

# GENERAL MEETING

## Persistent Bias in Probabilistic Production Forecasting and Simple Methods to Overcome It

### Location

- Rock Bottom Brewery - Downtown Denver
- 1001 16th St Denver, CO 80265

### Date

- Wednesday, November 19th, 2025
  - 11:30 AM – 1:00 PM

### Speaker

- Reidar Bratvold, University of Stavanger

**EARLY BIRD REGISTRATION CLOSING NOVEMBER 17TH AT 12:00 PM  
EVENT IS EXPECTED TO SELL OUT**

**REGISTER NOW**

### Session Overview

The one key idea I would like the members to take away: Unbiased probabilistic production forecasts are a crucial component in making good investment decisions – but typical ways of producing them result in persistent, value-destroying biases. There are quick and easy ways to make accurate, unbiased forecasts.

Increased awareness of uncertainty, combined with increasingly sophisticated tools and models for quantifying it, is causing a shift from deterministic to probabilistic production forecasting. For these forecasts to lead to better investment decisions (e.g. assessing how much it's worth paying to reduce uncertainty, or incorporating flexibility to manage it), they need to be an accurate (unbiased) representation of the uncertainty. However, our industry has a general history of overconfidence (ranges too narrow) and, more damaging for value-creation, optimism (consistent over-estimation).

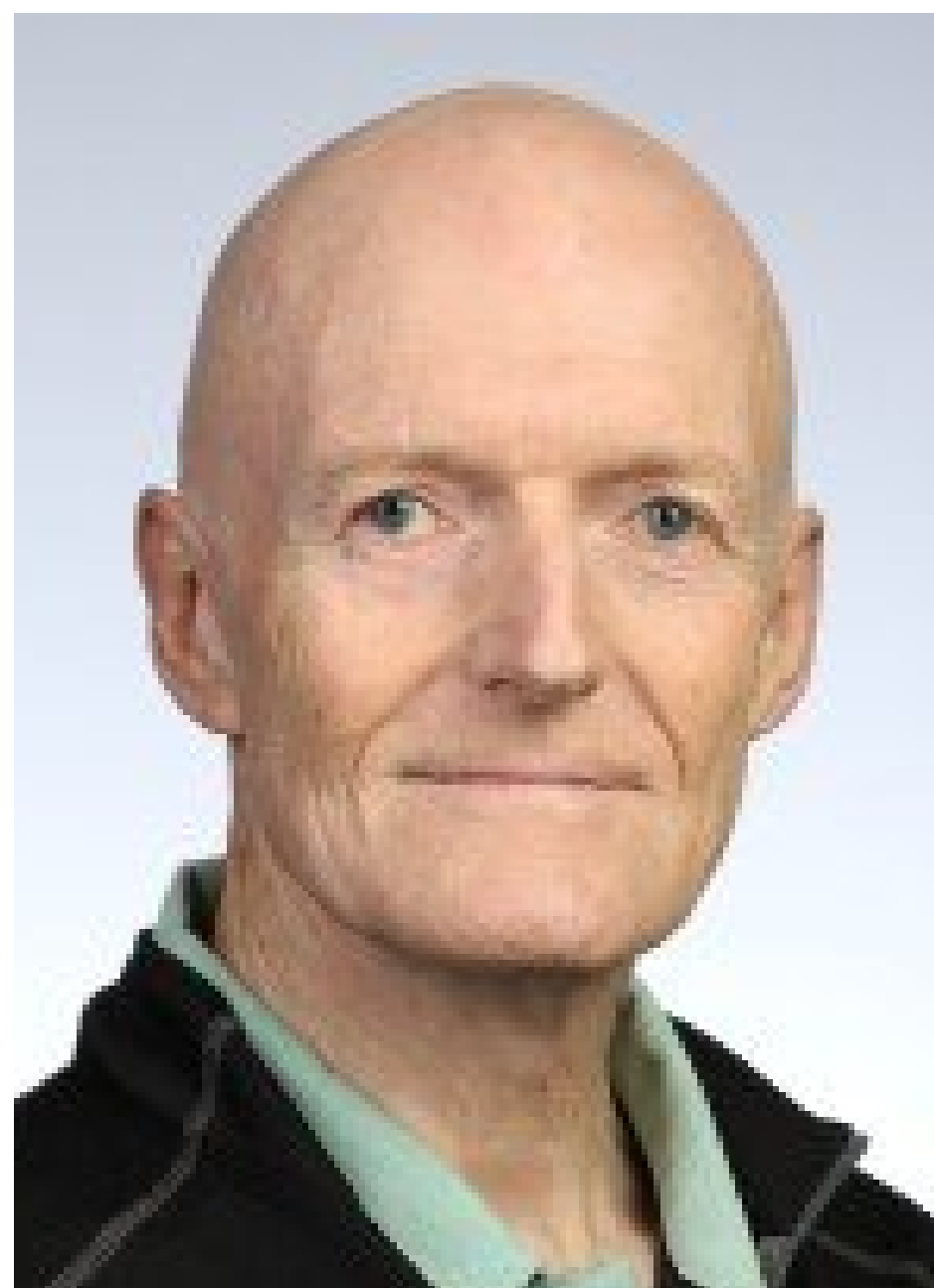
A large dataset of historical probabilistic production forecasts was investigated for potential bias by comparing them with actual outcomes. They were found to be both optimistic and overconfident, bringing into question their usefulness for decision-making and the value of the sophisticated uncertainty modeling techniques that were used to generate them.

Fortunately, there are quick and easy methods for creating accurate probabilistic forecasts. We describe these and show that they would have produced accurate forecasts for our case study fields (they do not make use of knowing the actual outcomes!).

Finally, preliminary results from a similar analysis of renewables projects indicate that the same problems exist. This could significantly impact investment decisions and policy development in renewable projects by governments and companies.

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### Meet our Speakers



Reidar B. Bratvold is Professor (emeritus) of Decision & Data Analytics at the University of Stavanger, where he teaches and supervises graduate students in decision and data analytics, including artificial intelligence and machine learning, project valuation, portfolio analysis, real-option valuation, and the behavioral challenges of decision-making. Before joining academia, Reidar spent 15 years in industry in various technical and leadership roles, including Vice President at Landmark Graphics Corporation (a Halliburton company) in Houston; Managing Director of Smedvig Technology Software Solutions (now Roxar); Senior Scientist with IBM; and Reservoir Engineer with Statoil. He began his career offshore as a roughneck and roustabout in the North Sea.

Reidar is a frequent speaker at industry conferences and delivers in-house short courses on decision-making and economic evaluation. He is one of only four individuals to have served as a Society of Petroleum Engineers (SPE) Distinguished Lecturer four times:

- Uncertainty Assessment and Risk Management in Reservoir Optimization (1998–1999)
- Would You Know a Good Decision if You Saw One? (2003–2004)
- Creating Value from Uncertainty and Flexibility (2016–2017)
- Persistent Bias in Probabilistic Production Forecasting and Simple Methods to Overcome It

He has published extensively on topics such as decision-making, the value of information, the application of machine learning and AI to support decisions, Bayesian evidence learning, stochastic reservoir modeling, fuzzy logic, data assimilation, and reservoir management. He is co-author of the SPE book Making Good Decisions, commissioned by the SPE.

Reidar was the 2017 recipient of the SPE Management & Information Award, has served as Executive Editor for SPE Economics & Management, and in 2024 was selected as Energy Professional of the Year by the SPE Stavanger Chapter. He is a Fellow of both the Society of Decision Professionals and the Norwegian Academy of Technological Sciences, and a Founding Member of the Friends of SDP initiative.

He holds a PhD in engineering and an MSc in mathematics from Stanford University and has completed executive education in business and management science at INSEAD, MIT, and Stanford

# TECHNICAL HAPPY HOUR



Denver Section

## TECHNICAL HAPPY HOUR Completions

EVALUATING THE TRANSITION TO NATURAL GAS-POWERED EQUIPMENT IN  
HYDRAULIC FRACTURING: CHALLENGES, BENEFITS, AND FEASIBILITY ANALYSIS

NOVEMBER 10TH | 4:00 PM – 6:00 PM | LIBERTY ENERGY  
950 17TH STREET, SUITE 2400, DENVER, CO 80202

**MADISON HOLLOWAY**

LOW EMISSIONS AND SUSTAINABILITY LEAD, LIBERTY ENERGY

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# ROCKY MOUNTAIN OILFIELD PICKLEBALL SHOWDOWN



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Register

## Rocky Mountain Oilfield Pickleball Showdown

**FRIDAY, NOVEMBER 14TH**

3rd Shot Pickleball, Wheat Ridge, CO

3PM - 7PM

Tournament begins at 3PM after short orientation!  
Drinks and light food will be provided  
Team themes are encouraged, and prizes will be awarded for winners!



### Description

Get ready to swing, slam, and pickle like never before at the Rocky Mountain Oilfield Pickleball Tournament, hitting the courts Friday, Nov 14th! We're at a 20 limit, so grab your spot and join the ultimate showdown at 3rd Shot Pickleball from 3pm-7pm. Sip on tasty drinks, unleash your inner pickleball rockstar, and compete to crown the oilfield's fiercest picklers! Kick things off with electrifying pool play—top 2 teams from each 4-team pool storm the winners' bracket to battle for glory, while the bottom 2 duke it out for a shot at 3rd place. Prizes await the top 3 teams (2 in winners bracket & winner of the losers bracket), so bring your A-game or your play for fun! Doubles teams, show off your vibe with epic themes—costumes encouraged! No gear? No problem! We've got paddles and pickleballs for all registered players. Let's make this tournament a total SMASH!

### Registration

- \$50 – Individual registration
- \$95 – Team registration

### Sponsorship Opportunities

- \$1,500 – Headband sponsor
- \$250 – Court Sponsors

# Volunteer with SPE Denver!



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## DPS 8TH GRADE CAREER FAIR

Registration is now open for  
exhibitor businesses

**Nov 12 & 13, 2025**

**8am - 3:15pm**

**Empower Field at Mile High**

Showcase your company  
and industry as a  
future career path for  
students!

**Denver Public Schools**

*in partnership with  
the Denver Broncos*



**REGISTER  
HERE**



SPE Denver Community Outreach

# EVENT SCHEDULE

FALL 2025

## October

**7** OCTOBER  
 NORTHFIELD STEAM COHORT  
 Session 2  
 10:15AM

**21** OCTOBER  
 DENVER RESCUE MISSION  
 6:45AM

## November

**4** NOVEMBER  
 NORTHFIELD STEAM COHORT  
 Session 3  
 10:15AM

**18** NOVEMBER  
 DENVER RESCUE MISSION  
 6:45AM

**12-13** NOVEMBER  
 DPS 8<sup>TH</sup> GRADE CAREER FAIR  
 TBD

## December

**2** DECEMBER  
 NORTHFIELD STEAM COHORT  
 Session 4  
 10:15AM

**16** DECEMBER  
 DENVER RESCUE MISSION  
 6:45AM

**TBD** DECEMBER  
 DPS MIDDLE SCHOOL SCIENCE FAIR  
 TBD

For More Information



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[Lilli@carbonvert.com](mailto:Lilli@carbonvert.com)

# COMMUNITY OUTREACH - SPE CARES

## SPE Serves Breakfast at the Denver Rescue Mission



### Location

- Lawrence Street Community Center
  - 2222 Lawrence Street, Denver, CO 80205

### Date

- Tuesday, November 18th, 2025
  - 6:45 AM – 8:30 AM

### Description

Please join SPE Denver in their support of the Denver Rescue Mission, a nonprofit organization helping the poor and homeless populations of the Denver area at the Denver Rescue Mission. More than 85% of the services of the Denver Rescue Mission are operated by volunteers, serving people experiencing homelessness and poverty in our community since 1892.

Please consider donating your time for a worthy cause. Feel free to bring friends and family to help out.

- **Please get in touch with community outreach team member [Nico Cosca](#) for more details!**

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WATCH THIS SPACE FOR ADDITIONAL UPCOMING VOLUNTEER OPPORTUNITIES IN THE DENVER AREA.



## MEMBERSHIP RENEWAL

# RENEW YOUR MEMBERSHIP FOR 2026!

### ADVANTAGES OF MEMBERSHIP:

- ✓ Access to JPT and OnePetro
- ✓ Stay up to date with industry events
- ✓ Enjoyed discounted workshops and publications



**RENEW HERE!**



**MORE INFORMATION**  
[www.spe.org/en/join/renew/](http://www.spe.org/en/join/renew/)

# SPONSORSHIP OPPORTUNITIES



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## Corporate Sponsorships

### SPE, Denver Section



#### PLATINUM

everything in Gold\*, plus:

- 8 General Meeting Sponsorships
- Short Ad in ea. Monthly Newsletter
- 4 GM Attendee Passes

**\$10,000**



#### GOLD

everything in Silver, plus:

- Ads at GM registration table
- Company logo on name tags
- 2 GM Attendee Passes

**\$5,000**



#### SILVER

Logo on:

- Instagram Event Posts
- LinkedIn Event Posts
- Website Homepage
- 1 Attendee Pass to GM

**\$2,500**

\*4 GM passes unique to Platinum tier

### About Us

As one of the largest SPE chapters internationally, Denver SPE Section enhances the local oil and gas community by hosting technical and networking events to advance industry knowledge, best practices and foster professional connections.

In the last decade, we have awarded \$800,000 in scholarships to support college students pursuing oil and gas careers. Through targeted fundraising, including corporate sponsorships, we are focused on improving Denver's oil & gas community!

### By the Numbers

**Professional** 1,345 members

**Student** 197 members

**Technical** 12 events

**Social & Networking** 18 events

**Social Media** 4,000+ professionals

**Scholarships** \$800,000 awarded



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denverspe.org

# JOIN THE DENVER SECTION!



SPE DENVER SECTION

# NEEDS YOU!

TO GET INVOLVED!



## VOLUNTEERS NEEDED: COMMUNICATIONS

- Newsletter

## COMMUNITY OUTREACH

- Mentors
- Science Fair Judges
- Science Fair Helpers
- Event Participants

## MEMBERSHIP

- Company Champions
- Sponsors
- Participants

Sign-up Link on Website:

<https://denverspe.org/all-purpose-help-volunteer/>