



SDSPLS 41ST ANNUAL CONVENTION SESSION DESCRIPTIONS

WEDNESDAY, JANUARY 10, 2024

1:15p – 3:00p

Trent J. Keenan, PLS, WRS, CFedS
Diamondback Land Surveying
Get Kids Into Survey/Outreach

Participants in this session will gain invaluable insights into the evolving field of land surveying and the strategies essential for nurturing and involving the upcoming generation in the field of land surveying. We will discuss the *Get Kids Into Survey* initiative and all the outreach possibilities currently available.

3:30p – 5:00p

Trent J. Keenan, PLS, WRS, CFedS
Diamondback Land Surveying
Mentoring Mondays/Workforce Development

Unveiling the critical need for mentorship and guidance, this session explores the imperative of fostering talent while dissecting the current data on workforce projections for land surveyors. Delving into actionable solutions, it offers insights into collaborative strategies to bridge the gap and create a sustainable future, providing a roadmap for individuals and the industry to initiate impactful change and ensure the profession continues to thrive.

THURSDAY, JANUARY 11, 2024

8:00a – 9:00a

Robert L. Green, PLS
Frontier Precision
GNSS Modernization: New Signals in Space - Revisited

This session will discuss the past, present and future of existing Global Navigation Satellite Systems (GNSS) constellations. It will include GPS, GLONASS, GALILEO, BeiDOU, QZSS and Indian Regional Satellite System (IRNSS)/ NavIC. The session will explore the similarities and differences between the various constellation's orbital parameters, signal structure and design. Additionally, Precise Point Positioning (PPP) and SBAS correction services will be touched on.

THURSDAY, JANUARY 11, 2024 (continued)

9:30a – 11:00a

Robert L. Green, PLS

Frontier Precision

Embracing the Past to Accelerate the Future of Measurement Technology

This presentation starts with cavemen living 17,000 years ago that knew the earth was round. Then we will “travel through time” exploring legacy survey techniques, great thinkers of the past and how they influenced today’s technology. Green uses the bible as a historical document and reveals interesting insight, then ends the session by predicting what the future of measurement science will look like both in application and principal.

11:00a – 11:30a

Linda M. Foster, PLS, GISP, MGIS

Esri

Jon Collins, PLS

South Dakota Department of Transportation

LDP Design Updates

The National Geodetic Survey’s (NGS) National Spatial Reference System (NSRS) modernization rollout is within sight. Included in the modernization effort is an updated state plane coordinate system (SPCS2022). Attend this session to learn about South Dakota’s zone designs, take a brief tour of the NGS’s SPCS2022 Alpha website, and get an update on the rollout timeline.

12:30p – 2:00p

Lucas Beauchamp

Bureau of Land Management

BLM’s Digital Cadastral Data: GCDB, CadNSDI, and the PLSS Dataset

This session will be a discussion of the evolution of BLM’s publicly available Public Land Survey System data and how to access, download, use, and interpret the most up to date data.

2:15p – 3:15p

Robert L. Green, PLS

Frontier Precision

Geodesy 101: GNSS and Surveying – Mapping Projections, Datum Transformations, Geoid Models and More

This session will explore Earth Centered Earth Fixed (ECEF) coordinates, ellipsoids, geodetic LLH coordinates, and global vs local (ITRF vs NAD83 renderings and differentiate geometrical and physical geodesy. There will be discussion on mapping projections, including State Plane coordinates and the ramifications of NGS’s 2022 Datums to be released in 2025. Additionally, the session will cover geoid models, their use, applications, and theory.

THURSDAY, JANUARY 11, 2024 (continued)

7:00p – 7:45p

Paul Horsted

Dakota Photographic LLC & Golden Valley Press

Exploring with Custer: The 1874 Black Hills Expedition

Paul Horsted is well-known for his work in seeking out the sites of historic photos, then creating a matching modern view to show how our world has changed (or not) over time. These photo pairs also inform our understanding of the environment, and reveal hidden history at these sites. Last summer, Horsted published a revised edition of the best-selling book “Exploring with Custer: The 1874 Black Hills Expedition”, first released more than 20 years ago. This expedition mapped the Black Hills for the first time, created the first photos here, found gold, and altered the course of history in the future state of South Dakota. The updated book reveals several new discoveries and all-new photographs, the subject of Horsted’s talk. Paul’s work and his books are on view at www.paulhorsted.com

FRIDAY, JANUARY 12, 2024

7:45a – 9:15a

Jerry Penry, RLS

Nebraska State Surveyor’s Office

South Dakota’s 6th Principal Meridian Surveys

Among the five states to have surveys referenced to the 6th PM, South Dakota has the smallest area. Why this portion of South Dakota was surveyed under this system will be uncovered and the manner in which it was surveyed will be explained. Details that a surveyor should know when surveying in this region will be important to know. From the Sun Dance Corral to the placing of bison skulls as monuments, this region of South Dakota is rich in surveying history.

7:45a – 9:15a

Jon Geffre, LSI, EI

Banner Associates, Inc.

LSIT Session: UAS in Surveying

Embark on an exploration of Unmanned Aerial Systems (UAS) integration within the surveying community in this presentation. Uncover a broad spectrum of UAS applications, diverse payloads, and various drone models. From topographic mapping to site inspections, this session will delve into the versatility of UAS in reshaping surveying methodologies. Discover essential best practices and establish realistic expectations for optimal project outcomes. Join us in navigating the dynamic landscape of UAS technology, unlocking new possibilities for efficiency.

9:30a – 10:30a

Jerry Penry, RLS

10:45a – 11:45p

Nebraska State Surveyor’s Office

The South Dakota – Nebraska State Line

Established on paper in 1861 as the dividing line, when both states were still territories, the boundary between South Dakota and Nebraska was not surveyed and monumented until 1874. Poor monumentation, troubles with Indians and South Dakota ceding land to Nebraska, prompted a resurvey in 1893. Similar to South Dakota’s boundary with North Dakota, the resurvey of the boundary with Nebraska was marked with stone monoliths which will forever define the line. The session will also explore the original boundary that followed the Keya

Paha River, difficulty in awarding a contract for the resurvey, and issues along the Missouri River portion between the two states.

9:30a – 10:30a

Chadwick Martinson, PLS

Banner Associates, Inc.

LSIT Session: FS and PS Exam Format

This session will focus on the FS and PS exam format with discussion on what to expect on the exam, as well as tips on how to both review for the exam and take the exam.

10:45a – 11:45p

Chadwick Martinson, PLS

Banner Associates, Inc.

LSIT Session: PLSS

The last LSIT Session will concentrate on the topic of sections inside a township. The discussion will go through how the original surveyors surveyed the sections, writing of original field notes, what the original plats represent, and the GLO/BLM manuals they used. In addition, the presenter will cover quadrangles, base lines, standard parallels, meridians, and initial points.



SDSPLS 41ST ANNUAL CONVENTION SPEAKER BIOGRAPHIES In Order of Appearance



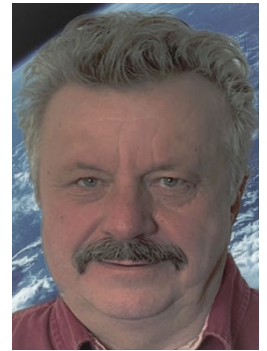
Trent J. Keenan, PLS, WRS, CFedS

Trent's surveying career started when he was 19 and now spans over twenty-eight years, including ten years in the public sector working for a large utility company, and eighteen years in the private sector, with 15 of the 18 years being the President/Founder of Diamondback Land Surveying. He has served through all officer positions of both the Southern Chapter and State Association of Nevada Association of Land Surveyors (NALS), received the Meritorious Service Award for NALS in 2013, and was honored as the NALS Surveyor of the Year in 2015, as well as receiving the Von Schimt Award for 2021 and a Presidential Citation from NSPS for his work on the NSPS Workforce Development Committee in 2023. He is a past-President of NALS (2015), Current Editor of The Nevada

Traverse Publication (NALS), Current Secretary/Treasurer for the WestFed (The Western Federation of Professional Surveyors) Board and current Director from NALS, Current Secretary on The Nevada Land Surveyors Education Foundation Board (NLSEF), Current President on the Southern Nevada Chapter of the NALS, Moderator/Facilitator/Founder of Mentoring Mondays & Wisdom Wednesdays for the Land Surveying Profession, Moderator/Facilitator for Round Table Tuesdays, and a proud sponsor and brand ambassador for Get Kids Into Survey (GKiS), as well as President for the West Coast Get Kids Into Survey Franchise. He is currently licensed in five Western States (Arizona, California, Nevada, Utah & Washington). He is also a Certified Federal Surveyor and a Nevada Water Rights Surveyor. He has been an active board member in NALS since 2007 and a regular member since 1997.

Robert L. Green, PLS

Bob is a multi-generation land surveyor and geomatics professional with over 43 years of boundary, cadastral, Right-of-Way, topographic, and geodetic experience. He is a former business owner of a Colorado based Land Surveying and Consulting Firm. Bob is a past two term member of The Monitor Panel of the Colorado State Board of Licensure for Architects, Professional Engineers, and Professional Land Surveyors. He also recently completed his last term as a member of the Survey Engineering Industrial Advisory Committee at New Mexico State University. Bob has been a positioning consultant to numerous government agencies including, the US Air Force Space Command Wing, the US Marine Corps, the Department of Defense, US Border Patrol, Army Corps of Engineers, Homeland Security, and NASA at White Sands Test Facility. Bob is employed by Frontier Precision as a Geospatial Analyst and is a well-known public speaker and measurement technology advocate. He is currently working on several research and development endeavors to streamline and improve functionality to legacy geospatial and drone-based photogrammetry and lidar workflows. Bob's article on Satellite Based Augmentation was featured in American Surveyor Magazine. <https://amerisurv.com/2021/06/20/are-satellite-based-correction-services-the-next-utility/>



Linda M. Foster, PLS, GISP, MGIS

Linda Foster oversees Esri's worldwide strategic vision for land records, cadastre, surveying, and land administration. A leader in professional organizations, she is Vice President of the National Society of Professional Surveyors (NSPS), has mentored in the URISA mentorship network, and facilitated the statewide design of low distortion projections in her state for the National Geodetic Survey's (NGS) upcoming datum updates. Foster is a registered land surveyor and certified GIS professional. She holds a Bachelor of Science degree in Geological Engineering and a Master's degree in GIS from Penn State University.

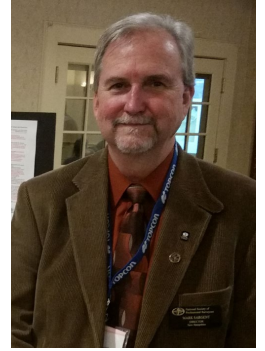
Jon Collins, PLS

Jon Collins is a Professional Land Surveyor licensed in South Dakota, North Dakota, and Nebraska. After earning an A.A.S in GIS/GPS technologies from Montana Tech, he surveyed across Montana, Idaho, and Wyoming before settling in South Dakota 18 years ago. Jon is currently employed as a Region Land Surveyor for the South Dakota Department of Transportation (SDDOT), performing control, cadastral, and boundary surveys across western South Dakota. He is a past president of the South Dakota Society of Professional Land Surveyors, led the design of the SDPCS LDP 26 zone system, and worked with the SDDOT legal and leadership teams to write and pass Senate Bill 87 in the 2022 session.



Mark C. Sargent, N.H. LLS 741

Mark is a licensed land surveyor and the owner and managing member of Richard D. Bartlett & Associates, LLC, a land surveying firm located in central NH. He has been employed in the Land Surveying Profession for over 40 years and has been active in land surveying organizations since college. Mark is a Past President of the National Society of Professional Surveyors and represented New Hampshire as NSPS Director/Governor from 2007 until his election as NSPS Vice President in 2018. He was elected to the NSPS membership grade of Fellow in 2013 and served as Secretary to the NSPS Board of Governors in 2012 and 2013, and as Chairman of the Board of Governors in 2014 and 2015. Currently Mark is the Chairman of the NSPS Government Affairs Committee as well as the Liaison to the NCEES Professional Organizations Liaison Counsel. Mark served as the 35th President of New Hampshire Land Surveyors Association in 2004 and has been a member of NHSLA for 40 years. He was elected to the membership grade of Fellow in 2005 and was the recipient of a NHSLA Presidential Citation and Distinguished Service Awards in 2005 and 2019 and was presented the Surveying Excellence Award in 2008 and again in 2023. Mark lives in Center Barnstead, New Hampshire with his wife Ginger and dogs Raven and Coconut in a 150-year old home that he and Ginger restored and unendingly work on. He is an avid fly fisherman and loves to spend his weekends, when possible, fishing at his camp in the northern reaches of New Hampshire on the Canadian border.



Lucas Beauchamp

Lucas Beauchamp is a Cadastral Surveyor with the Bureau of Land Management (BLM) and is the PLSS Dataset Manager for the BLM Nevada State Office. Prior to his eight years with the BLM, he served as a survey technician for the US Forest Service and in the private sector. Lucas graduated from the Oregon Institute of Technology with a Bachelor's of Science degree, majoring in Geomatics with an emphasis in surveying and minoring in Geographic Information Systems. Lucas also designed and teaches the GIS for Land Surveyors course for Great Basin College's online surveying Bachelor's degree program.



Randy Deibert, PLS

Randy Deibert started Surveying in 1979. He was the first Associate Member of the SDSPLS in 1984, and became a full member when he became a PLS in 1990. Randy is currently Licensed in South Dakota, North Dakota, and Colorado. He opened his surveying business in 1994 and continues his business today. In 2016, Randy was elected to the Lawrence County Commission and served over seven years. In 2022, he was elected and currently serves as the South Dakota Senator for District 31. He and his wife, Lori, reside in rural Lawrence County, west of Spearfish, and have four children and nine grandchildren.



Paul Horsted

Paul Horsted is a life-long photographer, author and publisher of books about the beauty and history of our country, including South Dakota and the Black Hills. You may remember Paul from his program at the 2014 SDSPLS convention in Chamberlain. He's well-known for his work in seeking out the sites of historic photos, then creating a matching modern view to show how our world has changed (or not) over time. These photo pairs also inform our understanding of the environment, and reveal hidden history at these sites. From his home near Custer, Paul continues producing new work and books. Paul's work and his books are on view at www.paulhorsted.com

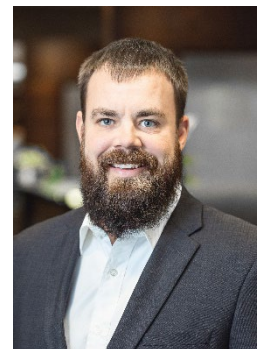


Jerry Penry, RLS

Jerry Penry is a licensed land surveyor in the states of Nebraska and South Dakota. He graduated from Southeast Community College (Milford, Nebraska) in 1985 with a degree in Surveying & Drafting Technology. During his first thirteen years, he worked for several private engineering companies in Lincoln. In 1997, Jerry began working for Lancaster County Engineering where he spent the next 24 years building the framework for the County Grid Coordinate System and was also chief surveyor performing legal surveys. He maintains an extensive knowledge in section corner recovery and monumentation. He has authored several books and has had over fifty professional articles published on surveying topics. Jerry has organized several field conferences where surveyors were able to participate in hands-on activities. He is a frequent speaker in a multi-state area. Jerry grew up in rural Holt County, Nebraska, near the town of Atkinson in the northern region of the state. He currently resides in Lincoln and is employed by the Nebraska State Surveyor's Office where he is the Chief Deputy State Surveyor. His duties combine both office and field work managing Nebraska's original "School Section" properties.

Jon Geffre, LSI, EI

Jon Geffre commenced his professional journey after earning an associate degree in land surveying and civil engineering technology from the North Dakota State College of Science in 2013. Advancing his education, he obtained a bachelor's degree in civil engineering from South Dakota State University in 2017. In 2017, Jon sat for and passed his FE and later, in 2021, he sat for and passed his FS exam. Currently a Survey Technician at Banner Associates, Jon actively contributes to professional organizations. He holds the roles of South Dakota Society of Professional Land Surveyors (SDSPLS) Young Surveyor Representative to the National Society of Professional Surveyors (NSPS), Vice President for the Big Sioux Chapter of SDSPLS, and President of the Young Surveyors Chapter within SDSPLS. In the latter position, Jon passionately shapes a platform dedicated to providing education and networking opportunities for emerging professionals in the surveying field. Certified as a Part 107 drone pilot since 2018, Jon boasts over 200 hours of flight time. He applies drone technology utilizing multiple payloads for marketing, construction observation, orthometric imaging, volumetric reports, and creating existing ground surfaces using Lidar. Jon's commitment extends to learning new software, testing various workflows, and staying updated on drone technologies to ensure the highest accuracies possible in his endeavors.





Chadwick Martinson, PLS

Chadwick Martinson grew up on a farm west of Jasper, MN on the South Dakota side of the border. He went to high school in Dell Rapids and graduated in 1998. After high school, Chadwick worked construction and farmed for a few years while also enlisting in the Army Reserves in 1999. It's a bit of a story on what brought him to surveying, but he was looking for something that wasn't going to destroy his body when he got older and something that he would enjoy. With that being said, he started school at Southeast Tech in the fall of 2002 and then had a deployment to OIF in 2003 to 2004. Chadwick came back, finished school, and graduated in the Spring of 2006. After school, he started working at Banner Associates and eventually became a Land Surveyor in South Dakota. He also spent the fall of 2022 and spring of 2023 helping with some adjunct teaching at Southeast Technical College. Chadwick retired from the Army Reserves in 2020, and guessed he needed something else to do with his time. It was a great experience for Chadwick!

Steven O. Thingelstad, PE/LS

Steve was born and raised on his grandfather's homestead in central South Dakota; where his parents lived their entire life. He graduated from High School in 1971 and attended college at SDSU, then moved to Rapid City in 1976 and started surveying with a local Surveying Company. In 1983 he attended the organizational meeting for SDSPLS, but was not considered a founding member because he was not licensed at the time. In 1985, Steve joined SDSPLS as a technician and received his Land Surveyor license in 1987. From 1992 through 1995, he attended SDSM&T and received a BS in Civil Engineering. In 1998 he achieved his license as a Professional Engineer. Steve purchased a small Civil Engineering and Land Surveying business in 2003. From 2004 through 2015, he served on the SDSPLS Board of Directors (3-years as West River Chapter President and 8-years as SDSPLS Treasurer). From the late 1990's through the present, he has volunteered to help in the Trig-Star program and served as Chairman of the program from 2011 through 2016. Steve was appointed to the South Dakota Board of Technical Professionals, as a Land Surveyor, by Governor Dugaard in 2015 and reappointed by Governor Noem in 2018 and 2021 and will be term limited in April of 2024. He served as Board Chairman for the 2020/2021 term, during Covid so the meetings were conducted via Zoom. The SDBOTP meets 6 times a year and is tasked with the review of Comity applications, Exam applications, and continuing education Audit assessments. Occasionally, there is a need to review formal complaints and, if the need arises, disciplinary hearings. As a sitting Board member, he is automatically enrolled into the National Council (NCEES.) Steve attended all of the annual meetings, held in August, with the 100th (in Chicago) and 101st (in New Orleans) meetings by Zoom because of Covid. He also attended the majority of the Zone meetings held each year in April. Steve served on the Zone Nominating Committee for three years, the final years serving as the chairman of the committee.

