



2013 Colorado Mathematics Awards

*The 18th annual reception to recognize outstanding performance
in national and international mathematics competitions
by Colorado middle school, high school, and undergraduate college students.*

**Thursday, May 16, 2013
4:15 – 7:00 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 and Resource Analyst, Colorado Department of Agriculture (retired)

Remarks: Mr. Rich Morrow, mathematics teacher, Challenge School, Denver (retired)

Presentation of Awards:

- **American Mathematics Contest 8:** presented by Mr. Howard Selbst, Falcon Creek Middle School, Aurora (retired) and Colorado AMC 8 Director
- **MATHCOUNTS:** presented by Mr. Paul Gulman, P.E., and Ms. Noelle Cochran, P.E., National Society of Professional Engineers of Colorado, Co-Chairs, Colorado MATHCOUNTS Committee
- **American Mathematics Contests 10 and 12:** presented by Dr. David Larue, Colorado School of Mines, and Colorado AMC High School Director
- **Recognition of U.S.A. Mathematics Olympiad participants** by Dr. Gibbs
- **American Regions Mathematics League Colorado Team:** presented by Ms. Silva Chang, Director, Colorado Math Circle, Boulder
- **Rocky Mountain MAA Section Burton W. Jones Distinguished Teaching Award** recipient, Professor Marlow Anderson, Colorado College, recognized by Dr. Bill Cherowitzo, Chair of the Rocky Mountain Section of the Mathematical Ass'n. of America
- **William Lowell Putnam Mathematical Competition:** presented by Dr. Cherowitzo
- **Mathematical Contest in Modeling:** presented by Dr. Cherowitzo

6:30 – 7:00

Refreshments

American Mathematics Contest 8

The AMC 8 is a 40-minute 25-question multiple choice contest given in school in November. Students in 8th grade and below are eligible. In 2012, more than 113,000 students from more than 1,800 schools nationwide participated in this exam. In Colorado, 1,270 students from 24 schools participated.

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

- (1) **Hongyi Chen**, Altona Middle School, Longmont (Joshua Hagin)
- (1) **Avi Swartz**, Challenge School, Denver (Matt Bixby)
- (2) **Annie Chen**, Summit Middle Charter School Boulder (Aaron Bradley)
- (2) **Matthew Iverson**, Liberty Common High School, Fort Collins (Torgun Lovely)
- (2) **Isani Singh**, Challenge School, Denver (Matt Bixby)
- (2) **Kevin Wang**, Southern Hills Middle School, Boulder (Denise Pearman-Johnson)
- (2) **Hannah Zhang**, Altona Middle School, Longmont (Joshua Hagin)

6th Grade First Place: **Anjalie Kini**, Challenge School, Denver (Matt Bixby)

Honorable Mention (and Coaches)

Sophia Chen, Summit Middle Charter School, Boulder (Aaron Bradley); **Anjalie Kini**, Challenge School, Denver (Matt Bixby); **Aaron Lou**, Cresthill Middle School, Highlands Ranch (Kevin Larsen); and **Jessica Shi**, Challenger Middle School, Colorado Springs (Charlotte Packard).

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 2012-13, 19,000 students from 5,200 schools participated in competitions nationwide, including 1,053 students from 135 schools in Colorado. The state MATHCOUNTS competition was held on March 16th. The national MATHCOUNTS competition was held May 9-12 in Washington, D.C.

First Place Colorado Team (and Coach)

Avi Swartz, Isani Singh, Hari Sowrirajan, and **Anjalie Kini**, Challenge School, Denver (Matt Bixby).

Colorado MATHCOUNTS Team (and Coaches)

Avi Swartz and **Isani Singh**, Challenge School, Denver (Matt Bixby); **Andrew Ying**, Campus Middle School, Greenwood Village (Katie Brehmer); and **Hongyi Chen**, Altona Middle School, Longmont (Tim Criger). Team Coach: Matt Bixby.

Honorable Mention (and Coaches)

Hari Sowrirajan and **Anjalie Kini**, Challenge School, Denver (Matt Bixby); **Aaron Lou**, Cresthill Middle School, Highlands Ranch (Kevin Larsen); **Matthew Iverson**, Liberty Common High School, Ft. Collins (Torgun Lovely); **Stephen New**, Kinard Core Knowledge Middle School, Ft. Collins (Cecelia Bonertz); and **Hannah Zhang**, Altona Middle School, Longmont (Tim Criger).

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; students in grades 12 and below are eligible for the AMC 12. The contests are given in two versions in February, 15 days apart. In 2013 national participation rates were approximately 106,000 students from 3,872 schools, and 98,000 students from 4,023 schools, in AMC 10 and 12, respectively. Colorado's participation rates: 567 students from 52 schools (AMC 10) and 605 students from 50 schools (AMC 12).

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

- (1) **Jesse Zhang**, Fairview High School, Boulder (Del Ebadi and Lori Johnson) **A perfect paper!**
- (2) **Avi Swartz**, Challenge School, Denver (Matt Bixby)
- (2) **Kevin Wang**, Southern Hills Middle School, Boulder (Denise Pearman-Johnson)
- (2) **Sirey Zhang**, Cherry Creek High School, Greenwood Village (Mike Nutter and Mike Berndt)

8th Grade First Place: **Avi Swartz**, Challenge School, Denver (Matt Bixby) and **Kevin Wang**, Southern Hills Middle School, Boulder (Denise Pearman-Johnson)

AMC 10--Honorable Mention (and Coaches)

Hongyi Chen, Altona Middle School, Longmont (Tim Criger); **Ethan Coldren**, Fossil Ridge High School, Ft. Collins (Martha Cranor); **Kristine Guo**, Peak to Peak Charter School, Lafayette (Kimberly Struck); **Aaron Lou**, Cresthill Middle School, Highlands Ranch (Kevin Larsen); **LiQian Peng**, Rampart High School, Colorado Springs (Matt Perry); **Christine Soh** and **Casey Zhang**, Fairview High School, Boulder (Del Ebadi and Lori Johnson); and **Erik Svenneby**, Challenge School, Denver (Matt Bixby).

AMC 12—First Place Colorado Team (and Coaches)

Albert Soh, **Henry Zhang**, and **Larry Zhang**, Fairview High School, Boulder (Del Ebadi and Lori Johnson).

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

- (1) **Albert Soh**, Fairview High School, Boulder (Del Ebadi and Lori Johnson)
- (2) **Henry Zhang**, Fairview High School, Boulder (Del Ebadi and Lori Johnson)
- (2) **Jesse Zhang**, Fairview High School, Boulder (Del Ebadi and Lori Johnson)

10th Grade First Place: **Jesse Zhang**, Fairview High School, Boulder (Del Ebadi and Lori Johnson)

AMC 12--Honorable Mention (and Coaches)

Tommy Fan, Lakewood High School (Daniel Bock); **Austin Gunnarson**, Silver Creek High School, Longmont (Matthew Smedley); **T. J. Leing**, Alexander Dawson School, Lafayette (Jeff Ellenbogen); **Shawn Ong**, Douglas County High School, Castle Rock (Laura Bush); **David Rincon-Cruz**, Air Academy High School, Colorado Springs (Glenn Hoyt); **Robert Spofford**, Heritage High School, Littleton (Lou Berlin); and **Larry Zhang**, Fairview High School, Boulder (Del Ebadi and Lori Johnson).

American Regions Mathematics League

In 2012, 2100 students from the U.S. and 6 other countries formed 140 fifteen-member teams to compete at the national ARML competition. The Colorado team placed 6th in the Western Division and 20th nationally. This year's team members are listed below:

Artem Bolshakov, Ridgeview Classical Schools, Fort Collins; **Julian Cannon**, Overland High School, Aurora; **Tommy Fan**, Lakewood High School; **Jacob Imola**, Cherry Creek High School, Greenwood Village; **T. J. Leing**, Alexander Dawson School, Lafayette; **Shawn Ong**, Douglas County High School, Castle Rock; **Albert Soh**, **Christine Soh**, **Siyang Sun**, **Casey Zhang**, **Henry Zhang**, **Jesse Zhang**, and **Larry Zhang**, Fairview High School, Boulder; **Robert Spofford**, Heritage High School, Littleton; and **Avi Swartz**, Challenge School, Denver. Team coach: Ms. Silva Chang, Director, Colorado Math Circle, 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. The exam is administered in school several weeks after the AMC 10 and 12 exams to students achieving Honor Roll status on the AMC 10 or 12 exams. In 2013, nearly 5,100 students nationwide participated in the AIME; 41 Colorado students participated this year.

The *USA Math Olympiad* and the *USA Junior Math Olympiad* are 9-hour 6-question essay examinations given 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 this July in Santa Marta, Columbia. Nationally, 285 students were invited to take the USAMO examination, including four from Colorado. Nationally, 283 students qualified for the USAJMO examination, including one Colorado student:

USA Math Olympiad Qualifiers: **Tommy Fan**, Lakewood High School (Daniel Bock); and **Albert Soh**, **Henry Zhang**, and **Jesse Zhang**, Fairview High School, Boulder (Del Ebadi and Lori Johnson). USA Junior Math Olympiad Qualifier: **Avi Swartz**, Challenge School, Denver (Matt Bixby). **Avi Swartz** is an eighth grader.

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 2012, 4,277 students from 578 institutions participated nationwide. Students from ten Colorado colleges and universities participated.

Top Colorado Individual Winners (and Coaches)

- (1) **Christopher Aicher** U. of Colorado-Boulder (Profs. Keith Kearnes, Alexander Gorokhovskiy, Sergei Kuznetsov)
- (1) **Daniel Bragg**, U. of Colorado-Boulder (Profs. Keith Kearnes, Alexander Gorokhovskiy, Sergei Kuznetsov)
- (2) **Kenneth Macneal**, University of Denver (Ronnie Pavlov)

International Mathematical Contest in Modeling

The international Mathematical Contest in Modeling is a team contest for undergraduates. The Mathematical Association of America is one of the sponsoring organizations. Teams of three students worked for 96 hours (8:00pm, January 30th, to 8:00pm, February 4th), using applied mathematics to solve their choice of one of two real-world problems. In 2013, solutions were submitted by 5,636 teams from 14 countries, including 375 teams from the U.S. Ten teams from seven Colorado colleges and universities participated.

Only 11 of the 5,636 teams worldwide were designated as Outstanding. Three were from Colorado!

- **Christopher Aicher, Tracy Babb, and Fiona Pigott**, Univ. of Colorado-Boulder (Prof. Anne Dougherty). This team was also designated as the SIAM (Society for Industrial and Applied Mathematics) Award winner for Problem A.
- **Yueh-Ya Hsu, Gregory McQuie, and David Thomas**, Univ. of Colorado-Boulder (Prof. Anne Dougherty). This team was also designated as the MAA (Mathematical Association of America) Award winner for Problem B.
- **Namgyal Angmo, Yukiko Iwasaki, and Aradhya Sood**, Colorado College (Prof. Andrea Bruder). This team was also designated as the Giordano Award winner for Problem B.

Benefactor (\$1,000 or more)



Patron (\$500-\$999)



Supporters (\$100-\$499)



Steering Committee

Dr. Richard Gibbs and **Dr. David Carlson**, reception co-chairs; **Ms. Silva Chang**, Director, Colorado Math Circle, Boulder; **Mr. Paul Gulman**, P.E., NSPE, Professional Engineers of Colorado; **Dr. David Larue**, Colorado School of Mines, Golden; **Ms. Rhonda Naylor**, Campus Middle School (retired) and Past President, Colorado Council of Teachers of Mathematics, Englewood; **Mr. Mario Scacco**, Civil/Structural Group Leader, CH2M HILL; **Mr. Howard Selbst**, Falcon Creek Middle School (retired); and **Prof. Lou Talman**, Dept. of Mathematics, Metropolitan State University of Denver; and **Mr. Rocke Verser**, independent computer consultant.

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Contributions and other expressions of support for the Colorado Mathematics Awards (CMA) annual ceremony 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>.