



2016 Colorado Mathematics Awards

*The 21st annual reception to recognize outstanding performance
in national and international mathematics competitions
by Colorado middle school, high school, and undergraduate college students.*

**Tuesday, May 17, 2016
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; Adjunct Faculty, Josef
Korbel School of International Studies (University of Denver) and the Iliff School of Theology**

Remarks: Ms. Robin Pringle Hickenlooper, First Lady of Colorado

Presentation of Awards:

- **MATHCOUNTS:** presented by Ms. Noelle Cochran, P.E., National Society of Professional Engineers of Colorado, and Colorado MATHCOUNTS Coordinator
- **American Mathematics Contest 8:** presented by Mr. Howard Selbst, Falcon Creek Middle School, Aurora (retired) and Colorado AMC 8 Director
- **American Mathematics Contests 10 and 12:** presented by Mr. Raymond Johnson, Mathematics Content Specialist, Colorado Dept. of Education
- **Moody's Mega Math (M^3) Challenge and U.S.A. Mathematics Olympiads:** Dr. Gibbs
- **American Regions Mathematics League Colorado A1 Team:** Ms. Silva Chang, Director, Colorado Math Circle, Dept. of Applied Mathematics, University of Colorado-Boulder
- **William Lowell Putnam Mathematical Competition, International Mathematical Contest in Modeling, and Interdisciplinary Contest in Modeling:** Professor Michael Jacobson, Metropolitan State University-Denver, and Chair, Mathematical Association of America, Rocky Mountain Section (MAA-RMS)
- **MAA-RMS Burton W. Jones Distinguished Teaching Award recipient, Professor Hortensia Soto-Johnson, University of Northern Colorado; and Early Career Teaching Award recipient, Professor Rebecca Swanson, Colorado School of Mines; recognized by Professor William Emerson, University of Colorado-Denver, and Governor, 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. The top four students at the state competition represent their state at the national competition. In 2015-16, approximately 30,000 students from 5200 schools participated in competitions nationwide, including approximately 800 students from more than 130 schools in Colorado. The state MATHCOUNTS competition was held in March; 168 students from 65 schools participated. The national MATHCOUNTS competition was held May 7-10 in Washington, D.C.

First Place Colorado Team (and Coaches)

Austen Mazenko, Rahul Thomas, Derek Li, and Nathan Miao, Campus Middle School, Englewood (Amy Bainbridge and Andrew Ying)

Colorado MATHCOUNTS Team (and Coach)

Austen Mazenko and **Rahul Thomas**, Campus Middle School, Englewood (Amy Bainbridge and Andrew Ying); **Edward Lim**, Leshler Middle School, Ft. Collins (Lynn Ann Johnson); **Anudeep Golla**, Southern Hills Middle School, Boulder (Matt McKay). Team Coach: Amy Bainbridge, Campus Middle School.

The Colorado team placed 17th in the national MATHCOUNTS competition.

Honorable Mention (and Coaches)

Colin Ferry, Altona Middle School, Longmont (Tim Criger); **Siddarth Ijju**, Challenge School, Denver (Matt Bixby); **Akshat Jain** and **Aditya Shankarling**, Stargate School, Thornton (Ken Haney); **Ryan Liao**, Ken Caryl Middle School, Littleton (Minru Liao); and **Kevin Yang**, Mountain Ridge Middle School, Colo. Springs (Christine Draper)

American Mathematics Contest 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 2015, more than 150,000 students from more than 2500 schools nationwide participated.

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

- (1) **Austen Mazenko**, Campus Middle School, Englewood (Amy Bainbridge) A perfect score!
- (2) **Rahul Thomas**, Campus Middle School, Englewood (Amy Bainbridge)
- (3) **Anudeep Golla**, Southern Hills Middle School, Boulder (Matt McKay)
- (3) **Christopher Tsai**, McAuliffe International School, Denver (Graham Ray)

6th Grade First Place: **Anthony Wang**, STEM School & Academy, Highlands Ranch (Jill Donnelly)

Honorable Mention (and Coaches)

Brandon Dong, Siddarth Ijju, and Min Young Chang, Challenge School, Denver (Matt Bixby); **Edward Lim**, Leshler Middle School, Ft. Collins (Lynn Ann Johnson); **Daniel Rui**, Summit Middle School, Boulder (Daniel Brown); and **Anthony Wang**, STEM School & Academy, Highlands Ranch (Jill Donnelly)

American Mathematics Contests 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. The contests were administered in two versions on different days in February. Nationally, more than 100,000 students from nearly 4000 schools participated in the AMC 10 exam in February, while more than 87,000 students from nearly 4000 schools took the AMC 12 exam then.

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

- (1) **Isani Singh**, Cherry Creek High School, Greenwood Village (Dotty Dady)
- (2) **Austen Mazenko**, Campus Middle School, Greenwood Village (Amy Bainbridge)
- (3) **Hari Sowrirajan**, Cherry Creek High School, Greenwood Village (Dotty Dady)
- (3) **Hannah Zhang**, Fairview High School, Boulder (Silva Chang and Ming Song)

8th Grade First Place: **Austen Mazenko**, Campus Middle School, Greenwood Village (Amy Bainbridge)

AMC 10--Honorable Mention (and Coaches)

Sonia Chu, Rock Canyon High School, Highlands Ranch (Erynn Albert and Ming Song); **Anudeep Golla**, Southern Hills Middle School, Boulder (Matt McKay); **Michael Hu, Christopher Lee, and Toby Lee**, Cherry Creek High School, Greenwood Village (Dotty Dady); **Eric Svenneby**, Grandview High School, Aurora (Kim Mitchell); **Rahul Thomas**, Campus Middle School, Denver (Amy Bainbridge); **Stephanie Zhang**, Fairview High School, Boulder (Silva Chang)

AMC 12—First Place Colorado Team (and Coach)

Won Jae Kim, Jeremy Schiff, Avi Swartz, and Andrew Ying, Cherry Creek High School, Greenwood Village (Dotty Dady)

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

- (1) **Andrew Ying**, Cherry Creek High School, Greenwood Village (Dotty Dady)
- (2) **Avi Swartz**, Cherry Creek High School, Greenwood Village (Dotty Dady)
- (3) **Hongyi Chen**, Fairview High School, Boulder (Silva Chang)

10th Grade First Place: **Hongyi Chen**, Fairview High School, Boulder (Silva Chang)

AMC 12--Honorable Mention (and Coaches)

Jackson Chen, Anurag Golla, and Casey Zhang, Fairview High School, Boulder (Emily Silverman and Silva Chang); **Matthew Iverson**, Liberty Common High School, Ft. Collins (Torgun Lovely); **Aaron Lou**, Highlands Ranch High School (Anthony Verbsky); **Tony Wang**, Fountain Valley School, Colorado Springs (Debra Prantl); and **Scott Weygandt**, Niwot High School (Adria Repp)

American Regions Mathematics League (A1 Team)

In 2015, 2000 students from the U.S. and nine other countries formed 135 fifteen-member teams to compete at the national ARML competition. The Colorado A1 team placed 5th in the Western Division and 20th nationally. This year's team members are listed below:

Hongyi Chen, Jackson Chen, Anurag Golla, Christine Soh, Kevin Wang, Casey Zhang, Hannah Zhang, and Stephanie Zhang, Fairview High School, Boulder; **Matthew Iverson**, Liberty Common High School, Ft. Collins; **T.J. Leing**, Alexander Dawson School, Lafayette; **Aaron Lou**, Highlands Ranch High School; **Austen Mazenko**, Campus Middle School, Greenwood Village; **Isani Singh and Avi Swartz**, Cherry Creek High School, Greenwood Village; and **Scott Weygandt**, Niwot 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 2016, nearly 4200 students nationwide participated in the AIME.

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 6-16 in Hong Kong. Nationally, 270 students were invited to take the USAMO exam, including four from Colorado. Nationally, 230 students qualified for the USAJMO exam, including two Colorado students.

USA Math Olympiad Qualifiers: **Hongyi Chen**, Fairview High School, Boulder (Silva Chang); **Anurag Golla**, Fairview High School, Boulder (Emily Silverman and Silva Chang); **Avi Swartz** and **Andrew Ying**, Cherry Creek High School, Greenwood Village (Dotty Dady). **Hongyi Chen**, a 10th grader, is among the top 12 winners. He and **Avi Swartz** have been invited to participate in the Mathematical Olympiad Summer Program (MOSP).

USA Junior Math Olympiad Qualifiers: **Austen Mazenko**, Campus Middle School, Greenwood Village (Amy Bainbridge); and **Hannah Zhang**, Fairview High School, Boulder (Silva Chang and Ming Song). **Austen Mazenko** is an 8th grader.

Moody's Mega Math (M³) Challenge

The M³ Challenge is an applied mathematics modeling contest open to high school students across the U. S. Teams consist of 3-5 students and one teacher-coach. The Challenge is sponsored by The Moody's Foundation (a charity of Moody's rating agency) and organized by the Society for Industrial and Applied Mathematics (SIAM). The M³ Challenge awards \$150,000 in scholarship prizes each year to top teams.

Three Colorado Teams received Honorable Mention awards.

George Washington High School, Denver

Aiden Carley, Braden Griebel, Cailan Rowland, and Claire Shugart (Joseph Bolz)

Overland High School, Aurora

Sam Goldman, Asia Keomanivong, Mikee Martin, and Melody Shellman (Gregory Oelrichs)

Silver Creek High School, Longmont

David Demers, Courtney Dobbins, Maiya Jazwierska, Emily Millican, and William Pelton (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 2015, 4275 students from 554 institutions in the U.S. and Canada participated.

Top 500 Colorado Individual Winners (and Coaches)

- (1) **Samuel Reinehr**, Colorado School of Mines, Golden (Professors Rebecca Swanson and Steve Pankavich)
- (2) **Gavin Stewart**, Colorado State University, Ft. Collins (Professor Henry Adams)

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 worked for 96 hours over a weekend (Jan. 28-Feb. 1), using applied mathematics to solve their choice of one of two real-world problems. In 2016, solutions were submitted by 7421 teams from 14 countries, including 389 teams from the U.S. Nineteen teams from five Colorado colleges and universities participated.

Out of 7421 teams worldwide, 13 were Outstanding, including one from Colorado!

Worldwide Outstanding Team and MAA Award Recipient

Jordan Deitsch, Matthew Hurst, and Nathan Yeo, CU-Boulder (Professors Bengt Fornberg and Anne Dougherty)

This same team also received one of nine Outstanding awards in 2015—out of 7,636 teams worldwide!

Interdisciplinary Contest in Modeling (ICM)

The *Interdisciplinary Contest in Modeling (ICM)* is an extension of the Mathematical Contest in Modeling (MCM) and held during the same 96-hour weekend. It is designed to develop and advance interdisciplinary problem-solving skills as well as competence in written communication. In 2016, solutions were submitted by 5025 teams from nine countries, including 91 teams from the U.S.

Out of 5025 teams worldwide, 14 were Outstanding, including one from Colorado!

Worldwide Outstanding Team

Robert Lewis, Samuel Loos, and Lawrence Pelo, CU-Denver (Professor Gary Olson)

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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. Mario Scacco**, Senior Structural Engineer, Stanley Consultants, Inc., Centennial; **Mr. Howard Selbst**, Falcon Creek Middle School (retired); and **Mr. Rocke Verser**, independent computer consultant.

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Dr. George Berzsenyi and members of the CMA Steering Committee*

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National Society of Professional Engineers-Colorado; Rocky Mountain Section of the Mathematical Association of America (MAA); and Stanley Consultants, Inc., Centennial

*Past CMA speaker and recipient of the prestigious MAA Gung and Hu Award for “empowering generations of high school students to pursue their mathematical passions by promoting the art of problem solving, and supporting mathematical competitions.”

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>.