

CHALLENGING STUDENTS TO CREATE A 21ST CENTURY WORKFORCE

NOW IN OUR 35TH YEAR

Presentation to the LESC

10-18-2024

Dr. Thomas Bowles – Board Member

Karen Glennon – Staff Member

Patty Meyer – Staff Member

For the Supercomputing Challenge

Board of Directors

WHAT IS THE SUPERCOMPUTING CHALLENGE?

**34-YEAR-OLD STATEWIDE STEM PROGRAM
FOR NM MIDDLE AND HIGH SCHOOL STUDENTS
CONDUCTING INDEPENDENT RESEARCH PROJECTS**

STUDENTS COMPETE FOR SCHOLARSHIPS AND PRIZES

PRIMARILY AN AFTERSHOOL PROGRAM

**STARTED BY LANL DIRECTOR SIG HECKER IN 1990
TO DEVELOP FUTURE LAB WORKFORCE**

501(C)3 NOT-FOR-PROFIT ORGANIZATION

CHALLENGE MISSION

THE SUPERCOMPUTING CHALLENGE PROVIDES A VENUE FOR BUDDING SCIENTISTS, RESEARCHERS, AND ENGINEERS TO LEARN COMPUTATIONAL SCIENCE SKILLS APPLICABLE TO NUMEROUS STEM FIELDS.

STUDENTS DEFINE A PROBLEM AND WORK WITH TEACHER MENTORS TO DEVELOP AND CARRY OUT AN EFFORT TO SOLVE THE PROBLEM FROM DESCRIPTION TO COMPLETION

BASICALLY, STUDENTS ARE LEARNING HOW TO DO R&D

THIS HELPS PREPARE NM STUDENTS FOR HIGH-PAYING, HIGH-TECH JOBS IN NM

HIGH-PAYING, HIGH-TECH JOBS IN NM *

The U.S. Bureau of Labor Statistics projects:

“Information security analyst” will be the 10th fastest growing occupation over the next decade.

These jobs have an expected growth rate of 31% compared to the 4% rate for all occupations.

Cybersecurity Ventures reports:

Global cybersecurity job vacancies grew by 350%, from 1 million openings in 2013 to 3.5 million in 2021.

The number of unfilled jobs leveled off in 2022, and remains at 3.5 million in 2023, with more than 750,000 of those positions in the U.S.

** NAIMI is working on a Build to Scale grant to grow IT/Cybersecurity jobs in NM*

(www.naimi.us)

CHALLENGE ACHIEVEMENTS

12,123 STUDENTS SINCE 1990

FROM ALL ACROSS NEW MEXICO

THOUSANDS ATTENDED NM COLLEGES AND UNIVERSITIES

HUNDREDS WENT TO TOP TIER UNIVERSITIES

MIT, CAL TECH, STANFORD, IVY LEAGUE, ETC.

TEAMS HAVE GONE ON TO WIN

1ST PLACE - SIEMENS COMPETITION IN MATH & SCIENCE (\$100,000)

2ND PLACE - SIEMENS COMPETITION IN MATH & SCIENCE (\$40,000)

1ST PLACE INTEL SCIENCE TALENT SEARCH (\$100,000)

NUMEROUS INTEL INTERNATIONAL SCIENCE FAIR WINNERS

SOME MESA ENGINEERING COMPETITION WINNERS

34% YOUNG WOMEN – 38% DURING LAST 10 YEARS

26% HISPANIC

11.1% NATIVE AMERICAN

2024 CHALLENGE

**34 TEAMS WITH 150 STUDENTS (74 male, 76 female)
PRESENT THEIR PROJECTS TO PANELS OF JUDGES
AT THE J ROBERT OPPENHEIMER LIBRARY**



**AWARDS CEREMONY
APRIL 30, 2024
WIDE RANGE OF AWARDS
\$17,500 IN SCHOLARSHIPS**

OUR REQUEST

\$200K RECURRING SUPPORT STARTING IN FY 2026

59TH LEGISLATURE - STATE OF NEW MEXICO - REGULAR SESSION, 2025

INTRODUCED BY
Christine Chandler

AN ACT

**MAKING AN APPROPRIATION TO THE
NEW MEXICO INSTITUTE MINING AND TECHNOLOGY
FOR THE SUPERCOMPUTING CHALLENGE PROGRAM.**

BE IT ENACTED BY THE LEGISLATURE
OF THE STATE OF NEW MEXICO:

SECTION 1. APPROPRIATION—Two hundred thousand dollars (\$200,000) is appropriated from the general fund to the Board of Regents of the New Mexico Institute of Mining and Technology for expenditure in fiscal year 2026 and subsequent fiscal years to support the supercomputing challenge program.

Any unexpended or unencumbered balance remaining at the end of a fiscal year shall not revert to the general fund.

CHALLENGE BUDGET

	Actual	Proposed		Actual	Proposed
Expenses	2024-2025	2025-2026	Revenues	2024-2025	2025-2026
Summer Teacher Institute	\$ -	\$ 47,000	Carryover	\$ 60,600	\$ -
Annual Kickoff	\$ 30,000	\$ 35,000	LANL	\$ 55,000	\$ 55,000
Expo & Awards Ceremony	\$ 21,000	\$ 43,000	SNL	\$ 10,000	\$ 10,000
Executive Director ((half time)	\$ -	\$ 50,000	Foundations	\$ 3,000	\$ 5,000
Contractors	\$ 50,000	\$ 50,000			
LANL Staff	\$ 55,000	\$ 55,000	Grants/Busir	\$ 35,000	\$ 20,000
General Costs	\$ 7,500	\$ 10,000	State		\$ 200,000
TOTAL	\$ 163,500	\$ 290,000	TOTAL	\$ 163,600	\$ 290,000

YEARLY OUTLAYS

**SUPPORT 2-WEEK-LONG SUMMER TEACHER INSTITUTE
*ASSIST TEACHER MENTORS TO WORK WITH STUDENTS***

PROVIDE FOR IN-PERSON YEARLY AWARD CEREMONY

HIRE A PART-TIME DIRECTOR

RECRUIT STUDENTS AND TEACHER SPONSORS

SECURE PRIVATE SECTOR FUNDING

REVENUE ISSUES

LANL FOCUS SHIFTED FROM LONG-TERM TO SHORT-TERM STAFFING

NMC PREVIOUSLY PROVIDED SIGNIFICANT FUNDING

- *Now provide accounting support, but not cash contribution*

COVID IMPACTED THE CHALLENGE

- *Still recovering - more difficult now to obtain business funding*

**LACK OF STABLE STATE FUNDING BASE RESULTS IN REDUCED
ABILITY TO SECURE GREATER SUPPORT FROM THE PRIVATE SECTOR**

OUR REQUEST

**\$200K RECURRING SUPPORT
FROM THE LEGISLATURE
STARTING IN FY 2026**

APPROPRIATION WILL BENEFIT ALL OF NEW MEXICO

**IT WILL STRENGTHEN THE STEM AND CODING SKILLS
OF OUR STUDENTS, PREPARE THEM TO DO WELL
IN OUR UNIVERSITIES, AND INCREASE THEIR
ABILITY TO GET HIGH-VALUE JOBS IN NM**

**WE CAN DEMONSTRATE TREMENDOUS SUPPORT
FROM PARENTS, TEACHERS, AND STUDENTS**

THANK YOU FOR YOUR CONSIDERATION

For additional information please visit our website

<https://supercomputingchallenge.org>