



# 2020 Colorado Mathematics Awards

*The 25<sup>th</sup> annual recognition of outstanding performance  
in national and international mathematics competitions and contests  
by Colorado middle school, high school, and undergraduate college students.*

July 2020

Due to the unprecedented impact of the coronavirus pandemic, recognition of outstanding performance in mathematics competitions by Colorado students cannot be done in person this year. Nevertheless, we wish to honor 47 exceptional students and their 28 teacher/coaches in this written program, as we have done annually since 1996. As usual, certificates, plaques, and medals will also be sent to deserving winners.

Each year, thousands of Colorado students participate in one or more of the following national and international competitions and contests. Each competition or contest is described in the following pages, along with the names and schools of student honorees and their teacher/coaches:

MATHCOUNTS (8<sup>th</sup> grade and below)

American Mathematics Competitions 8 (8<sup>th</sup> grade and below)

American Mathematics Competitions 10 (10<sup>th</sup> grade and below)

American Mathematics Competitions 12 (12<sup>th</sup> grade and below)

American Regions Mathematics League (12<sup>th</sup> grade and below)

American Invitational Mathematics Examination (AMC 10 & 12 honor roll students)

USA Junior Mathematical Olympiad (top AIME, AMC 10 & 12 students)

USA Mathematical Olympiad (top AIME, AMC 10 & 12 students)

High School Mathematical Contest in Modeling (high school)

William Lowell Putnam Mathematical Competition (college undergraduates)

Interdisciplinary Contest in Modeling (college undergraduates)

We hope to return to the historic Grant-Humphreys Mansion on Thursday, May 13<sup>th</sup>, 2021, for the 26<sup>th</sup> annual Colorado Mathematics Awards reception and ceremony! Details for supporting this annual event may be found at the bottom of the last page.

--CMA Steering Committee

## MATHCOUNTS

MATHCOUNTS is an after school program for 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> 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. In 2019-20, approximately 1000 students from more than 100 schools in Colorado participated in chapter competitions. This year, because of the coronavirus pandemic, some state competitions were canceled; the national competition was also canceled.

### First Place: Boulder Chapter Competition

**Wesley Ding**, Summit Middle School, Boulder (Heather Politi)

### First Place: Jefferson Chapter Competition

**Ben Barron**, Manning School, Golden (Cheri Cahill)

### First Place: Metro Chapter Competition

**Srinivas Arun**, Campus Middle School, Greenwood Village (Christy Marini)

### First Place: North Metro Chapter Competition

**Valerie Xin**, Stargate School, Thornton (Ken Haney)

### First Place: Northern Chapter Competition

**Jackson Dryg**, Preston Middle School, Ft. Collins (Roslyn Stern)

### First Place: Pikes Peak Chapter Competition

**Aashay Deshpande**, Mountain Ridge Middle School, Colorado Springs (Christine Draper)

### First Place: Southern Chapter Competition

**Christopher Pollock**, Pueblo Academy of Arts, Pueblo (Sharon Pollock)

### First Place: Western Slope Chapter Competition

**Connor Frithsen**, Steamboat Springs Middle School, Steamboat Springs (Sally Lambert and Shane Lambert)

## American Mathematics Competition 8

The AMC 8 is a 40-minute 25-question multiple-choice exam was given on November 12, 2019. Students in 8th grade and below are eligible. Nationally, 94,742 students from 1876 schools nationwide participated.

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

- (1) **Srinivas Arun**, Campus Middle School, Greenwood Village (Christy Marini and James Padavic)
- (1) **Abhinav Krishna**, Challenge School, Denver (Matt Bixby)
- (3) **Jackson Dryg**, Preston Middle School, Ft. Collins (Roslyn Stern)
- (3) **Ethan Lou**, Campus Middle School, Greenwood Village (Christy Marini)
- (3) **Rishi Rai**, Challenge School, Denver (Matt Bixby)
- (3) **Toby Shu**, Campus Middle School, Greenwood Village (Christy Marini)
- (3) **Eric Wang**, Kinard Core Knowledge Middle School, Ft. Collins (Cecilia Bonertz)

6<sup>th</sup> Grade First Place: **Shruti Arun**, Campus Middle School, Greenwood Village (Christy Marini); and

**Alex Gallimore**, Challenge School, Denver (Matt Bixby)

\*\*Alex is a 5<sup>th</sup> grader!

### Honorable Mention (and Coaches)

**Kelly Young**, Summit Middle School, Boulder (Heather Politi and Erin Eastwood); **Shruti Arun**, Campus Middle School, Greenwood Village (Christy Marini); **Alex Gallimore**, Challenge School, Denver (Matt Bixby); **Shourya Hooda**, Challenge School, Denver (Matt Bixby); **Nicholas Rui**, Campus Middle School, Greenwood Village (Christy Marini); **Davin Yin**, Altona Middle School, Longmont (Brian Moler)

## 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 in 2020 on January 30<sup>th</sup> [10/12A] and February 5<sup>th</sup> [10/12B]. Nationally, 62,705 students took the 10A or 10B exam (or both); also, 48,228 students took the 12A or 12B exam (or both).

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

- (1) **Eric Wang**, Kinard Core Knowledge Middle School, Ft. Collins (Cecilia Bonertz) \*\*Eric is a 7<sup>th</sup> grader!
- (2) **Srinivas Arun**, Campus Middle School, Greenwood Village (Christy Marini) \*\*Srinivas is an 8<sup>th</sup> grader!
- (3) **Jackson Dryg**, Preston Middle School, Ft. Collins (Roslyn Stern)
- (3) **Kyle Wang**, Fairview High School, Boulder (Michelle Considine)

8<sup>th</sup> Grade First Place: **Eric Wang**, Kinard Core Knowledge MS, Ft. Collins (Cecilia Bonertz)

\*\*Eric is a 7<sup>th</sup> grader!

## American Mathematics Competitions 10 and 12 (continued)

### AMC 10--Honorable Mention (and Coaches)

**Abhinav Krishna**, Challenge School, Denver (Matt Bixby); **Anthony Wang**, Rock Canyon High School, Highlands Ranch (Karen Bukowski, Silva Chang); **Anthony Chui**, Rock Canyon High School, Highlands Ranch (Karen Bukowski, Silva Chang); **Charlie Flaxbeard**, Cherry Creek High School, Greenwood Village (Jim Padavic); **Hannah Wang**, Fairview High School, Boulder (David Wang and Ming Song); **Max Xu**, Rock Canyon High School, Highlands Ranch (Silva Chang); **Jiasheng Zhou**, Fairview High School, Boulder (Michelle Considine)

### AMC 12--First Place Colorado Team (and Coaches)

**Austen Mazenko**, **Rahul Thomas**, and **Siddarth Ijju**, Cherry Creek High School, Greenwood Village (Jim Padavic and Cayel Dwyer)

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

- (1) **Rahul Thomas**, Cherry Creek High School, Greenwood Village (Jim Padavic)
- (2) **Austen Mazenko**, Cherry Creek High School, Greenwood Village (Cayel Dwyer)
- (3) **Kyle Wang**, Fairview High School, Boulder (Michelle Considine)

10<sup>th</sup> Grade First Place: **Anthony Wang**, Rock Canyon High School, Highlands Ranch (Erynn Albert)

### AMC 12--Honorable Mention (and Coaches)

**Anthony Wang**, Rock Canyon High School, Highlands Ranch (Erynn Albert); **Grace Zhang**, Grandview High School, Aurora (Hillary Peters); **Anudeep Golla**, Fairview High School, Boulder (Michelle Considine); **Siddarth Ijju**, Cherry Creek High School, Greenwood Village (Jim Padavic); **Sophia Zhai**, Fairview High School, Boulder (Michelle Considine); **Rithwik Mylavarapu**, Fairview High School, Boulder (Michelle Considine); **Brandon Dong**, Cherry Creek High School, Greenwood Village (Jim Padavic); **Rui Wen**, Cherry Creek High School, Greenwood Village (Jim Padavic)

## American Regions Mathematics League Team

Each year about 2000 12<sup>th</sup> grade and below students from the U.S. and other countries form 15-member teams to compete at the national ARML competition. In June 2019, 33 students from 12 different schools represented Colorado at the national competition. In the B Division, Colorado finished in 1st place at the Las Vegas site and tied for 7<sup>th</sup> place nationally. This year's team members are listed below:

**Srinivas Arun**, Campus Middle School, Greenwood Village; **Brandon Dong**, **Ellie Greyson**, **Siddarth Ijju**, **Aiden Lee**, **Austen Mazenko**, and **Rahul Thomas**, Cherry Creek High School, Greenwood Village; **Anudeep Golla** and **Kyle Wang**, Fairview High School, Boulder; **Andrew Huycke**, Regis Jesuit High School, Denver; **Nina Ning**, Silver Creek High School, Longmont; **Quinn Perian**, Home School; **Anthony Wang** and **Max Xu**, Rock Canyon High School, Highlands Ranch; and **Grace Zhang**, Grandview High School, Aurora. Team Coach: Silva Chang, Director, Colorado Math Circle, and AMC 8 co-Editor-in-Chief, 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 to students achieving Honor Roll status on the AMC 10 or 12 exams. The AIME I was given on March 11 and the AIME II was given online on June 6. In 2020, more than 4000 students nationwide participated in AIME 1.

The *USA Mathematical Olympiad* and the *USA Junior Mathematical Olympiad* are 9-hour 6-question essay examinations to the top 500 or so students participating in the AMC 10 and 12 exams and the AIME; more than 100,000 students participated in at least one of these exams nationwide. Both Math Olympiad exams are usually given in April; this year, they were given on June 19-20. The top 6 USAMO students will comprise the USA team at the International Mathematical Olympiad to be held online on September 21-22. Nationally, 223 students were invited to take the USAMO exam, including two students from Colorado. Nationally, 158 students qualified for the USAJMO exam, including one from Colorado.

USA Math Olympiad Qualifiers: **Austen Mazenko** Cherry Creek High School, Greenwood Village (Cayel Dwyer) and **Rahul Thomas**, Cherry Creek High School, Greenwood Village (Jim Padavic)

USA Junior Math Olympiad Qualifier: **Srinivas Arun**, Campus Middle School, Greenwood Village (Christy Marini)  
\*\*Srinivas is an 8<sup>th</sup> grader!

## High School Mathematical Contest in Modeling (HiMCM)

*The High School Mathematical Contest in Modeling* is an international applied mathematics modeling contest open to teams of high school students. Teams of up to four students have a 14-day window in which to download and choose their problem, complete their modeling solution, and electronically submit their solution document to the Consortium for Mathematics and Its Applications (COMAP) for centralized judging. In 2019, 791 teams from 324 schools competed; there were 9 Outstanding and 236 Honorable Mention teams worldwide. This year's contest will be held November 4-17, 2020.

One Team from Colorado received an Honorable Mention award!

**Leo Gu, Aadi Nashikkar, and Alexander Safayan**, Colorado Springs School, Colorado Springs, (Josh Gillon)

## 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 2019, 4229 students from 570 institutions in the U.S. and Canada participated.

### Top 500 Individual Winner (and Coach) from a Colorado Institution

(1) **Vladimir Vintu**, Colorado College (Professor Stefan Erickson)

## Interdisciplinary Contest in Modeling (ICM)

The *Interdisciplinary Contest in Modeling* (ICM) is an international contest for college undergraduates and high school students. Teams of three students work for 99 hours over a weekend (this year, February 13-17), using applied mathematics to solve their choice of one of three real-world problems. The ICM is an extension of the *Mathematical Contest in Modeling* (MCM). The ICM is designed to develop and advance interdisciplinary problem-solving skills as well as competence in written communication. In 2020, solutions were submitted by 7203 teams from 16 countries, including 10 teams from two Colorado institutions. There were 18 Outstanding Winners, and 234 Finalists worldwide

One Colorado Team received a Finalist award!

**Wyett Considine, Anastasia Muszynski, and Allyson Wheaton**, University of Colorado Boulder  
(Professors Anne Dougherty, Bengt Fornberg, and Manuel Lladser)

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## Early Career Teaching Award: Mathematical Association of America-Rocky Mountain Section

**Molly Moran**, Assistant Professor, Colorado College

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## Colorado Mathematics Awards Steering Committee Members and Contributors

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

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

**Ms. Silva Chang**, Director, Colorado Math Circle, and AMC 8 co-Editor-in-Chief, 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

**Dr. Raymond Johnson**, Mathematics Content Specialist, Colorado Department of Education

**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)**

*CMA Steering Committee members*

**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 from past years may be viewed at [cma.coloradomath.org](http://cma.coloradomath.org).*