

WELCOME TO THE 2019 ANNUAL AWARDS CEREMONY

April 30, 2019



You Took the Challenge! You Finished the Marathon!



Master of Ceremonies

Shaun Cooper

**Past Member of the Board of
Directors**

Supercomputing Challenge

Retired NMSU CIO

College Professor, CS, NMSU



CNM Welcomes You!

Jennifer McDonald

Director of Outreach and Recruitment Services

**Thank you for the use of Smith Brasher Hall
And
Parking for all of the buses and cars!**

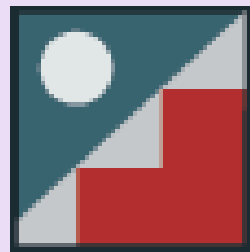


UNM EPSCoR Welcomes You!

Selena Connealy, PhD

Education and Outreach Manager

Thanks for Use of the Rotunda!



**New Mexico
EPSCoR**



LANL/Triad Welcomes You!

Irene Qualters

Associate Laboratory Director, Simulation and
Computation



Sandia Welcomes You!

Susan Seestrom

Advanced Science & Technology Associate
Labs Director & Chief Research Officer



Presentation 2018-19 Finalists

Presented by

**Bill Blackler
Challenge Evangelist**



The Finalists

04 Albuquerque High

Traffic Model

05 Barranca Mesa Elementary

Detecting Shock Waves With Artificial Intelligence

28 Los Alamos High

A Novel Computational Tool to inform Cost-Effective Nutrition interventions in Sub-Saharan Africa

29 Los Alamos High

Using QAOA to Solve NP-Hard Problems



The Finalists

30 Los Alamos High

Data-Based Approach to Estimating Ice-Shelf Melt Rates

32 Los Alamos Middle School

What is the Radius of the Earth's Core?

56 New Mexico School of the Arts

Optimizing Flapping-Wing Flight

97 Los Alamos High

Computer Simulation as a tool for Risk Assessment of Coastal Areas



I Took the Challenge!

First Year Schools



Presented by

Patty Meyer

Supercomputing Challenge

New Schools

House

Media Arts Charter

Mesilla Valley



Schools Returning to the Challenge

**Albuquerque High
Barranca Mesa Elementary
Shiprock High
Socorro High**



Newcomer Award

Presented by
Mark Fidel



Sponsored by Bob and Peggy Robey



Newcomer Award

Team: 74 Sarracino Middle School

Title: Cellular Automata

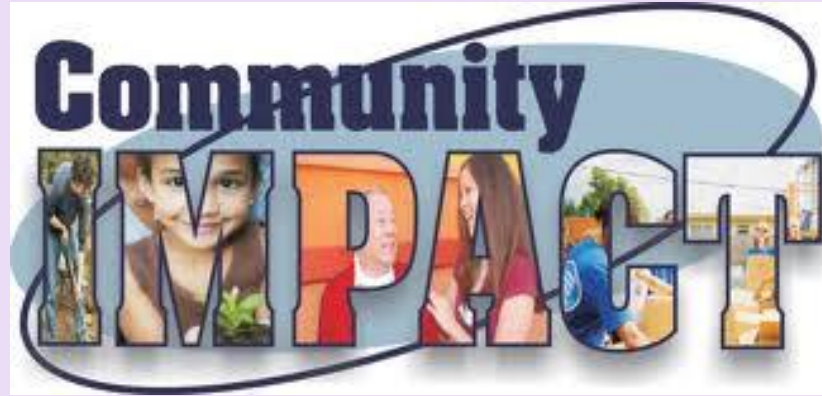
Team Members:

Sky Sessions, Angelica Jaquez, Elena Prieto

Sponsor: Teresa Apodaca, Lauri Capps



Community Impact Award



Presented by

Secretary Karen Trujillo

NM Public Education Department

Community Impact Award

Team: 10 Multi Schools-Cleveland Middle School/Cottonwood Classical Charter

Title: Albuquerque Fire Department Wait Times

**Team Members: Ayvree Urrea,
Kiara Onomoto**

Sponsor: Karen Glennon



Magellan Award



Presented by



Ronda Cole Harmon and Matthew Fetrow

Sponsored by

Bob and Peggy Robey



Magellan Award



Team: 85

Technology Leadership High School

Title: Learning about NUCS

Team Members:

Reyanna Gutierrez-Fromme

Mentor: Drew Einhorn

Crowd Favorite



Presented by

Sheila Mendez, PNM

On behalf of NM Tech Council



Crowd Favorite



Team: 81 Socorro High

Title: Mangrove Madness

Team Members:

Elias Zheng, Cody Johnston, Rio Sessions

Sponsor: Jay Garcia



Professional Presentation



Presented by

Tom Bowles, Challenge Board of Directors

North American Intelligent Manufacturing Initiative



Professional Presentation



Team: 28 Los Alamos High

Title: A Novel Computational Tool to Inform Cost-Effective Nutrition Interventions in Sub-Saharan Africa

Team Members: Lillian Petersen, Garyk Brixi

Mentor: Mark Petersen



Award for Agent-based Modeling using NetLogo

Presented by

Stephen Guerin - Simtable



Agent-based Model using NetLogo Award

Team: 87 Media Arts Charter School

Title: Finding the Battleships

Team Members: Seungbin Chung

Sponsor: Creighton Edington



Los Alamos National Laboratory Environmental Modeling Award



Presented by

David Janecky

Retired LANL Scientist

**Manufacturing Science & Engineering
Group**



Environmental Modeling Award

Team: 59 New Mexico Tech

Upward Bound Math & Science

Title: The Mission of Plastic

Decomposition: Fungi Edition

Team Members: Seth Griffen, Jeremy

Lawrence, Danny Luong, Torrey Luong

Sponsor: Karen Glennon, Kurtis Griess



Technical Writing Award

Presented by

Paige Prescott

Computer Science Alliance



Technical Writing Award

Team: 28 Los Alamos High

**Title: A Novel Computational Tool to Inform
Cost-Effective Nutrition Interventions in Sub-
Saharan Africa**

Team Members: Lillian Petersen, Garyk Brixi

Mentor: Mark Petersen



Recognition of Judges

Michael Trahan Sandia National Laboratories

Principal Member of Technical Staff

Integration and Test, Group # 5515

Kaley Goatcher Software Test Engineer at TransCore



Web Presentation of Final Report Award



Presented by
Michele Jacquez-Ortiz
Senator Udall's Office



Web Presentation of Final Report Award



Team: 81 Socorro High

Title: Mangrove Madness

Team Members: Elias Zheng, Cody Johnston,

Rio Sessions

Sponsor

Jay Garcia

Congressman Ben Ray Lujan's Middle School Award



**Patrick Duran
Field Officer for Lujan's Office**



Congressman Ben Ray Lujan's Middle School Award

Team: 75 Sarracino Middle School

Title: Angry Boards

Team Members:

Elizabeth Moellenbrock,

Andrew Moellenbrock

Sponsor: Teresa Apodaca, Lauri Capps



Human – Computer Interaction

Presented by
Genevieve Brown



Human – Computer Interaction



Team: 80 Shiprock High

Title: Campus Alert System

**Team Members: Adam Pettigrew, Mya Harvey,
Shi'son Tsosie, Lawrence Kee, Destiny Domingo**

Sponsor: Natalie Johnston



Teacher Appreciation Award

Thanks!



Presented by

Karen Glennon

Supercomputing Challenge



Teacher Appreciation Award

Thanks!



Presented by
Ariana Garcia
Capital High School

Teacher Appreciation Award

Recipient:

Irina Cislaru

Capital High



Teacher Appreciation Award

Thanks!



Presented by

Rio Sessions

Socorro High School

Teacher Appreciation Award

Recipient:



Jay Garcia

Socorro High

NMTIE Research Award

NMTIE

Furthering Education through Technology

Presented by
Shaun Cooper

NMTIE



NMTIE Research Award

NMTIE

Furthering Education through
Technology

Team: 20 Jackson Middle School

Title: Glioblastoma

Team Members: Israel Chirino, Santiago Herrera

Sponsor: Sharee Lunsford



NMTIE Teamwork Award

NMTIE

Furthering Education through Technology

Presented by

Shaun Cooper

NMTIE



NMTIE Teamwork Award

Team: 45 House High

Title: Turtles vs. Pollution

**Team Members: Alexis Smith, Evelyn Garrett,
Gracie Sanchez, Laci Meadors, Madison Garrett**

Sponsor: Alan Daugherty



Creativity and Innovation Award

Presented by

Shannan Schnedler



Creativity and Innovation Award



Team: 46 Melrose High

Title: Till the Cows Come Home

Team Members: Hunter Hollaway, Rilee Priest

Sponsor: Alan Daugherty



Technical Poster Award

Presented by
Amy Knowles
New Mexico Tech



Technical Poster Award



**Team: 12 Multi Schools-Eldorado High
/NexGen**

Title: Human Intelligence vs Machine Logic

**Team Members: Brendan Kuncel, Quentin
Dye, Savannah Phelps**

Sponsor: Karen Glennon



Graphical Poster Award

Supercomputing Challenge

Logo for 2019-2020

Presented by

Shaun Cooper

NMSU



Graphical Poster Award

Team: 82 Taos High

Title: Moving Water

Team Members:

Jenay Barela, Eben Bellas, Kineo Memmer

Sponsor: Tracy Galligan



New Mexico Network for Women in Science and Engineering



Presented by
Cheri Burch
NMNWSE



New Mexico Network for Women in Science and Engineering



Team: 49 Melrose Middle

Title: Mustangs of America

Team Members: Lily Macfarlane, Lilly Gallagher

Sponsor: Alan Daugherty

Science Rocks Award



Presented by
Carly Beneke



Descartes
Labs



Science Rocks Award



Team: 1 Academy For Tech & Classics

Title: Detecting Developmental Delays

Team Members: Etta Pope, Shyla Sharma, Odin Frostad

Sponsor: Jenifer Hooten



Judges' Special Awards

Presented by

Michael

Trahan

Kaley Goatcher



New Frontiers

Team: 1006 Taos High

Title: Stem Cell Therapy

Team Members:

Delaney Galligan, Kyle Totman, Cyrus O' Hern

Sponsor: Tracy Galligan



Medical Aid

Team: 83 Taos High

Title: Doctors Assistant Program

**Team Members: Sawyer Solfest, Henry Tosta,
Skylar Spriggs, J Ryan Cox**

Sponsor: Tracy Galligan



Earth Sciences

Team: 32 Los Alamos Middle School

Title: What is the Radius of the Earth's Core?

Team Members: Veronica Sofia Parra

Mentor: Mark Petersen



Food of the Future

Team: 1001 Los Lunas High

Title: Ready Set Grow!

Team Members: Delsin Jaramillo

Sponsor: Anne Loveless



Advancing Frontiers in Supercomputing

Team: 29 Los Alamos High

**Title: Using QAOA to Solve NP-Hard Problems
on NISQ Computers**

Team Members: Elijah Pelofski



Water Under Pressure

Team: 82 Taos High

Title: Moving Water

Team Members:

Jenay Barela, Eben Bellas, Kineo Memmer

Sponsor: Tracy Galligan



Sponsor Recognition

**Let's give a big round of
applause for our sponsors!!**

**The people in these businesses and companies
helped us**

Reach the Finish Line!!



Primary Sponsors

Los Alamos National Laboratory

Platinum Sponsors

**National Science Foundation Secure and
Trustworthy Spaces Program**

New Mexico Consortium

Sandia National Laboratories

Triad National Security

VanDyke Software



Educational Partners

- CNM** Central New Mexico Community College Ingenuity
- UNM** University of New Mexico
- NMSU** New Mexico State University
- ENMU** Eastern New Mexico University
- NMT** New Mexico Institute of Mining and Technology
- CCL** The Center for Connected Learning Computer-Based Modeling/NetLogo
- MIT Starlogo**
- New Mexico EPSCoR, Experimental Program to Stimulate Competitive Research**



Educational Partners

**Collaborative Research: Cyberinfrastructure Development in the
Western Consortium of Idaho, Nevada, and New Mexico,
NSF Award #0918635**

NMHU New Mexico Highlands University

PED New Mexico Public Education Department

**NMTIE New Mexico Technology in Education in conjunction with
NMCHECS**

NNMC Northern New Mexico College

SJCC San Juan College

SFCC Santa Fe Community College



Commercial Partners

Abba Technologies /Hewlett Packard

Air Force Research Laboratory

Descartes

bigbyte.cc

LANL Foundation

New Mexico Technology Council

NM Technology in Education(NMTIE)

OpenMake Software

Wildflower International

Network for Women in Science and Engineering

Boeing

Gulfstream Group

Intel

Ideum, New Mexico

Cray Inc.

Redfish Group

The MathWorks

Windspirit



Kudos to Alan Daugherty, AKA Mr. D!

From the Melrose School Community



Scholarship Recipients



Presented by

Teri Roberts and Dana Roberson

Scholarship Committee

Scholarship Recipients

Christie Djivjev

NMTECH

Quentin Dye

CNM

Destiny Erickson

NMTECH

Delaney Galligan

University of Florida

Ariana Garcia

Undecided

Occam Kelly-Graves

Harvey Mudd

Scholarship Recipients

Jeremy Lawrence	Tulane
Danny Luong	CNM
Torrey Luong	UNM
Nigone "Owen" Phommachack	UNM
Elijah Pelofske	NMTech
Alexis Smith	NMTech
Manoj Subedi	UNM



Service Award



**In recognition for your
dedication and passion for the Challenge**

Cray High Performance Computing Award



Presented by
Drew Einhorn



Cray High Performance Computing Award



Team: 97 Los Alamos High

Title: Computer Simulation as a Tool for Risk Assessment of Coastal Areas

Team Members: Robert Strauss & Logan Dare

Sponsor/Mentor: Charles Strauss



**And the moment we
have ALL been
waiting for.....**

Tie for Third Place

Team: 30 Los Alamos High

Title: Data-Based Approach to Estimating Ice-Shelf Melt Rates

Team Members: Christie Djidjev

Mentor: Mark Petersen



Tie for Third Place

Team: 4 Albuquerque High

Title: Traffic Model

Team Members: Rishi Yang

Sponsor: Joan Newsom



Second Place

Team: 97 Los Alamos High

Title: Computer Simulation as a Tool for Risk Assessment of Coastal Areas

Team Members: Robert Strauss, Logan Dare

Mentor: Mark Petersen



First Place

Team: 28 Los Alamos High

**Title: A Novel Computational Tool to Inform
Cost-Effective Nutrition Interventions in Sub-
Saharan Africa**

Team Members: Lillian Petersen, Garyk Brixi

Mentor: Mark Petersen



First Place Winner's Project Overview



Food Trucks Outside

(Teachers grab a boxed lunch outside the auditorium.)



Street Food Blvd.



**And some parting words
from
Dr. Cooper...**