



2018 Colorado Mathematics Awards

*The 23rd annual reception to recognize outstanding performance
in national and international mathematics competitions and contests
by Colorado middle school, high school, and undergraduate college students.*

Thursday, May 10, 2018

4:15 – 6:45 p.m.

Grant-Humphreys Mansion

770 Pennsylvania Street -- Denver, Colorado

Program

4:15 – 5:00

Refreshments

5:00 – 6:30

**Welcome: Dr. Richard Gibbs, CMA Co-Chair and Emeritus Professor of Mathematics,
Ft. Lewis College**

**Recognition of Underwriters: Dr. David Carlson, CMA Co-Chair; Founder and Convener,
Ethics and Ecological Economics Forum at the Iliff School of Theology**

**Remarks: Dr. Rebecca Kantor, Dean of the School of Education and Human Development,
University of Colorado Denver – “The Hundred Languages of Learning”**

Presentation of Awards:

- **MATHCOUNTS:** presented by Ms. Noelle Cochran, P.E., National Society of Professional Engineers of Colorado, and Colorado MATHCOUNTS Coordinator
- **American Mathematics Competition 8:** presented by Mr. Howard Selbst, Falcon Creek Middle School, Aurora (retired) and Colorado AMC 8 Director
- **American Mathematics Competitions 10 and 12:** presented by Mr. Raymond Johnson, Mathematics Content Specialist, Colorado Department of Education
- **MathWorks Math Modeling Challenge and U.S.A. Mathematics Olympiads:** Dr. Gibbs
- **American Regions Mathematics League Colorado Team 1:** Ms. Silva Chang, Director, Colorado Math Circle, Dept. of Applied Mathematics, University of Colorado Boulder
- **William Lowell Putnam Mathematical Competition and the International Mathematical Contest in Modeling:** Professor Michael Jacobson, University of Colorado Denver and Past Chair, Mathematical Association of America, Rocky Mountain Section (MAA-RMS)
- **MAA-RMS Burton W. Jones Distinguished Teaching Award recipient, Professor Jeanne Clelland, University of Colorado Boulder; and Early Career Teaching Award recipient, Professor Ian Pierce, U. S. Air Force Academy; recognized by Professor Alexander Hulpke, Colorado State University, and Chair, MAA-RMS**

6:30 – 6:45

Refreshments

MATHCOUNTS

MATHCOUNTS is an after school program for 6th, 7th, and 8th graders which leads to a series of three-hour competitions at school, chapter, state, and national levels. Each year, approximately 140,000 students nationwide participate in school MATHCOUNTS competitions, with about 40,000 students participating at chapter competitions. The top four students at each state competition will represent their state at the national competition in Washington, D.C. on May 12-15. In 2017-18, 1020 students from 124 schools in Colorado participated in chapter competitions, while 159 students from 50 schools participated at the state competition on March 24th at the Anschutz campus of the University of Colorado Denver

First Place Colorado Team (and Coaches)

Aiden Lee, Angelo Pan, Srinivas Arun, Keelan Hu, Campus Middle School, Greenwood Village (Christy Marini)

Colorado MATHCOUNTS Team (and Coach)

Anthony Wang, Cresthill Middle School, Highlands Ranch (Kevin Larsen, Walter Stroessner, Merry Wong); **Aiden Lee**, Campus Middle School, Greenwood Village (Christy Marini); **Ellie Greyson**, West Middle School, Greenwood Village (Joanne Parkhouse); **Shane Lambert**, Steamboat Springs Middle School (Sally Lambert). Team Coach: Christy Marini.

Honorable Mention (and Coaches)

Max Xu, Rocky Heights Middle School, Littleton (Christopher Gowing); **Quinn Perian**, Summit Charter Middle School, Boulder (Tanya de Nobrega); **Ari Wang**, Mountain Ridge Middle School, Highlands Ranch (Christine Draper, Ming Song); **Toby Shu**, Campus Middle School, Greenwood Village (Christy Marini); **Jackson Dryg**, Preston Middle School, Fort Collins (Roselyn Stern); **Jack Younger**, Colorado Academy Middle School, Denver (Kathy Zolla and Pete Horst)

American Mathematics Competition 8

The AMC 8 is a 40-minute 25-question multiple-choice exam given in November. Students in 8th grade and below are eligible. In 2017, 102,510 students from 1848 schools nationwide participated.

AMC 8--Top Colorado Individual Winners (and Coaches)

- (1) **Anthony Wang**, Cresthill Middle School, Highlands Ranch (Merry Wong) A perfect score!
- (2) **Anthony Chui**, Rocky Heights Middle School, Highlands Ranch (Christopher Gowing)
- (2) **Aiden Lee**, Campus Middle School, Greenwood Village (Christy Marini)
- (2) **Quinn Perian**, Summit Charter Middle School, Boulder (Tanya de Nobrega)

6th Grade First Place: **Eric Wang**, Kinard Core Knowledge Middle School, Ft. Collins (Cecilia Bonertz) A 5th grader!

Honorable Mention (and Coaches)

Ellie Greyson, West Middle School, Greenwood Village (Joanne Parkhouse); **Keelan Hu** and **Angelo Pan**, Campus Middle School, Greenwood Village (Christy Marini); **Natalie Pujet**, Southern Hills Middle School, Boulder (Matthew McKay); **Ari Wang**, Mountain Ridge Middle School, Highlands Ranch (Christine Draper, Ming Song); **Eric Wang**, Kinard Core Knowledge Middle School, Ft. Collins (Cecilia Bonertz); **Hannah Wang**, Hulstrom K-8, Northglenn (Angela Newberry); **Andrew Zirger**, Summit Charter Middle School, Boulder (Thomas Seibel)

American Mathematics Competitions 10 and 12

Each contest is a 75-minute 25-question multiple-choice test with approximately 12 common problems between them. Students in grades 10 and below are eligible for the AMC 10 exam; students in grades 12 and below are eligible for the AMC 12 exam. Each contest was administered in different versions on February 7th [10/12A] and February 15th [10/12B]. Nationally, 41,145 students took the 10A exam and 32,041 students took the 10B exam; student totals for the AMC 12 were 33,226 [12A] and 27,619 [12B]. Some students took an exam on both days.

AMC 10--Top Colorado Individual Winners (and Coaches)

- (1) **Austen Mazenko**, Cherry Creek High School, Greenwood Village (Jim Padavic and Cayel Dwyer) A perfect score!
- (2) **Rahul Thomas**, Cherry Creek High School, Greenwood Village (Jim Padavic)
- (3) **Anudeep Golla**, Fairview High School, Boulder (Silva Chang)

8th Grade First Place: **Quinn Perian**, Summit Charter Middle School, Boulder (Tanya de Nobrega)

American Mathematics Competitions 10 and 12 (continued)

AMC 10--Honorable Mention (and Coaches)

Brandon Dong and **Derek Li**, Cherry Creek High School, Greenwood Village (Jim Padavic); **Rithwik Mylavarapu** and **Kyle Wang**, Fairview High School, Boulder (Silva Chang); **Quinn Perian**, Summit Charter Middle School, Boulder (Tanya de Nobrega); **Daniel Rui**, Peak to Peak Charter School, Lafayette (Joe Howard); **Anthony Wang**, Cresthill Middle School, Highlands Ranch (Silva Chang and Merry Wong)

AMC 12—First Place Colorado Team (and Coach)

Hongyi Chen, **Andrea Lin**, and **Hannah Zhang**, Fairview High School, Boulder (Jack Cawelti)

AMC 12--Top Colorado Individual Winners (and Coaches)

- (1) **Austen Mazenko**, Cherry Creek High School, Greenwood Village (Jim Padavic and Cayel Dwyer)
- (2) **Hongyi Chen**, Fairview High School, Boulder (Jack Cawelti and Silva Chang)
- (3) **Andrea Lin**, Fairview High School, Boulder (Jack Cawelti and Silva Chang)

10th Grade First Place: **Austen Mazenko**, Cherry Creek High School, Greenwood Village (Jim Padavic and Cayel Dwyer)

AMC 12--Honorable Mention (and Coaches)

Sonia Chu, **Amber Liu**, and **Luke Zhang**, Rock Canyon High School, Highlands Ranch (Erynn Albert, Ming Song, Silva Chang); **Sarah Gao**, Cherry Creek High School, Greenwood Village (Jim Padavic and Cayel Dwyer); **Cedar Turek**, Steamboat Springs High School (Norbert Turek); **Warren Woo** and **Hannah Zhang**, Fairview High School, Boulder (Jack Cawelti, Silva Chang, and Ming Song)

American Regions Mathematics League

Each year about 2000 high school students from the U.S. and other countries form 15-member teams to compete at the national ARML competition. In June 2017, thirty-five students from eighteen different schools represented Colorado at the national competition. Colorado won 5th place in the B Division and ranked 22nd nationally out of 133 regional teams. This year's team members are listed below:

Hongyi Chen, **Anudeep Golla**, **Andrea Lin**, **Rithwik Mylavarapu**, **Kyle Wang**, **Hannah Zhang**, and **Stephanie Zhang**, Fairview High School, Boulder; **Sonia Chu**, Rock Canyon High School, Highlands Ranch; **Taha Krarti**, Niwot High School; **Brandon Dong**, **Austen Mazenko**, and **Rahul Thomas**, Cherry Creek High School, Greenwood Village; **Erik Svenneby**, Grandview High School, Aurora; and **Cedar Turek**, Steamboat Springs High School Team Coach: Silva Chang, Director, Colorado Math Circle; Dept. of Applied Mathematics, University of Colorado Boulder.

American Invitational Mathematics Examination and the USA Math Olympiads

The *American Invitational Mathematics Examination* is a 3-hour 15-question examination with each answer a 3-digit number. Two versions of the exam were administered on different days in March to students achieving Honor Roll status on the AMC 10 or 12 exams. In 2017, nearly 4300 students nationwide participated.

The *USA Math Olympiad* and the *USA Junior Math Olympiad* are 9-hour 6-question essay examinations given in April to the top 500 or so students participating in the AMC 10 and 12 exams and the AIME. The top 6 USAMO students will comprise the USA team at the International Mathematical Olympiad to be held July 3-14 in Cluj-Napoca, Romania. Nationally, 292 students were invited to take the USAMO exam, including two students from Colorado. Nationally, 224 students qualified for the USAJMO exam, including one from Colorado.

USA Math Olympiad Qualifiers: **Hongyi Chen**, Fairview High School, Boulder (Jack Cawelti and Silva Chang); and **Austen Mazenko**, Cherry Creek High School, Greenwood Village (Jim Padavic and Cayel Dwyer).

USA Junior Math Olympiad Qualifier: **Rahul Thomas**, Cherry Creek High School, Greenwood Village (Jim Padavic)

MathWorks Math Modeling Challenge (M3C)

M3C is an applied mathematics modeling contest open to high school students across the U. S. Teams of 3-5 students and one teacher-coach have 14 hours during a weekend (this year, March 2-5) to prepare a report on a real-life problem. The challenge is sponsored by MathWorks and scholarship prizes are awarded each year to top teams. This year, 913 teams participated; there were 6 Finalist teams, 6 Semi-Finalist teams, and 22 Honorable Mention teams.

One Colorado Team received an Honorable Mention award!

Silver Creek High School, Longmont

Paxton Lee, Emma Lilly, Jet Rostykus, and Max Ruiz (Carmen Rubino)

William Lowell Putnam Mathematical Competition

The *William Lowell Putnam Mathematical Competition* is a collegiate examination sponsored by the Mathematical Association of America. It is a 6-hour 12-question essay examination given on campus on the first Saturday in December. All undergraduates are eligible. In 2017, 4638 students from 575 institutions in the U.S. and Canada participated.

Top 500 Individual Winners (and Coaches) from Colorado Institutions

- (1) **Samuel Reinehr**, Colorado School of Mines [*Samuel placed in the top 184 participants.*]
- (2) **Matthew Iverson**, Colorado School of Mines
(Professors Rebecca Swanson and Steve Pankavich coached both students)

Mathematical Contest in Modeling (MCM)

The *Mathematical Contest in Modeling (MCM)* is an international contest for college undergraduates and high school students. Teams of three students work for 96 hours over a weekend (this year, February 8-12), using applied mathematics to solve their choice of one of three real-world problems. In 2018, solutions were submitted by 10,670 teams from 18 countries, including 331 teams from the U.S. and ten teams from two Colorado institutions.

Out of 10,670 teams worldwide, only 16 were Outstanding—including one from Colorado!

Derek Gorthy, Christine Reilly, and Marc Thompson, University of Colorado Boulder (Professor Anne Dougherty)

This team also received the SIAM Award and the Mathematical Association of America (MAA) Award!

#

Colorado Mathematics Awards Steering Committee Members and Contributors

Dr. Richard Gibbs and **Dr. David Carlson**, reception co-chairs; **Ms. Silva Chang**, Dept. of Applied Mathematics, University of Colorado Boulder; **Mr. Paul Gulman**, P.E., National Society of Professional Engineers of Colorado; **Ms. Rhonda Naylor**, Campus Middle School (retired) and Past President, Colorado Council of Teachers of Mathematics; **Mr. Raymond Johnson**, Mathematics Content Specialist, Colorado Department of Education; **Mr. Howard Selbst**, Falcon Creek Middle School (retired); and **Mr. Rocke Verser**, independent computer consultant.

Benefactors (\$1,000 or more) *Dr. David Larue [former Steering Committee member] and the McGraw-Hill Foundation*

Patrons (\$500-\$999) *Rocky Mountain Section of the Mathematical Association of America (MAA)*

Supporters (\$100-\$499) *National Society of Professional Engineers-Colorado and CMA Steering Committee members*

Special thanks to: Arrow Awards, Phoenix, and Judy Lerner Catering, Denver.

Contributions and other expressions of support for the Colorado Mathematics Awards (CMA) annual event may be sent to: FLC Foundation, 1000 Rim Drive, Durango CO 81301-3911. Please write CO Math Awards on the memo line.

Pictures of students and teacher-coaches may be viewed at: <http://cma.coloradomath.org>.