



# Education Subcommittee Update

Chair: Mahmoud ElGizawy

SLB

Scribe: Carol Mann

Dynamic Graphics, Inc.



## Education SC Chairperson

Mahmoud ElGizawy

- SLB Global Surveying Domain Manager
- PhD & MSc in Geomatics Engineering, U. of Calgary
- 27 years in positioning and navigation
- Based in Bucharest, Romania



Carol Mann

- WellArchitect Product Manager, Dynamic Graphics, Inc





# Mission Statement

- ISCWSA Education Subcommittee is an advisory body dedicated to raising awareness of wellbore positioning practices and challenges within the drilling industry through workshops, webinars, eBooks, public lectures, and other media.



# Activities

## Professional and Young Professional Awareness

- SPE Live and Webinars
- Distinguished Lecture
- Hits and Misses proposal – target young professional
- ISCWSA Course Scholarship
- Young Professional Liaison

## Educational

- eBook Update
- ISCWSA Course Update
- Short Videos

## Recognition & Awards

- ISCWSA long time contributors to error models, CA and others

## Student Awareness

- WPTS Directional Drilling Competition proposal
- PetroBowl
- Student Chapters Engagement



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# SPE Webinars / SPE Live 2026

- Webinar and SPE Live Planned for 2026
- SPE Webinar
  - Topic:
  - Geothermal ?
  - Best practices of Survey Data - OSDU?
  - Integrating WBS uncertainty to subsurface uncertainty
- SPE Live
  - Title, etc. TBD
- Other ideas??? Contact Mahmoud!



# Distinguished Lecturer Program



SPE DISTINGUISHED  
**LECTURER**<sup>SM</sup>

Adrian Ledroz (2025-2026)

**High-definition Wellbore Trajectory –  
Drilling, Completion, and Production  
Considerations**



# Hitting Targets / Avoiding Hazards ATW

- SPE 2.5-day Advanced Technical Workshop
- Delivered by industry SMEs on Wellbore Positioning
- Tentative Program
  - Introduction to WP
  - Directional database
  - Error models
  - Survey correction
  - Collision avoidance
  - Well interception and its applications
- Organizer Volunteers: Robert Wylie and Carol Mann
- Revised name from “Collision Avoidance and Well Interception,” aka “Hits and Misses”
- Previous Discussions:
  - Consider 1-day only
  - Ross and Benny volunteered at speakers
- Update: Reached out to SPWLA to target subsurface population
- Coordinate with SPE



# ISCWSA Course Scholarship

- ISCWSA Scholarship is open to take the ISCWSA course and wave the \$1200 tuition fee
- Sponsored by ISCWSA
- Possibly more than one recipient
- Recipient is announced before each cohort
- **Selection committee volunteers: Suzanne Hawkins and M. Long to receive applications and decide on the scholarship**
- **Name:**
- **Contact email:**
- **Location:**
- **Please give us an information about your background (Education, career, etc.)**
- **What is your current role and status?**
- **Why do you want to attend this course? What do you think you will gain from this course?**
- **Any previous exposure to wellbore positioning: college / MWD / directional drilling etc.?**
- **What interests you about wellbore positioning?**
- **Why should we select you for this scholarship?**
- **The course is eight weeks (4-6 hrs / week) in duration. Are you able to devote the time required to complete the course?**
- **Scholarship recipient must complete the course**



# ISCWSA Course Scholarship Webpage

- Webpage is published
- Access via link on Edu

**ISCWSA Wellbore Positioning Course**

Students who are eligible for a scholarship at the end of the eight-week course are encouraged to fill out the application form.

[ABOUT THE COURSE](#) [APPLY NOW](#)

The screenshot shows the ISCWSA Scholarship Form webpage. The browser address bar displays the URL: https://www.iscwsa.net/forms/iscwsa-scholarship-form/. The page title is "ISCWSA SCHOLARSHIP FORM". The main heading is "ISCWSA Wellbore Positioning Course Scholarship". Below this, there is a paragraph describing the course: "The ISCWSA Wellbore Positioning Course is based on the ISCWSA free eBook 'Introduction to Wellbore Positioning'." This is followed by a paragraph explaining the course content: "Using a mixture of videos, training exercises, and self-study material, it covers subjects such as mapping and geodesy, directional drilling, surveying, survey uncertainties, and high accuracy directional drilling." Another paragraph states: "Students who are eligible for a scholarship and are willing to commit 4-6 hours per week throughout the eight-week course are encouraged to fill out the application below to apply for scholarship." The form fields include: "First Name\*", "Last Name\*", "Address\*", "City\*", "State\*" (a dropdown menu), and "Zipcode\*". There is a large text area for "Please provide in 500 words or less your background (Education, career..etc)\*". At the bottom, there is a field for "What is your current role and status? (i.e. student/employed; full-time/part-time)\*". On the right side of the form, there are three questions: "Why do you want to attend this course? What do you think you will gain from this course?\*", "Please describe any previous experience with or exposure to wellbore positioning; i.e. College / MWD / Directional Drilling, etc?\*", and "What interests you about wellbore positioning?\*" (with a radio button). At the bottom right, there is a checkbox for "Scholarship recipient acknowledges that the eight-week course must be completed to fulfill scholarship requirements.\*" and a blue "SUBMIT" button.



# Reach out to young professionals

Young Professional Liaison

Josh Albright

Actively engagement/presenting to universities

Please forward SPE WPTS/ISCWSA emails to:

- Your colleagues
- Your colleges



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## Educational

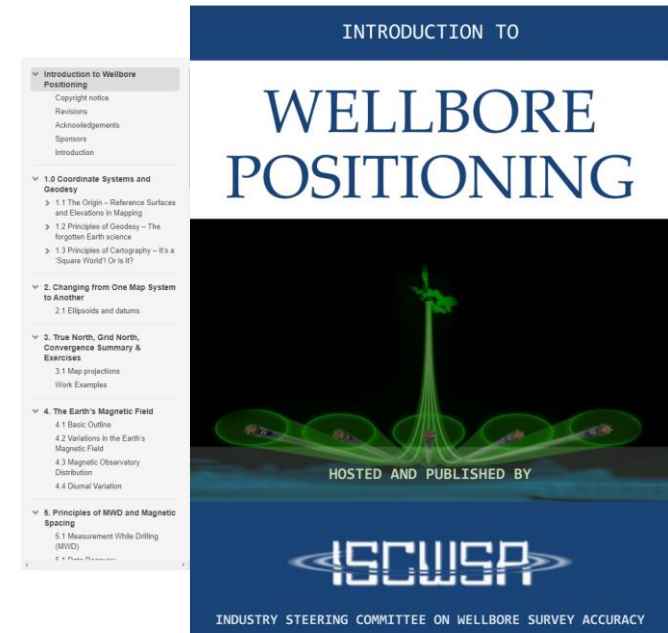
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# eBooks Update

## Introduction to WBP

- New Revision draft is complete
- Target to be published 2026
- Cover update (remove UHI) / new design
- Each section now has a 'Points to Ponder' addition to the section with additional comments and some key takeaways from the section
- WPTS AC Update
- Error model section simplified – reference to EM SC live document
- Angus and Mahmoud to separate Introductory materials and advanced material (move to appendices)
- WBP eBook Web version is available (considering flippingbook.com)

- ISCWSA hosting/copy right of eBooks
  - Introduction to WBP
  - Well Interception
  - Survey QC (Work-in-Progress)





# Course Update

- 175 graduates to date  
Cohort #12 is just completed.  
14 students
- Server update completed
- Proposed updating of some course materials including videos are completed
- Depth module has been upgraded
- Error models and survey program module has been added

## THE ISCWSA WELLBORE POSITIONING COURSE

NEXT COURSE STARTS SEPTEMBER 2024   APPLICATIONS ARE NOW BEING ACCEPTED.

This course is based on the ISCWSA free eBook "Introduction to Wellbore Positioning". The next groups will start in September 2024, and January 2025.

Using a mixture of videos, training exercises, and self-study material, it covers subjects such as Mapping, directional drilling, surveying, survey uncertainties, and high accuracy...

## About the ISCWSA Wellbore Positioning Course

This course is based on the ISCWSA free eBook "Introduction to Wellbore Positioning".

Using a mixture of videos, training exercises, and self-study material, it covers subjects such as mapping and geodesy, directional drilling, surveying, survey uncertainties, and high accuracy directional drilling.

STARTS SEP 2024  
 APPLICATIONS ARE NOW BEING ACCEPTED.  
 ENDS DEC 2024  
 TUITION FEE \$1,200

1.1.1 Mapping History

Mapping History video

And what we do that, we projected every point on the Earth's surface with the exception of the North Pole onto the cylinder...

how, clearly, if we were to continue to go to higher and higher latitudes there would be an enormous vertical stretch...

and so the Mercator projection is only published to make 90 degrees of latitude practical.

What this does mathematically is it creates the same amount of stretch north south as we have east west.

And so in general the shapes of the countries are about right. But the sizes of the countries are enormously distorted!

Take a look at Greenland now. If I told you that you could fit the whole of Greenland 10 times into the continent of Africa you now get an idea of how much scale distortion we're talking about.

You sure that people in Greenland saw this map. I believe there's only 55 thousand people live there, but according to the map they have one of the

### What's in this course?

The course has 7 main teaching modules, in addition to introductions and reviews. It is expected that 2 modules will be completed every three weeks. Click on each "Week" Module to for an overview of what is included.

### Course Benefits

- Industry recognized certificate
- Be more informed in your work
- Expert instructors
- Paced to fit working students

### FAQs & Support Help

How do I earn this course's Certificate?

How long do I keep the course?

What daily hours are recommended?



## Short Educational Videos

- List of topics
- Materials
- Video length -
- Reach out to media company
- Board approval



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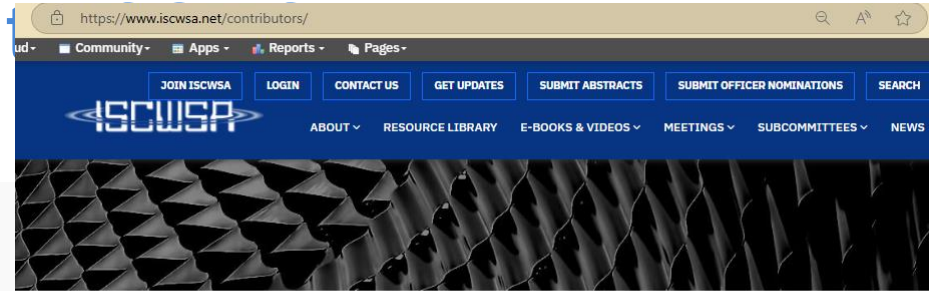
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# Recognition of contributors (error models, etc.)



## ISCWSA Hall of Fame

ISCWSA acknowledgement of long time contributors

### HALL OF FAME

- “Hall of fame” page is live, but...
- Work-in-progress
- Can be accessed via Education SC

### ISCWSA CONTRIBUTORS HALL OF FAME



#### Chris Wolff

Wolff and deWardt, systematic error model, SPE 9223 (1981)



#### John DeWardt

Wolff and deWardt, systematic error model, SPE 9223 (1981)



#### John Thorogood

Thorogood, instrument performance model (IPM), SPE 18051 (1988). Published in SPE Drilling Engineering in 1990



#### Andy Brooks

Brooks and Wilson, linking error budget to probability, SPE 36863 (1996), Implementation of toolface-independent weighting functions



#### Harry Wilson

Brooks and Wilson, linking error budget to probability, SPE 36863 (1996), Implementation of toolface-independent weighting functions



#### Roger Ekseth

Ekseth's thesis (1998)  
Ekseth et al., Gyro error model, SPE 90408 (2004)  
Ekseth et al., ISCWSA QC papers, SPE 103734 (2006) and SPE 105558 (2007)



#### Torgeir Torkildsen

Initiated research in wellbore positioning error model (SINTEF) and as Ekseth's thesis sponsor (1998)



#### Hugh Williamson

Williamson, ISCWSA error model, SPE 67616 (2000)



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# WPTS Directional Drilling Competition

- Relief well drilling exercise (S shape well)
- Kick off the competition in Q4
- Oct 30<sup>th</sup> is deadline for submission
- Marking and ranking of winners in Nov
- Nov 30<sup>st</sup> winners announcement

A promotional poster for the Drilling Competition. The background shows a night-time drilling rig with lights. The text is overlaid on the image. At the top left is the SPE International logo. To its right, it says 'Attention all Students' and the ISCWSA logo. The main title is 'Drilling Competition'. Below that, the prizes are listed: 'First Prize \$1000', 'Second Prize \$750', and 'Third Prize \$500'. A numbered list of four steps is provided: 1. Download the Simulator, 2. Watch the Training Video, 3. Submit your Survey File, 4. Get Rich Quick. At the bottom, it says 'Here's the link' followed by the URL [www.iscwsa.net/Relief\\_Well\\_Competition](http://www.iscwsa.net/Relief_Well_Competition).



# PetroBowl

## PetroBowl<sup>®</sup> Competition

The PetroBowl<sup>®</sup> competition matches SPE student chapter teams against one another in a fast-paced quiz competition covering technical and nontechnical aspects of the oil and gas industry.

<https://www.spe.org/en/students/petrobowl/>

- Connect with PetroBowl competition team to include questions on WBS
- Looking for contributions
- ***Submit your Wellbore Positioning questions*** via PetroBowl link

<https://www.spe.org/en/students/petrobowl/>

### ISCWSA - PetroBowl Q&A Submittal

The PetroBowl is an international competition hosted by the SPE that pits student chapter teams against each other in a series of quick-fire Q&A rounds related to the Oil & Gas industry. This is a great opportunity for the ISCWSA to continue spreading the message of the importance of wellbore positioning.



# Acknowledgement

- Education SC members are acknowledged for their participation and contribution to the SC activities
- Participants in this week's meeting:
  - Carol Mann, Dynamic Graphics
  - Matt Weber, Shell
  - Jamie Dorey, SDI
  - Mike Long, Round Lab
  - Jamie Stewart, Baker Hughes
  - Tim Patron, SQC
  - Mark Frasier, SDI
  - Robert Wylie, Xn Drilling