



**Colorado Scientific Society – Earth Sciences since 1882**  
***The oldest scientific society in the Rocky Mountain region***

Founded in 1882, the objective of the Society is to promote the knowledge and understanding of Earth science, and its application to human needs. Samuel Franklin Emmons, 1841-1911, was “Geologist in Charge” of the Colorado Division of the U.S. Geological Survey when it was established in 1879 and was the first president of the Society. We focus primarily on earth science, welcoming members with interests in all fields of science. [Learn more.](#)

**April 2026 Colorado Scientific Society Newsletter**

**CSS April Meeting**  
**Thursday, April 16, 2025 at 6:45 p.m.**



**The Dueling Dinosaurs: Putting the science back into one of the most intriguing dinosaur discoveries of this century**



The dueling dinosaurs?

Thursday, April 16, 2026

**Dr. Eric Roberts**, Colorado School of Mines, Department of Geology and Geological Engineering

In-person Meeting at **Calvary Church, Golden**

*All are welcome – no admission charge*

**6:30 pm** – Social time begins

**6:45 pm** – Join Zoom meeting, if attending remotely

**7:00 PM** – Meeting starts.

Please arrive early. Church doors are locked, and you must text someone to get in **after 7:00 pm**.

**Link to Join CSS April Meeting via Zoom**

CSS invites you to Join our meeting via Zoom on Thursday, April 16th at 6:45 pm.

**Click to Join CSS Zoom Meeting**  
from PC, Mac, Linux, iOS or Android

The details about attending the meeting in person at the Golden Calvary Church follow the details about the talk.



Nanotyrannus skull during preparation

**The Dueling Dinosaurs: Putting the science back into one of the most intriguing dinosaur discoveries of this century**

**Abstract:** This talk will focus on the complicated story of the 'Dueling Dinosaurs', and specifically the geological context of this now famous discovery of a Triceratops and Tyrannosaurus entombed together in a putative death scene. The backstory of the original discovery, legal battles, auction saga, and ultimate homing of the specimens at the North Carolina Museum of Natural Sciences will be discussed. However, the talk will focus on the author's work in helping to reconstruct the geological context of the

specimens by returning to the excavation site over many field seasons to study the sedimentology, stratigraphy and age of these two iconic North American fossils to understand when and why they died and ended up together. The talk will also discuss the broader geological context of the famous Hell Creek Formation in Western North America, which records the end of the age of dinosaurs. The talk will conclude with a cameo from PhD student, Dorian Gursky, whose project is focused on high-precision radiometric dating of Acme of Dinosaur evolution and diversity in Western North America.



Nanotyrannus skull during preparation



Dr. Eric Roberts

### **Dr. Eric Roberts**

Professor, Geology and Geological Engineering

Director, Potential Gas Agency

I am a sedimentary geologist who works on Mesozoic and Cenozoic basins, and maintains close links with industry, as well as vertebrate paleontologists, to better place the continental sedimentary record into a robust stratigraphic and tectonic context.

### **Research Interests**

- Basin analysis, energy exploration and sedimentary geology with a focus on Mesozoic-Cenozoic basins in Gondwana and North America
  - U-Pb geochronology and sedimentary provenance analysis

- Critical minerals and resources, including Helium and Hydrogen exploration
- Hydrocarbon exploration and reservoir and seal characterization
- Global energy transitions
- Continental ichnology
- Vertebrate paleontology/paleoanthropology with a focus on stratigraphy, dating, taphonomy and paleoenvironmental reconstruction

**Skills and Expertise:**

Sedimentology, Stratigraphy, Palaeoecology, Tectonics, Sequence Stratigraphy, Geology, Sedimentary Basins, Sediments, Evolution, Field Geology



Download [CSS Lecture Apr'26 Eric Roberts Dueling Dinos](#) (PDF) flyer.

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## **In-person Meeting at Calvary Church, Golden**

Enter off 14th Street, see map below.

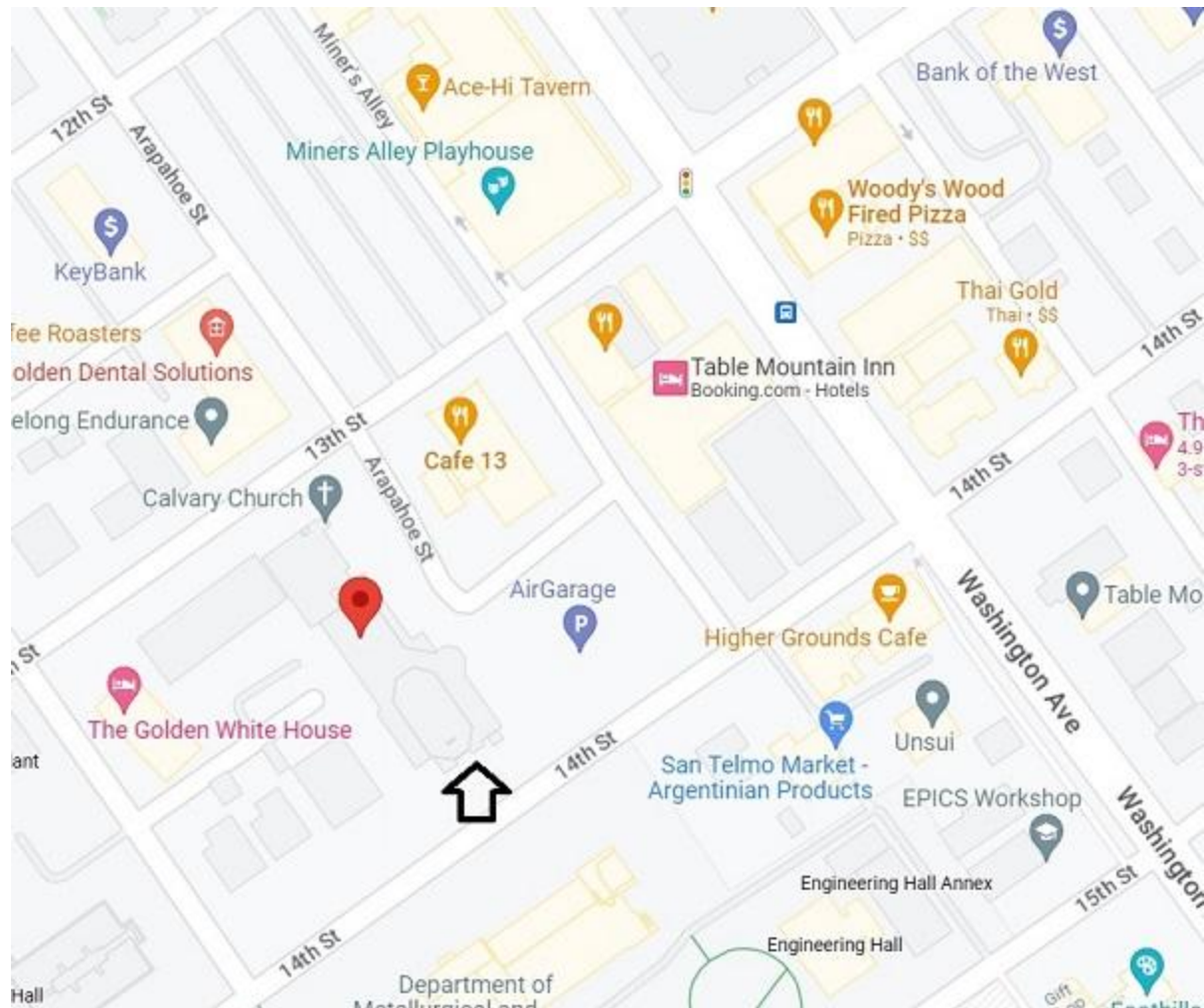
*All are welcome - no admission charge*

**6:30 pm - Social time starts**

**6:45 pm - Join Zoom meeting**, if attending remotely

**7:00 PM - Meeting starts.**

Please arrive early. Church doors are locked, and you must text someone to get in **after 7:00 pm.**



Calvary Church in Golden. Enter at arrow on map.

[1320 Arapahoe St, Golden, CO 80401](https://www.google.com/maps/place/1320+Arapahoe+St,+Golden,+CO+80401/@39.74751,-105.22111,15z)

Click on link to open a Google map.

**Enter off 14th St.,** going in via the main glass doors on 14th St.

Do **not** enter the old church above 13th St.

Go through building following the CSS signs to the Community Rooms 1 and 2, where we meet.

**The church doors must stay locked, and we will have a person to let you in at the doors off 14th St.**

They want to see the presentation too, so **please arrive before 7:00 pm.**

There will be a phone number that you can text to be let in if you arrive late.

### **Parking**

On street parking is available close by, west of Washington Ave in downtown Golden.

The "Public Parking" NE of the Church is free for registered church members but not for us. Lowest parking rate is \$5.75 for three hours; one pays using a QR code shown on signs there. For that parking rate, it says one is supposed to park on the upper (roof top)

level. When driving uphill (southwest) on 14th St, the rooftop entrance is the 2nd entrance to the parking structure, immediately before the church.

**For free parking: 14th Street** usually has parking within a block of the entrance to the Church.

Coming from the north (CO 93) or northeast (CO 58, between North and South Table Mountains), come southeast on Washington Street, turn right (southwest) on 13th Street, Turn left on Cheyenne St. Go up the hill and turn left on 14th Street. Park on your right.

Coming from the east or or southeast on US 6 (6th Ave.), exit US 6 onto 19th St. going NE. Turn left on Illinois St. Go through the Mines campus and turn right on 14th St. If you can, park NE of Cheyenne St.

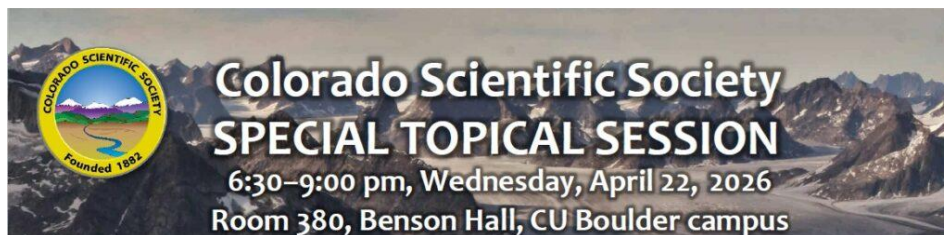
**When 14th Street is full**, Mines may have scheduled an event.

There is Golden city parking southwest of downtown Golden. This is downhill from (northwest of) the Church in the half block between 13th and 12th streets, between Arapahoe St. on the SW and Miners Alley on the NE. There is usually space here. The Foss Lot (SE half of the parking area) is private and says "Paid Parking". The public Arapahoe Lot (NW half of the parking area) says "Paid Parking 7-5" and should be free. To get to the meeting, go up the hill along the church by Arapahoe St.

You can also find parking in the streets below (north of) the Church and west of downtown Golden.

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## CSS Special Topical Session



### *Greenland:* A geocitizen's introduction to its bedrock geology and glacial history

Wednesday, April 22, 2026, 6:30-9:00 pm

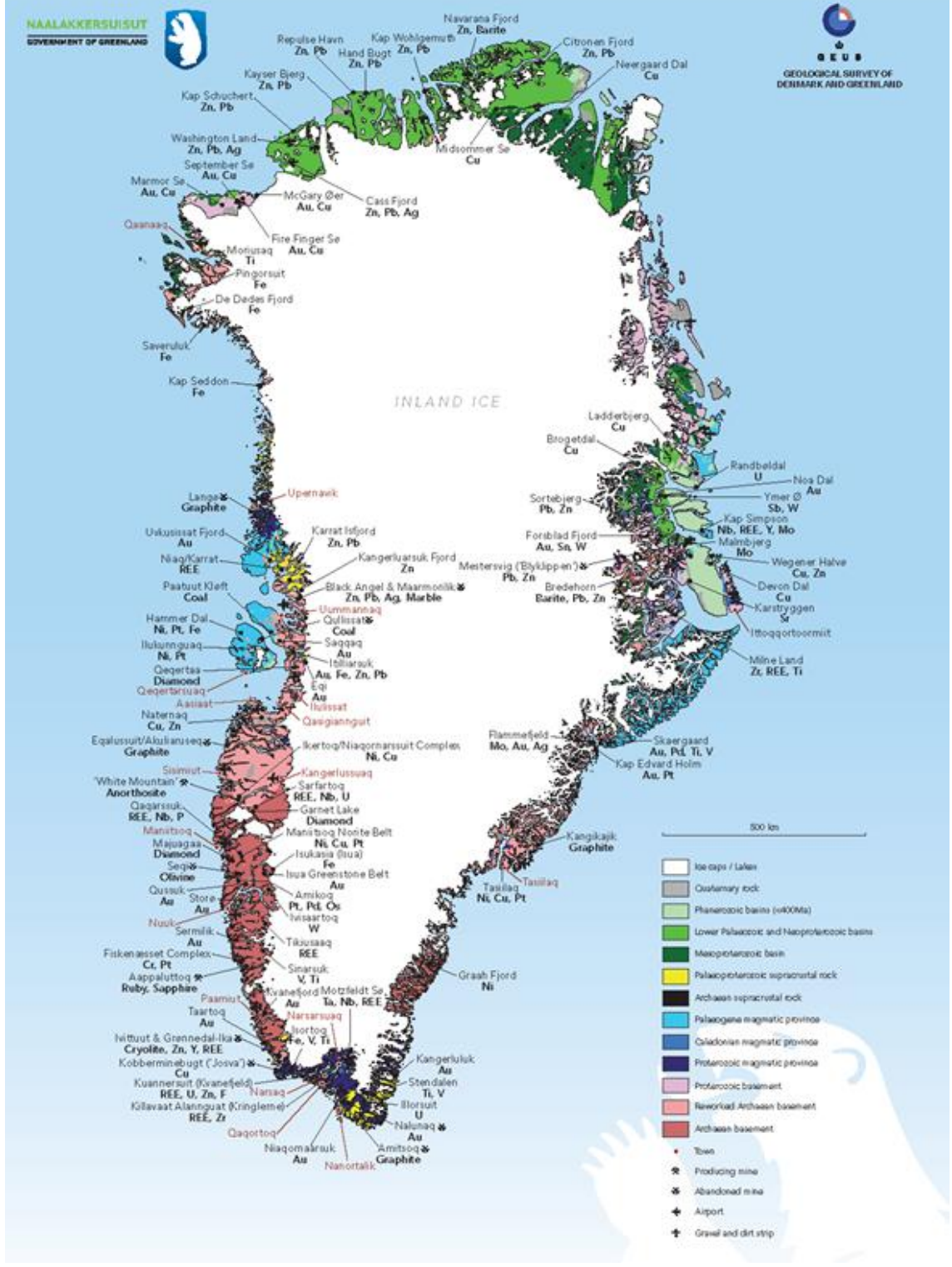
Benson Earth Sciences, Room 380, CU Boulder campus and via Zoom

Dr. Flemming Mengel, Geological Sciences, CU Boulder

Dr. Bradley Markle, Geological Sciences & INSTAAR, CU Boulder

*Please check our website for the Zoom link to this meeting!* Location & parking maps follow.

# GREENLAND GEOLOGY AND SELECTED MINERAL OCCURRENCES



Click on the map to download a large (2.9 MB) PDF with more detail! Then click the + in the top menu to zoom in. Thanks to Jim Paces for finding this map.

## Greenland Lecture Highlights:

Greenland has recently been at the center of geopolitical discussions due to its strategic location and potential natural resources. Both natural and human resources of the world's largest island will become increasingly important as warming climates allow greater habitation, increased mineral exploitation, new shipping routes, and heightened geopolitical relevance. Yet the geologic and glacial histories of Greenland remain underappreciated by many in the geoscience community. To achieve a better informed geocitizenry, Drs. Flemming Mengel and Bradley Markle will provide an overview of the 3.8 Ga geotectonic evolution of the crust underlying the world's second largest continental ice sheet, the conditions that lead to its current glacial state, and what that ice can inform us about earth's past and future climates.

## Speakers



Dr. Flemming Mengel

**Dr. Flemming Mengel**, Geological Sciences, CU Boulder

Dr. Flemming Mengel has worked extensively on the tectonic evolution of west Greenland and Labrador during and after receiving his PhD at Memorial University, St. John's, Newfoundland, in 1988. He has published widely on tectono-metamorphic evolution of the Paleoproterozoic Nagssugtoqidian orogen. He also has years of experience in conventional and unconventional oil and gas plays focused in Rocky Mtn basins. He is currently a lecturer at CU Boulder.

*(see more, below)*



Dr. Bradley Markle

**Dr. Bradley Markle**, Geological Sciences & INSTAAR, CU Boulder

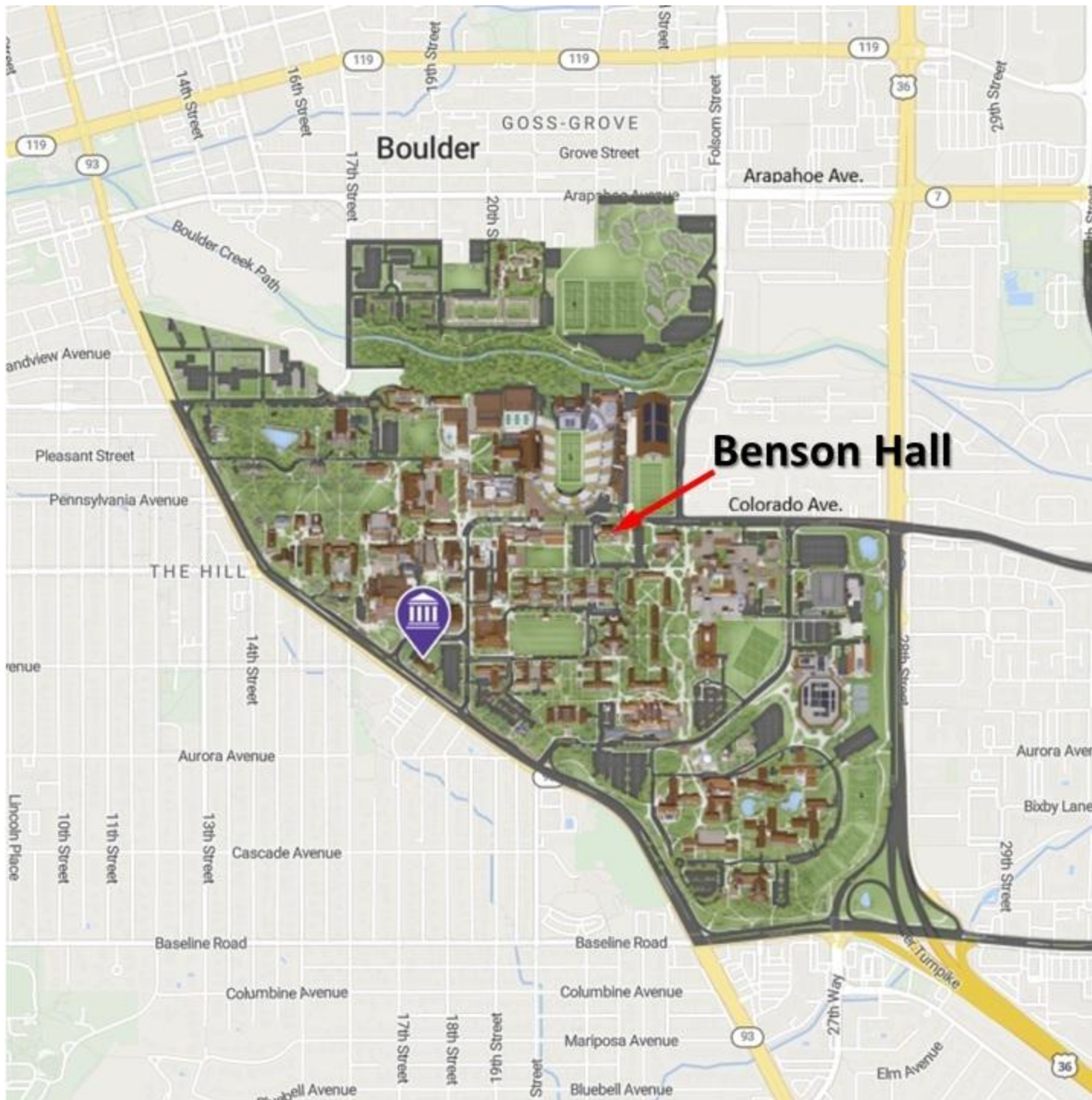
Dr. Bradley Markle studies Earth's climate system, how it works, and how it changes through time. His research specialties include isotope biogeochemistry; paleoclimate and climate dynamics, particularly in the high latitudes. He uses those tools to investigate geochemical proxy records and models of paleoclimate and climate dynamics. He received his PhD at the University of Washington, Seattle, in 2017 and currently holds positions in the CU Boulder Geosciences department and the Institute for Arctic & Alpine Research.

#### **Keywords**

Greenland; geologic evolution; mineral resources, ice sheet; paleoclimate

Download [CSS Special-Topic-Session 04-22-2026 Greenland Geology Glaciology](#) (PDF) flyer

**Following maps: The Location of Benson Earth Sciences at the University of Colorado, Boulder and where you can park**



Map of the University of Colorado Campus in Boulder  
Benson Earth Sciences is at 2200 Colorado Ave., a block west of the intersection of Colorado Ave. and Folsom St. It is just south of Folsom Stadium.  
Go to Benson Hall via Colorado Ave. from the east or Folsom St. from the north (unless you live nearby).



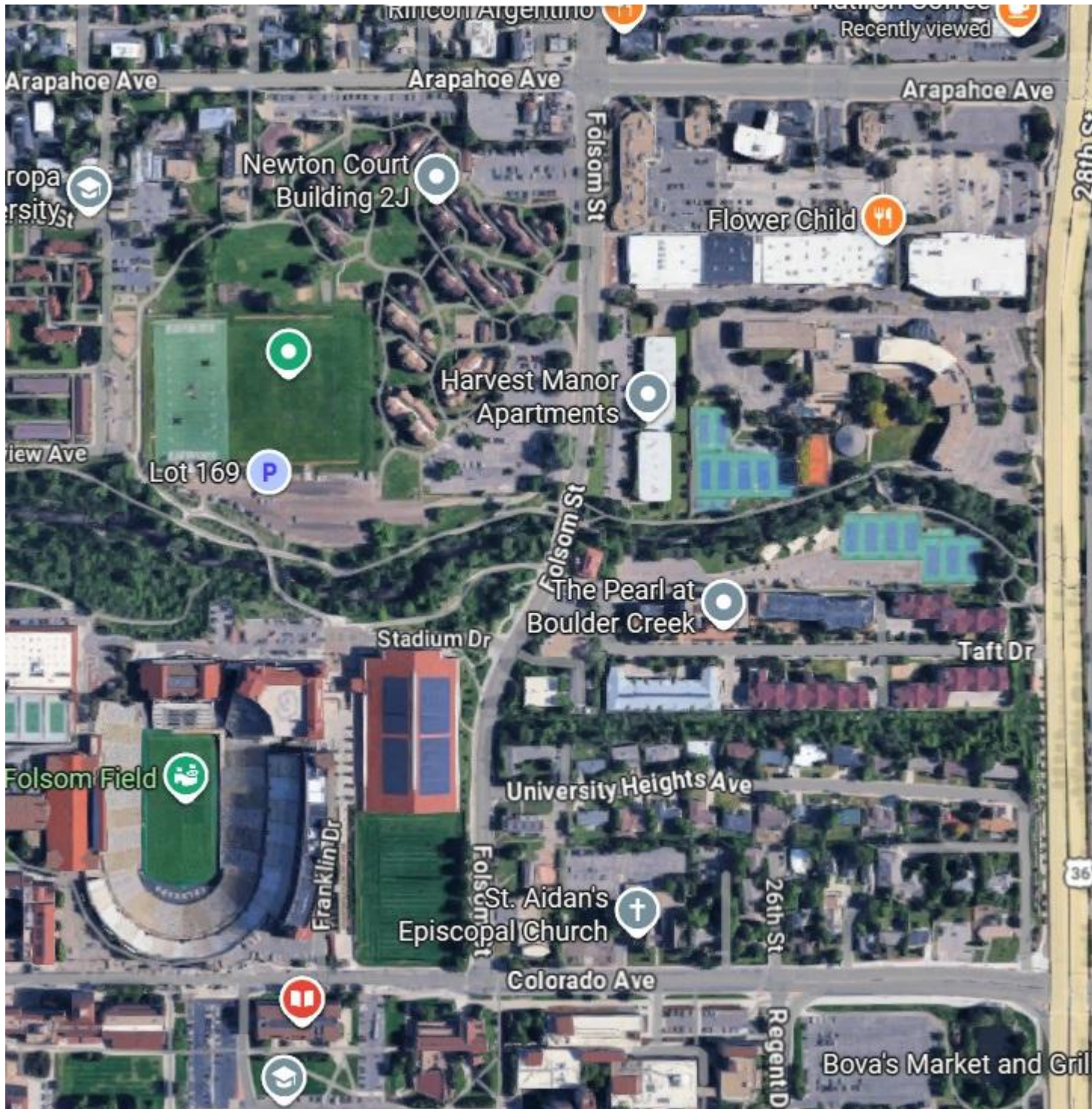
Benson Earth Sciences Hall. Folsom Stadium is just above it.

Paid parking lot 360 wraps around Benson Hall.

Link to [Benson Earth Sciences on the CU Boulder Campus](#) on Google Maps.

Look for the red circle with an open book inside, just southeast of Folsom Field (the stadium).

Where you can park on the evening of Wednesday, April 22, 2026



Benson Hall is under the red circle with an open book.  
University Heights Ave is east of Folsom St. and north of Colorado Ave.  
Free parking along University Heights Ave. by the Wesley church

There is free 2-hour parking a short walk away, and though it is packed during class time, there should be no problem parking there during the evening program. It is along University Heights Ave. by the Wesley church...It is a 5-minute or less walk from the free on-street parking to Benson.

You can enter University Heights Ave from Colorado Ave, going west, just west of 20th St./US 36, or from Folsom St. See map.

If this doesn't work:

### Free parking in shopping center at SE corner of Folsom Street and Arahapoe Ave.

Enter the shopping center south of Arahapoe Ave, either at the light between 28th St. and Folsom or going east on Arahapoe at an entrance before Chase Bank.

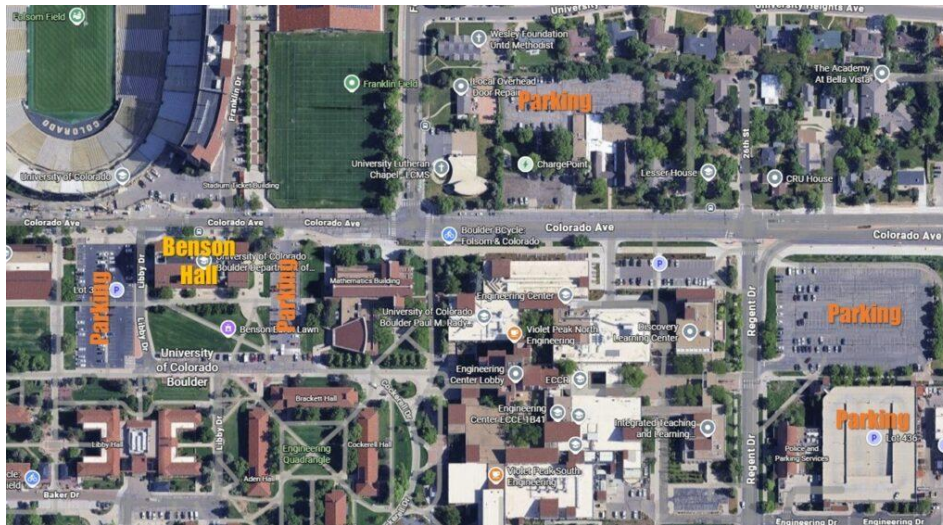
Park near Chase Bank to leave room for customers to restaurants and Petco in shopping center.

Use cut-thru to Folsom St. at SW corner of shopping center.

Follow Folsom St. uphill to the south. Turn right on Colorado Ave. Benson Earth Sciences is the second building on the south side of the street, across from eastern Folsom Stadium

### Paid Parking

Visitor/Short Term parking at Lot 360, west, south, and east of Benson Hall off Colorado Ave



All of these lots are paid parking, except possibly the lot by St. Adian's Episcopal Church. Lot 360, around Benson Hall is the most convenient. There is a pay station at the 360 parking lot west of Benson.

#### Hourly Pay-to-Park Lots

- \$2 per hour from 7 a.m. to 7 p.m. and
- \$1 per hour from 7 p.m. through 7 a.m.
- Machines accept credit cards and, in some locations, coin.

Parking is for your car's license plate number. If you don't remember it, take a picture with your cellphone.

See <https://www.colorado.edu/pts/parking/visitors-short-term-parking> for more details.

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## CSS May Meeting – Emmons Lecture

Thursday, May 21, 2026

Corey Woodruff, Paleontologist at the Frost Science Museum, Miami, Florida

### “The Oldest Ankylosaur”

In-person Meeting at Calvary Church, Golden + online via Zoom

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# CSS Past Presidents' Dinner and September Meeting

Thursday, September 10, 2026

Karen Chin, University of Colorado, Boulder  
Geological Sciences and CU Museum of Natural History

## Dinner and Talk at Mount Vernon Canyon Club



Dr. Karen Chin

### Dr Karen Chin

#### Research

My research investigates the structure and dynamics of ancient ecosystems—particularly those of the Mesozoic Era (about 65 to 250 million years ago). I am interested in how ancient communities of organisms differed from modern ecosystems in composition and organization. Much of my work focuses on tapping information available in permineralized coprolites (fossil feces), but I also examine other trace and body fossils. My work focuses on understanding interactions among ancient organisms, and deducing the environmental conditions in which these organisms lived and were fossilized. I use a multidisciplinary approach by examining geological, biological, and chemical characteristics of fossils and compare the fossil evidence with modern ecosystems to derive paleoecological interpretations.

#### Keywords

paleoecology, ichnology (trace fossils), petrographic and chemical analyses of fossils, coprolites, dinosaur diets

#### Research Interests

Primary: Paleontology and Paleobiology, Geobiology

Secondary: Geochemistry, Paleoclimate and Paleoceanography

#### Education & Training:

Ph.D., University of California at Santa Barbara 1996

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# CSS October Meeting

Thursday, October 15, 2026

Dr. Josh Lively, Curator of Paleontology  
Utah State University Eastern, Prehistoric Museum

In-person Meeting at **Calvary Church, Golden** + online via **Zoom**



Mosasaurus are one of Blake Lively's main research interests

## Speaker



Dr. Josh Lively

**Joshua Lively, Ph.D.**, is the Curator of Paleontology at the Prehistoric Museum in Price, Utah. His main research interest is the spatial and temporal change in ecosystems – both freshwater and marine – during the Late Cretaceous, or last 34 million years of the Age of Dinosaurs. Lively's specialties include turtles and mosasaurs, as both groups are well represented in the fossil record. He has spent the last 15 years conducting fieldwork in Utah and beyond.

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## CSS November Meeting Poster Night

Thursday, November 19, 2026

For Students and Early Career Earth Scientists

In-person Meeting at Calvary Church, Golden

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## CSS December Pot Luck Dinner and Past President's Address

December, 2026

Speaker Amy Atwater, Director of Paleontology, Friends of Dinosaur Ridge  
and current President of the Colorado Scientific Society

More details coming

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Click to Join or Renew your  
Colorado Scientific Society  
Membership

### Please pay your CSS dues for 2026!

Membership dues paid in November and December also apply to the following year.

You may pay dues online, or print out a PDF of the membership form and mail it to us with a check. Continuing your membership in CSS will enable us to continue all our ongoing programs, including our field trips, virtual meetings, Student Research Grants, and more.

See [Membership and Donations](#) for our online membership payment form and the CSS Membership printable PDF.

**Regular Membership** – \$25;

**Student Membership** – (any level) \$5;

**Life Membership** – \$395.

Send your membership payment, if not done through [our online membership payment form](#), to Colorado Scientific Society P.O. Box 150495 Lakewood, CO 80215-0495.

Thank you!

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## Meetings are normally on the third Thursday of the month.

*All are welcome – no admission charge*

Join us at in-person after 6:30 pm for social time before the meeting

Join Zoom meetings after 6:45

Meeting and Program begin at 7:00

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See [Archives of CSS Talks – Indexed](#) (under Events) for previous Colorado Scientific Society Talks, or just follow the link.

## *More about some of our past, present, & future CSS activities!*

*A lot goes on at CSS “behind the scenes”, and if you don’t make it to our meetings in person or browse our website frequently you may not know about them! Let us do our best to update you on some of these that have, or will, take place!*

### *Recent past activities:*



Six other CSS members joined Pete Modreski on March 31 for a short notice, late-afternoon “**No Moss**” geology hike on the Lubahn Trail on South Table Mountain. We saw and discussed interesting features in the uppermost beds of the Denver Formation and overlying lava flow, including upright fossil trees, conglomerate beds with a variety of volcanic clasts and abundant small euhedral augite crystals derived from the volcanic sediments and/or ash deposits, and fluidized structures in the sediments. We hiked as far as the top lava beds on the

“Castle Rock” butte overlooking Golden. We are planning for more short “No Moss” and other longer field trips, this spring, summer, and fall. One possible trip we’ve been talking about may be to the Davidson Mesa – Eldorado Springs area south of Boulder.

Several CSS volunteers judged student project at the **2026 Colorado State Science and Engineering Fair**, April 9, for awards given by CSS. We gave a first and second place award for each of the Junior (Middle School) and Senior (High School) divisions. We’ll have future report on what students received these awards for their projects.

### ***Ongoing:***

At each of our in-person meetings we have:

Copies of *The Geology of Boulder County* by Raymond Bridge (2004) are available for \$20; see our Treasurer, Jim Paces.

**Colorado Scientific Society T-shirts**; if you’d like one, you might check with Jim in advance ([jpaces.css@gmail.com](mailto:jpaces.css@gmail.com)) to make sure he’ll have one in your size, on hand at the meeting).

We have **Good refreshments** at each of our meeting!

Each year, CSS has a competitive **Research Grant Program** for graduate and also undergraduate earth science students. Typically, several dozen applicants share in total awards exceeding \$10,000. Our 2026 applications are being evaluated right now for this year’s awards.

### ***Future events:***

The Friends of Dinosaur Ridge are planning to open the new **Martin Lockley Dinosaur Discovery Center** (on the west side of Dinosaur Ridge, at the north entrance road to Red Rocks Park) on May 23. We hope to offer a special pre-opening tour of the Center a week or two before that, perhaps on May 13. We’ll keep you informed! Last month, the CSS Council voted to donate \$1000 toward the new exhibit construction at the Lockley Discovery Center.

At the 2026 Geological Society of America annual meeting, in Denver, October 11-14, CSS will sponsor a session as part of the technical program: **Peaks, Plains, and Plateaus: 150 years of Colorado Science Discoveries**. CSS will also sponsor a field trip in the Front Range area near Denver & Golden.

CSS in planning to have, for the first time, a booth at the annual “**Colorado Science [Educators] Conference**, to be held November 6 at the Colorado State University CSU-Spur Science Education Center at the National Western [Stock Show] Center in Denver. For more information about this see <https://coloradocast.org/CSC> .

Just to list them all in one concise place, here are the dates of all our upcoming Colorado Scientific Society meetings this year; all held at Calvary Golden Church unless otherwise noted:

Thurs., April 16, **The Dueling Dinosaurs**, by Dr. Eric Roberts

Wed., April 22, **Greenland: A geocitizen’s introduction to its bedrock geology and glacial history**, by Dr. Flemming Mengel and Dr. Bradley Markle (taking place at CU-Boulder)

Thurs., May 21, CSS Emmons Lecture, **The Oldest Ankylosaur**, by Dr. Corey Woodruff

Thurs., Sept. 10, CSS Past Presidents' Dinner, **Mesozoic Ecosystems**, by Dr. Karen Chin; at Mount Vernon Canyon Club

Thurs., Oct. 15, **Turtles and Mosasaurs**, by Dr. Josh Lively

Thurs., Nov. 19, **Poster Night, presentation by students & early career Earth Scientists**

December (date TBD), **Potluck dinner & President's Address**, Dr. Amy Atwater, at New Terrain Brewing Co.

### ***Coming events from other organizations:***

The **Coors Mineral Hall** at the Denver Museum of Nature & Science **is closing for a complete renovation** as of 5 p.m., Wednesday, April 15. So, April 14 and 15 will be the last days on which it will be possible to view the “old”, existing, Coors Mineral Hall. It is well worth a trip to see it “one more time” before it re-emerges in a completely new form!

This weekend, April 17-19, the “**Colorado Mineral and Fossil Spring Show**” is taking place Fri. (10-6)-Sat. (10-6)-Sun. (10-4) at the Livestock Center, National Western Center, 5115 Race Court, Denver. Admission to the show is free, but there is a \$15 parking charge.

**Denver Museum of Nature & Science, Earth Science Colloquium** lectures are free and open to anyone. Upcoming lectures this season are:

**April 28<sup>th</sup> : Hot to the touch! Scorching temperatures in the mid-Cretaceous Western USA.** ([Anne Fetrow](#), Colorado College)

**May 20<sup>th</sup> : Yellowstone hotspot uplift and erosion explored through river records** ([Joel Pederson](#), Colorado State University)

**June 2<sup>nd</sup> : Museomics and the Hidden Data in Vertebrate Fossils** ([Caitlin Colleary](#), Cleveland Museum)

Talks are in-person-only, from 2–3 pm in Ricketson Auditorium. Museum admission not required to attend. Enter through Staff/Volunteer entrance, 50' east of main visitor entrance, and let Security know you're attending the talk, they will direct you to the location. Walk through Space Odyssey exhibit to the West Atrium (overlooking City Park), then take a right into Ricketson Auditorium. For the full Colloquium schedule see [Home https://sites.google.com/view/dmns-earth-science-colloquium/home](https://sites.google.com/view/dmns-earth-science-colloquium/home) ; more lectures resume in the fall.

I found this recorded lecture by Vince Matthews to be an excellent, insightful presentation introducing a lot of new (to me, at least) concepts about the tectonic origin of the Colorado Plateau. It was given recently by Vince at the Utah Department of Natural Resources, and forwarded to me by the local Denver “Geolly” study group. The video link will open if you click on the title; and you’ll see, that rather than the generic title you see below, the actual title of Vince’s presentation was “**The Sangre Taphrogeny**”. If that terminology is all new to you, well, just watch the video!

“See this presentation by Geolly Member Vince Matthews III presenting:

[Young Uplift of the Southern Rocky Mountains and Uinta Mountains](#) .

The **Pikes Peak Gem, Mineral & Jewelry Show**, sponsored by the Colorado Springs Mineralogical Society, will take **place June 5-7 at the Norris Penrose Event Center**, 945 Lower Gold Camp Road, Colorado Springs. There is a \$5 admission fee.

The Colorado Chapter, Friends of Mineralogy, is sponsoring a mineralogical symposium, **“Colorado 150, Celebrating 150 Years of Colorado Statehood”**, **June 11-15** on the Colorado School of Mines campus; with lectures, field trips, workshops, and a mineral auction. See [www.friendsofmineralogycolorado.org/symposium](http://www.friendsofmineralogycolorado.org/symposium) for full details and registration information.

The **Lake George Gem & Mineral Show** is taking place **Fri.-Sat.-Sun. July 3-5**, 9-5 daily at a completely new (not in Lake George!) date and location, in Cripple Creek. It will be at 5<sup>th</sup> & Bennett Ave., in the parking lot near northwest of the Cripple Creek District Museum. Free admission and parking.