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AMS NEWSLETTER FEBRUARY 26th, 2024

AMS WEEKLY SCHEDULE

Monday, February 26th:

- AMS Department Head Candidate Seminar, **MZ 226 - 3:00 PM to 4:30 PM**

Tuesday, February 27th:

- DI&A Meeting, **CH 143 - 4:00 PM to 5:00 PM**
- SWiM Meeting, **CH 143 - 5:00 PM to 6:00 PM**

Wednesday, February 28:

- Hydrology Research Meeting, **CH 156 - 12:00 PM to 1:00 PM**
- Methane Research Meeting, **CH 156 - 1:00 PM to 3:00 PM**

Thursday, February 29th:

- Optimization Research Meeting, **SH 110 - 10:45 AM to 12:00 PM**
- Grad Visit Days

Friday, March 1st:

- Grad Visit Days

ADVISING CORNER

AMS Academic Advising Office Hours

Office hours with Paula Prentice are held weekly on **Thursdays in CH 147 from 2:30 PM - 3:30 PM**.

Office hour procedure: There is a list on the door where you can sign up when you arrive. To best serve each student, we will meet individually for a maximum of 15 min on a first come first serve basis. If you would like to have more time, make an appointment **here**. Appointments through this link are 25 minutes unless you schedule two in a row.

ANNOUNCEMENTS & EVENTS

Jayden Stack Visiting Campus

On **Tuesday, March 5th at 4:00PM in CH143** Jayden Stack will be sharing about his role as a lead data analyst at College Sports Evaluations in Fort Collins, CO. He will also be sharing about internship opportunities available for both graduate and undergraduate students. Snacks will be provided.

Rocky Mountain Section Putnam Results

The results of the 84th Putnam Competition are now available on the MAA website. Congratulations to the top 3 teams from the Rocky Mountain Section:

Colorado School of Mines **(Congratulations Professor Griesmer and team!)**

Colorado State University, Fort Collins

University of Wyoming

Thank you to all students and faculty who participated in this year's competition! Full results can be found at maa.org/putnam.

AMS Colloquium

This week's colloquium is on **March 1st at 3:00 PM in CH 143** with **Brennan Sprinkle & Dorit Hammerling**!

For this semester's Colloquium schedule, **click here**!

CONFERENCES & SEMINARS

AMS Department Head Candidate Seminar

APPLIED MATHEMATICS AND STATISTICS

DEPARTMENT HEAD CANDIDATE

Dr. Christine Kelley

TECHNICAL AND VISION PRESENTATION

February 26th 3:00-4:30 pm

Marquez Hall 226

Also Streaming Live on Zoom -

https://mines.zoom.us/j/96251730596

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CWP Seminar

For the CWP seminar on **02/26** we will have 2 speakers:

Speaker 1: Ashish

Title: Application of stable diffusion (a generative AI tool) in seismic exploration

Abstract: Stable Diffusion is a generative AI model/tool that was released in 2022. It is used to generate images and videos from text and image prompts. In simple terms, diffusion models encode images by iteratively adding Gaussian noise. They then employ a reverse diffusion process to reconstruct the original image. Recently, stable diffusion models have found applications in seismic exploration, including seismic data processing, noise attenuation, and seismic data compression. It can also be used as a regularization in full-waveform inversion to produce high resolution elastic properties of the hydrocarbon reservoirs. In this presentation, I will briefly talk about the mathematical basis of diffusion models and how they are applied in the field of seismic exploration.

Title: SWinvert – a 1-D surface wave inversion workflow utilizing open-source software

Abstract: SWinvert is a workflow developed for the inversion of surface wave dispersion data to construct 1-D shear wave velocity models. This methodology utilizes the Dinver module of the Geopsy software as the engine for the inversion. Additionally, the python package SWprepost and application SWbatch were developed to aid in the processing of surface wave inversion data and for performing batch style inversions using HPC. In this talk we will cover the paper “SWinvert: a workflow for performing rigorous 1-D surface wave inversions” by Joseph P Vantassel and Brady R Cox.

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