
- **LANL/University Project Collaborations**
 - 43 Total
 - 30 with NM Schools
- **Support of NM Universities**
 - 21 Faculty
 - 28 Students
 - 20 subcontracts
- **Support of Student/Faculty Housing During Visits to LANL**
 - Total \$28,667
 - Seed projects for proposals
- **Support of NM University Conferences/Activities**
 - Total \$113,416
 - Science and Engineering Fair
 - Cyber Security Competition
 - Engineering Synthetic Cells and Organelles Conference 2020
 - Super Computing Challenge
 - EPSCOR Smart Grid Project

Community Benefits: Update 2019-2020

- **Support of Community Activities (\$102K)**

- Super Computing Challenge
 - K-12 Competition
 - Fiscal/Administrative Management
- Math & Science Academy for Teachers
 - Fiscal Management
- LA Public Schools Science Fest
- JROMC Scholarships
- NM Alzheimer's Workshop
- LA Summer Concert Series
- Los Alamos Arts Council
- Santana Rael Lego League
- YMCA Sponsorship

- **Economic Development**

- Facilities and Equipment Available to Local Start-ups
 - 2,500 Sq. Ft. 1 MW Computing Center
 - **Proposed New 81,000 sq.ft. Research Center at Los Alamos Research Park**
- Investment/Support for Start-ups
 - \$4.6M
 - Innate Immunity, Immunological Solutions- Plant and Human Disease Control
 - Pebble Labs – Plant, Animal, Human Disease Control
 - Specifica – Antibody Libraries
 - Quara Devices - Pathogen Detection
 - Pajarito Cloud Computing – Tailored Computational Hardware Provider
 - Spartina Biotechnologies- COVID 19 Treatment

New Mexico Consortium: Summary Update 2019-2020

- **Operations**

- Operating Budget: \$20.3M (18 months)
- Students Support at NMC: 73
- Students Supported at Universities: 31
- Faculty Supported: 21
- University Subcontracts: 20
- LANL Joint Appointment/Outside Activity Staff Supported: 40
- Total NMC Employees: 114

- **Facility Changes/Developments**

- NMC Biolab sold to Pebble Labs USA, Inc. (\$11.5M)
- New Building Proposed for Research Park (\$30M)



NMC - How to Get Started

- Visit NMC website (Get Involved>Affiliates>For Partner Universities
 - <http://newmexicoconsortium.org>
 - **Get Involved > Affiliates > For Partner Universities**
- Contact Steve Buelow
 - buelow@newmexicoconsortium.org
 - 505-695-4618



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The New Mexico Consortium

The New Mexico Consortium (NMC) is an innovative effort to engage universities and industry in scientific research in the nation's interest and to increase the role of Los Alamos National Laboratory (LANL) in science, education and economic development. This non-profit corporation formed by the three New Mexico universities focuses on facilitating collaborations at the Laboratory interface.

The NMC leverages capabilities at LANL, universities and industry and provides agile and accountable operations to execute joint initiatives. The NMC develops and manages self-sustaining research facilities to support these joint initiatives. Through the NMC, the universities and LANL have developed more effective models to advance our nations interests and increase the impact of scientific research on the local and national economy.



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