



DGS
DHAHRAN
GEOSCIENCE SOCIETY

THE OIL DROP

A DGS
Magazine

**Professional
Meetings
Series**

**DGS Field
Trips Series**

**Upstream
Hackathon**

**DGS at
GEO 2018**

2017-2018
End of Term Edition

**DGS Workshop
Series**

Contents



14
Field Trips
Series

- 5 **DGS Executive Committee:** Meet the 2017-2018 committee who brought a year full of successful events and activities
- 8 **Professional Meetings:** A look into the Dinner Meetings and Technical Luncheons featuring Local and world-renowned speakers from around the globe
- 14 **Field Trips:** Follow DGS and its members as they travel the globe to visit some of the most unique and geological wonders in Saudi Arabia and abroad
- 20 **YP Events:** Get a glimpse into the activities of the YP-Section as they thrive to inspire young professionals into visualizing their future
- 25 **Articles** AI and Big Data Analytics: where the world is heading



26
Upstream
Hackathon



38
DGS
Workshop
Series



8
Professional
Meetings
Series

- 26 **Upstream Hackathon:** Meet the professional who came together to find creative solutions to some of the industry challenges in a unique hacking event
- 28 **Mystery Hunt and Family Festival:** enjoy the festivity with DGS in the form of a family-friendly festival and a competitive mystery hunt
- 32 **Ideation Challenge:** take a look at the unique challenge where participants went through the ideation process of generating and developing new ideas to solve a problem or improve a product, process, or service
- 34 **DGS at GEO 2018:** A glimpse at DGS activities that helped in the success of the largest and best attended technical event of its kind in the region
- 38 **Workshop Series:** A look into DGS workshops offered in collaboration with exploration departments and other professional societies to enhance and develop technical understanding their members
- 40 **Students Outreach:** Follow the journey of DGS Student Section as they travel across the kingdom to raise awareness of geosciences and oil and gas exploration
- 42 **DGS through the years:** Take a journey in time and explore precious moments of our past
- 44 **DGS in Numbers:** A holistic view of the many activities of DGS in the term 2017-2018



34
DGS at GEO
2018



THE OIL DROP

A DGS Magazine

Editor In Chief:
Abdulaziz AlMansour

The Oil Drop Contributors:
Mazen AlAngari
Salma AlSinan
Nasher AlBinHassan

About The Oil Drop
The Oil Drop newsletter was first released on June 1990, as a platform to share the latest activities and news of the Dhahran Geoscience Society. For the first few years, The Oil Drop was printed and photocopies were distributed to members at events and technical meetings. Over the years, The Oil Drop has evolved both in format and content to become a platform that connects its readers with not just the news of DGS, but also the latest advancements in their fields.



www.dgsonline.org

President Welcome Message: Abdulaziz Al Muhaidib



The Dhahran Geoscience Society is pleased to present the 2017/2018 issue of The Oil Drop. As we embarked on commencing our program for the 2017/2018 term almost a year ago, one of our initial goals was to foster a greater sense of community and

to improve communications and outreach.

To achieve this goal, our team led the society throughout the term to expand its horizon with exciting events and activities, and continued to provide a sustainable platform to exchange technical knowledge and promote professional development within our community. The overall ambition of DGS is, of course, to remain one of the region's leading professional societies, and to improve the communication and network among DGS members in the region and work on expanding DGS outreach far and beyond. Our commitment to drive the society's success was manifested through several programs, including young professional activities, technical meetings, workshops, courses, field trips, and a multitude of unique year-round events that we strived to capture and share with you in this issue of the newsletter.

I hope you have enjoyed this term as much as we have, and I invite you to join DGS 2018/2019 new cohort to be part of this exciting journey.

Sincerely,
Abdulaziz Al Muhaidib
DGS President

Meet the Team: 2017-2018 Elected Executive Committee

Led by DGS President, Abdulaziz Al Muhaidib, eleven elected members of the executive committee have assumed their duties for the term (2017-2018) as follows:



Abdulaziz Al Muhaidib
DGS President



Mohammed Al Duhailan
President Elect



Khalaf Al Temimi
Vice President



Musab Al Modrra
Professional Development
Officer



Yasmina Kechida
Field Trip Officer



Abdulaziz Al Mansour
Publications Officer



Firas Al Awam
Student Section Liason



Emad Al Hemyari
Membership Liason



Salma Al Sinan
Young Professional
Officer



Mohammed Bin Gubair
Treasurer



Nasher AlBinHassan
Webmaster



Aun Al Ghaithi
Professional Meetings
Officer



Soaad Al Enazi
Secretary

From the Editor's Desk



As the publication officer, and on behalf of the DGS executive committee, I would like to welcome you to this issue of The Oil Drop. Since its foundation in 1987, the Dhahran Geoscience Society (DGS) has strived

to develop its member's technically and update them on the latest in their fields in geology, geophysics, and related sciences.

In over 30 years, DGS has organized hundreds of events that facilitated continued growth among its members and young professionals, focusing primarily on the exploration for, and development of, petroleum and mineral resources within the Arabian Peninsula. And since the first publication of the Oil drop was released on June 1990, more publications kept being released till this day. DGS publication committee would like to thank its contributors and loyal followers for their continuous support and constructive comments.

Sincerely,
Abdulaziz Al Mansour
Publication Officer

Call for Articles & Editors

DGS membership has a long history of having specialized experiences in a diverse range of specialties and best practices in the Oil and Gas Industry. Our members are involved in some of the most sophisticated and challenging professions in the exploration for and the extraction of Oil and Gas. The DGS Publication Committee is seeking authors to contribute articles to the upcoming issues of The Oil Drop. To become an editor, submit an article, or ask questions about the suitability of your submission, please contact the Publication Committee at publication@dgsonline.com

Relaunch of DGS Website

www.dgsonline.org



www.dgsonline.org

DGS Dinner and Technical Luncheon Meetings

Local and world-renowned scientists and professionals are regularly invited to present their work and share their experiences at the Dhahran Geoscience Society (DGS) Dinner Meetings and Technical Luncheons as part of the society's mission to expand the knowledge of its members in the Oil and Gas Industry. Members of the Dhahran Geoscience Society and industry professionals attend those meetings to gain an insight into significant industry relevant issues while simultaneously utilizing those unique opportunities to socialize and expand their professional network.

speaker was Craig Smith, the CEO of Dhahran Technology Development Company; who gave a talk in October about Saudi Arabia's innovation ecosystem creating value under Vision 2030.

Craig Smith,
CEO of Dhahran
Technology
Development
Company



Jean-Jacques
Bieau
president
of EAGE



Five DGS dinner meetings included a choice selection of keynote guests such as Jean-Jacques Bieau, president of the European Association of Geosciences and Engineers, covering relationships between petroleum sealing interval identification and pore pressure predictions. Another distinguished



The February dinner meeting featured Nancy House, president of the Society of Exploration Geophysicists (SEG), who presented the unconventional revolution in exploration geophysics.

The March dinner meeting hosted Khalid Almudaifer, president and CEO of the Saudi Arabian Mining Company (Ma'aden), along with a delegate of Ma'aden executive management. Almudaifer started the dinner meeting with an enlightening talk on "Ma'aden's Journey: building a world-class mining and minerals sector in Saudi Arabia" to a large audience of DGS members and professionals. In his talk, Almudaifer walked the audience through Ma'aden's achievements during the past decade and its journey to be a world class minerals enterprise. Emad Saadawi, Vice President of exploration in Ma'aden,



Khalid
Almudaifer,
President and CEO of
the Saudi Arabian
Mining Company
(Ma'aden)





Almudaifer and a delegate of Ma'aden executive management

followed up with a talk that highlighted Ma'aden's workflow and best practices for exploring minerals.

The DGS concluded its 2017/2018 term with a dinner meeting in May featuring Adam Sieminski, President of the King Abdullah Petroleum Studies & Research Center (KAPSARC), who shared with the audience an interesting overview on the World Energy Outlook.



Nancy House, president of the Society of Exploration Geophysicists



Denise Cox, president-elect of AAPG



Adam Seiminski, president of the King Abdullah Petroleum Studies & Research Center (KAPSARC)



Ten Technical Luncheons that were held over the 2017/2018 term have opened the minds of the many attendees to a wide variety of exciting topics such as Micro-seismicity induced by hydraulic fracturing, inverting the arrival of near-surface imaging, full waveform seismic modeling and inversion in complex media, Modeling the Evolution of Permeability in Carbonates, Crustal-scale Seismology at the Red Sea Margin, Rock-Fluid Interactions and Diagnostic Processes in Carbonates with Application to 4D Seismic, The Role of Geoscience in Sustainable Energy Solutions, and What Does it Take to Illuminate the Earth at all Scales.



Rachel Wood,
Professor of Carbonate Geoscience at the University of Edinburgh



Amos Nur,
Wayne Loel Professor of Earth Sciences at Stanford University



Misfir Azzahrani,
executive director of exploration at Saudi Aramco

Denise Cox,
president-elect of AAPG



Scan the QR code using you mobile



Scan the QR code using you mobile



Mark Zoback,
Professor of Geophysics at Stanford University

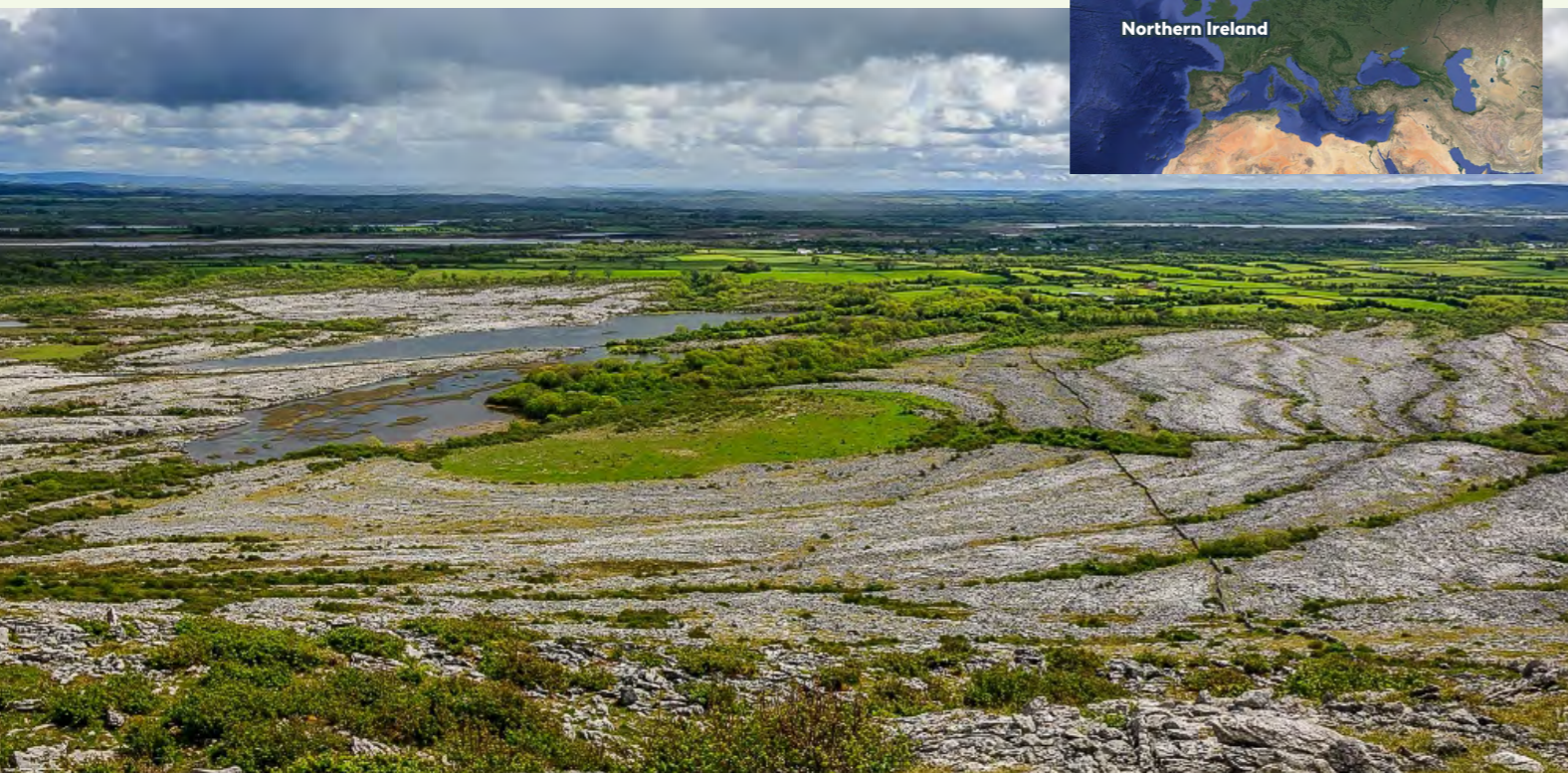
DGS Field Trips Series

Northern Ireland trip:

During Eid al-Fitr, 20 Aramcons and ex-Aramcons attended the first DGS trip to the north of Ireland, to explore the geology and cultural history of the province. The week-long trip took in two world heritage sites, national parks and many sites of special scientific and historical interest. Despite its small size (c.100 miles from north to south and 120 miles from east to west), Northern Ireland boasts rock exposures from every geological time period, from Cambrian to Quaternary, and many of these were explored on the tour.



photo by Ghazi Kraishan.



Field trips sponsored by DGS offer a unique opportunity for Geoscientists to experience geologic formation and environments nationally and abroad. The occasion allows for distinctive networking prospects and hands-on field experience in an industry that thrives in physical observation of environmental and geologic details. the field trip series allowed for unique opportunities to to explore the geological wonders of Ireland, Jordan, The Wa'abah Crater and Taif, Al Ahsa, and Hail.

The Jordan trip:

The Jordan field trip offered itself as an opportunity to view geologically familiar formations (Precambrian & Cambrian) to DGS members. Coupled with a historically rich tour of one of the seven wonders of the world Petra which included camping in Wadi Rum. The trip also included the chance of visiting the Dead Sea and the capital of Jordan Amman.



Wa'abah Crater and Taif Trip:

The trip to Taif and the daylong visit to Wa'abah Crater allowed for an exceptional occasion. Following the arrival in Taif, the group of around 40 DGS members organized a daylong trek into the heart of the 2-kilometer crater. Wa'abah Crater is a site of a very strong volcanic blast leaving a giant 250ft pockmark. After the long trek into the heart of the crater, the remainder of the weekend-long trip was spent in Taif and in the traditional souk, as well as a visit to a rosewater distillation factory, and a short visit to the local baboon population with the day rounded out at Al Hada escarpment.



Al Ahsa Trip:

The one-day trip to Al Ahsa presented an amazing opportunity to view the unique attractions the city had to offer such as the Camel Market, Qasr Ibrahim, the Old Market of Al Qaisariyah, Jabal Alqarah, and local farms and springs.



Hail Trip:

The two-days trip to Hail was another great opportunity for DGS members to experience the unique generosity of Jubbah culture and to learn to read and interpret Thamodic ancient inscriptions engraved on rocks that are 2000 years old! Participant were able to explore the octagonal historical pool of the ancient route of Zubeida that extends from Iraq to Makkah. Trip activities included visiting the Oasis of Jubbah "Capital of Generosity", World Heritage site at UmmSinman mountain, the "two ghosts" prehistorical cave and mountain, historical castle of "Fayd", and the Old Market.



HASSAN ALBAYYA
Rajaz Field Trip 2017 | Train 10

DGS YP Events



DGS Wellness Series

In the YP Wellness Series, an enlightening talk about taking initiative and staying energized was delivered by a key member of Saudi Aramco's Human Energy Management Team Paul Burgess. Another inspiring talk was given by Abdullah Al Joud, an Olympic Runner and Coach, about his athletic journey, how he energized himself, self-motivation and love for the sport.



DGS YP team participating in the 3k Race



170 Runners ready to start the 3k race

Abdullah demonstrated the necessary running and warm up techniques to prepare mentally and physically for running and the importance of practicing the sport correctly. The YP section in DGS also sponsored a 3K running race in collaboration with the Dhahran Road Runners Club (DRRC) in April. In which many DGS members and their families participated in the race. Other than the top 3 runners categories, additional medals were distributed amongst the top three runners which is divided by gender and age.



Top 3 male runners



Top male runners in the age category (60+)

Distinguished professionals were invited to share their expertise in a variety of industry professions in order to inspire and motivate young professionals into visualizing their future. In the DGS YP Events, speakers often shed light on key entrepreneurial skills and techniques on staying focused and energized on tasks, as well as high value skills learned through years of experience in interesting careers that can be useful both inside and outside of the workplace.

Competitive sports provide both physical and mental growth that can influence and inspire individual and communities to develop. The Eastern Flames Football Club (EFFC), which is an all-female football team, provides an outlet for women who enjoy playing the game and exercising. Founded in 2006 for women aged 18 and older, the team started out with very few players and grown into a recognized female football team competing in both domestic and international leagues. The EFFC are keen advocates for the sport and try to empower women to join the sport through their outreach activities around the kingdom.

For the first time, DGS hosted a female football clinic with EEFC. During the two- hour football clinic, the 17 female participants, aged 17 to 48 years old, were introduced to football by the EFFC coach, practiced ball skills with members from the Eastern flames team, and challenged themselves in a friendly game.



DGS Entrepreneurship by Experts Series

The Entrepreneurship by Experts Series aims to provide a venue for Saudi entrepreneurs to share their success stories to motivate our members. The primary goal is to introduce entrepreneurship and show case the different opportunities, inside of Saudi Aramco, to make a difference. DGS aims to inspire its members to attain a successful career through embracing creativity and innovation, as similar programs have delivered great results in other companies.



leading initiative in the Saudi Arabian export and fisheries development, standards and regulations setup. The second talk in the Entrepreneurship by Expert Series featured Khalid Al Khudair. Khalid is a social entrepreneur, writer, founder and CEO of (Glowork), a women empowerment organization that provides thousands of jobs for women and has placed over 30,000 women in jobs so far. Khalid is also the first Saudi Ashoka fellow, a young global leader at the World Economic Forum, and an endeavor entrepreneur.



Khalid Al Khudair sharing his thoughts on creating your own opportunities.



Dina al Fares empowering the DGS members to be entrepreneurs within the company.

Two interactive sessions were presented in the Entrepreneurship by Expert Series this term. The first talk by Deena Al-Faris, Vice President of Al Faris Group of Industries; about her entrepreneurial journey to achieving the first exportation of caviar to the Russian Federation. Deena Al Faris's vision was to produce caviar on Saudi soil. Through her leadership, AGI successfully convinced the Saudi minister and deputy to establish communication with the federation of Russia and ministry of aquaculture. This led to the export of the first Caviar in the world to Russia. Also, it introduced Al Faris firm as the

DGS Annual Winter Campaign

Every year, thousands of families fear they will not be able to secure winter supplies when the extreme cold sets in. DGS Young Professionals Team reinvented the winter campaign this year with practical yet creative and meaningful ways to carry out this campaign. The smile they put on the faces of those families was DGS's greatest reward, and the renewed hope they were left with meant everything.



Campaign to help those in need of winter supplies. In the campaign, the team donated 58 blankets, 16 heaters, 24 LuLu supermarket vouchers, flowers and letters written by DGS members. Our Family Group played a big role in reaching out to the families and providing support with the logistics.

The team met at a distribution point to pick up the donations and then deliver them to their assigned families. The team visited a total of 8 families in Al Thugbah and Dammam. The donations, which contained blankets, heaters and gift vouchers, were wrapped as gifts and delivered with flowers and letters to the families.



On January 3, 2018, DGS Young Professional Team in collaboration with Our Family Group organized a Winter

DGS Be Enriched Series

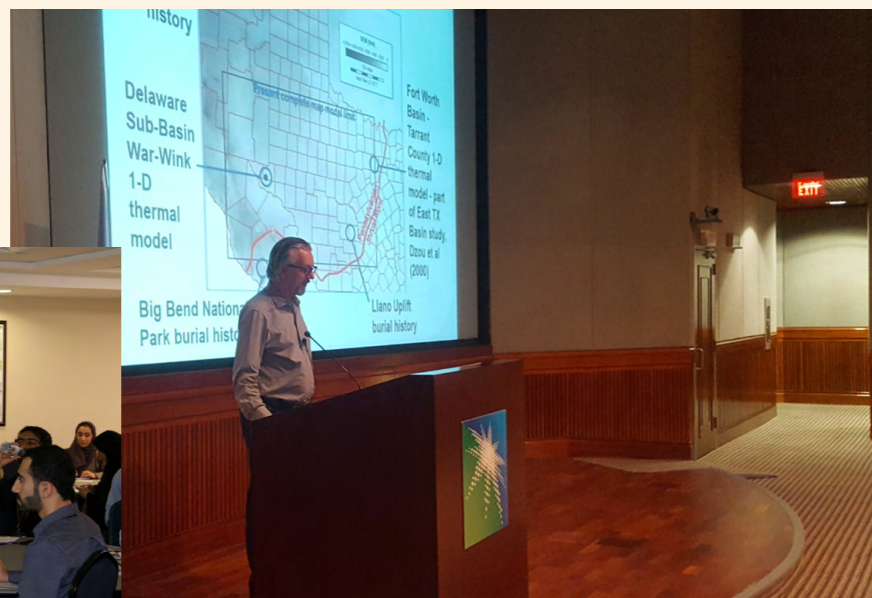


Many of us are focused on time management and how little time we have to get everything done during the hectic lives we lead. It is important to remember that time is a limited resource; once used it is lost forever.



However, our personal energy levels are renewable. For that reason, managing our energy and not our time should be our goal. DG SYP hosted a workshop titled Take the Lead, Stay Energized by Paul Burgess and Zdenka Mazourek from the Human Energy Management (HEM) team. This workshop examined the key dimensions of energy management and how each one, although independent, is interdependent with the others, to ensure that we are able effectively to manage our energy. The workshop was followed by a relaxation and stress management session.

The YP team also hosted Andrew Pepper, Director of This is Petroleum Systems LLC to give a talk about Understanding the conventional and unconventional petroleum systems of the prolific Permian Basin.



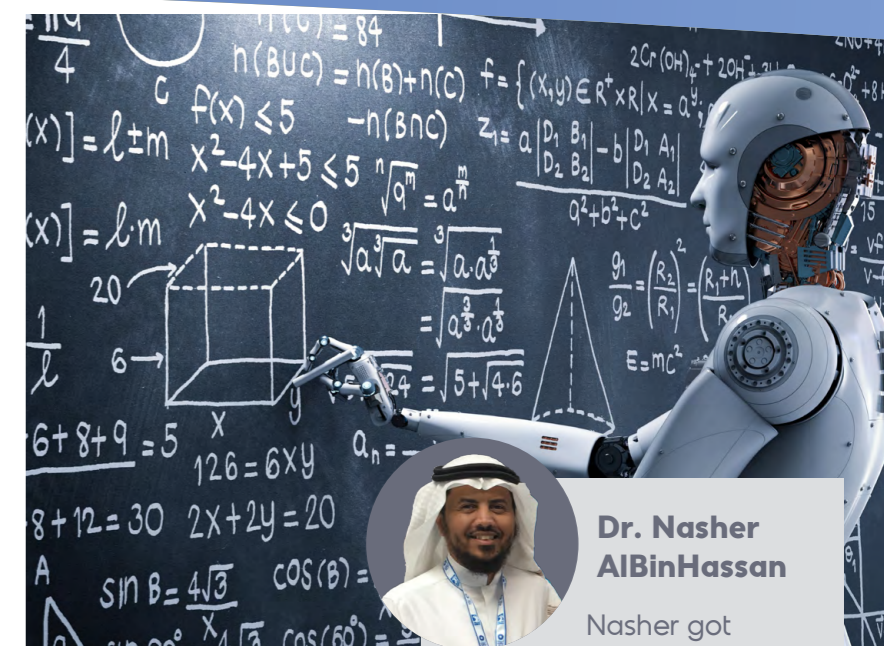
AI and Big Data Analytics: where the world is heading

We continuously grow up every day from many different prospective. Age is a number but that number is increasing and likewise our thoughts, friends, payments, knowledge, experience and the list goes on and on. All of this is happening at an enormous increasing speed not every day but every moment. With that same speed, the overall data size is also growing up tremendously across the earth to form the term known as "Big Data". With that term, a yet another industrial revolution technology is storming the world and is called "Artificial Intelligence" or AI.

Professor John McCarthy from Stanford University defined AI as "The science and engineering of making intelligent machines, especially intelligent computer programs." "Machine Learning" or ML is a branch of AI and people usually interchange the two terms (AI & ML) to represent the same meaning but this is not always true because AI covers a wide range of technologies such as robotics, Natural-language processing (NLP), and Internet Of Things (IOT).

To come up with a combined definition of Big Data and AI we would say that, Big Data Analytics is the use of latest AI and ML technologies against a huge, unsorted, structured and unstructured, different size and fast-growing data. Experts from the Big Data Analytics field represent it as the three Vs. Volume, Velocity, and Verity. Some other scientists add a fourth term "Veracity" or the presence of uncertainty on the data.

Currently, the overall utilization of ML and AI based solutions is very limited.



Dr. Nasher AlBinHassan

Nasher got a PhD degree

in Geophysics from Imperial College London, a master degree from University of Houston and a BS degree from KFUPM. He worked for Saudi Aramco as a computer analyst, programmer, and provided seismic interpretation software support. Currently, he is working as a developer with the Geophysical Technology Team under EXPEC-ARC. Some of his interests are: Integrating artificial intelligent methods with geophysics and participating in voluntary activities.

With increasing expansion of big data analysis into the AI and ML procedures, devices and machines will get smarter and able to perform much better than usual. This will lead to consistent improvement, enhancement and advancement in AI solutions which will boost the market adoption of these solutions, giving rise to a high increase in their market demand.

Saudi Arabia is the first country to grant a robot the right to citizenship. Sophia is a non-human woman Saudi citizen. She gives facial expressions while talking. She has an answer for every question (picture). Saudi Arabia is also researching the use of AI algorithms to estimate Tawaf crowds at the Grand Mosque in Makkah. The Kingdom of Saudi Arabia Vision 2030 recognizes the important role development of advanced and latest technology. AI will play in the future of society, particularly as an economic driving tool.

Scientists and developers, especially the young generations, should educate themselves and compete toward utilizing the online courses such as Coursera and Udacity because that's "where the world is heading".

Upstream Hackathon

Upstream Hackathon, jointly organized by EXPEC Advanced Research Center at Saudi Aramco (EXPEC ARC) Young Research Committee and the Dhahran Geoscience Society (DGS), was a unique experience where 18 multidisciplinary groups of Saudi Aramco employees were tasked with tackling industry-wide challenges identified by different upstream departments. The groups had two-and-a-half days to come up with conceptual theories and solutions to the presented challenges.



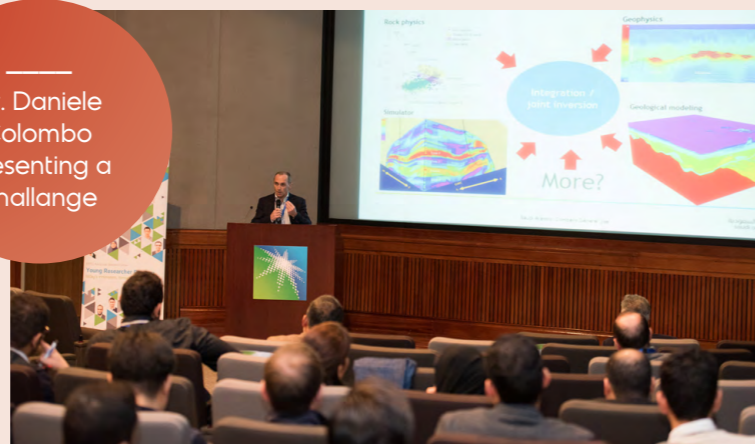
Ibraheem Assa'adan, vice president at Saudi Aramco addressing the participants.

A Hackathon, is an event where industry challenges are presented and where industry professionals come together to find creative solutions. This year's Hackathon, the first of its kind in Saudi Aramco, was a resounding success. The competition consisted of 80 Saudi Aramco young professionals from 9 Upstream Departments and 4 Admin Areas confronting 12 different upstream challenges. "Introduced for the first time in Saudi Aramco, the Upstream Hackathon format is appealing and exciting," said Ibraheem Assa'adan, vice president of Exploration. "With a focus on the young workforce and their energy, the Upstream Hackathon

serves as a creative model to navigate complicated futures."

The first day the groups were made and the challenges presented to the teams, where each team was then allowed to choose the challenge they found most interesting. The following day was

Dr. Daniele Colombo presenting a challenge



one of brainstorming and preparation, where the teams came up with their solutions and organized their ideas to be made in presentable fashion. The final day, was where the teams presented their ideas and were judged by a panel of 26 Subject Matter Experts (SMEs) and were evaluated by the following criteria: Creativity, presentation skills, and the validity and feasibility of the solutions. The three teams with the highest scores were awarded and recognized by the Exploration VP Ibraheem Assa'adan.

Team 17 at first place: Fahd A. Almalki, Nour O. Baqader, Bashayer S. Aldakkan, and Bilel Hamzaoui from EXPEC ARC, who came up with a solution for improving recovery using responsive Nano-materials.



Misfir A. Azzahrani
executive director of exploration at Saudi Aramco

Team 1 at second place: Abrar A. Abbad and Abdulrahman A. Shuhail from EXPEC ARC, Noha H. Lababidi from Eastern Area Exploration Department, and Fatimah A. Alsinan from ETSD, who presented on automated core description and interpretation using artificial intelligence.

Team 11 at third place: Sultan S. Otaibi from Reservoir Description & Simulation Department, Mohammed K. Bassam, Raed R. Alruwaili, and Saud A. Alfadhel from EXPEC ARC, who presented on downhole water detection and inflow control in horizontal wells.



Participants registering for the Hackathon event

The event was a resounding success creating a platform of ideas, as well as an exclusive experience for all the contributing parties; the upstream departments, the YP participants, as well as the spectators departing the year with a sentiment of hope and optimism for the future.



DGS Mystery Hunt and Family Festival

On Friday February 9, 2018, The DGS YP Section organized a community family festival and a mystery hunt competition at the Dhahran Hills Park. As part of the society's active efforts within the Dhahran community, the event was meant to introduce family members to DGS, socialize in a family-friendly environment, and expand



DGS outreach. The family festival was scheduled from 2 until 8 pm, in which families and their children enjoyed various carnival games, music, and food trucks. DGS provided 15 carnival games such as ball games, puzzles, coordination games, bowling, target games, and two inflatable castles for the younger guests. Three food trucks were provided (Code, Carnival and



Everyone loves a festival, and everyone loves a challenge. The fun of taking the whole family out to a fun festival can only be topped by the thrill of facing difficult challenges and tackling them head on to emerge victorious.

Snack Truck) along with some grilled food provided by the Arabian Food Supplies.

The DGS mystery hunt competition that accompanied the family festival was also a huge hit with attendees. The DGS mystery hunt is inspired by MIT's popular Mystery Hunt that has more

have simplified the format to appeal to families, who come out to have a fun weekend with their children," says Hussam H. Banaja, coordinator of the event. "To interest and engage the children, the theme of DGS' first-ever Mystery Challenge is cartoon characters and other popular characters." For Aisha Nadir and family, the event provided an opportunity to learn more about geosciences and the DGS. The children found the puzzles challenging, particularly, matching terms to their equivalent acronyms. At the end of the day, they attested to learning more about geology and geophysics. And not only children, adults found the hunt to be challenging as well. "The series of



The DGS Mystery Hunt winners

than 2,000 people participating every year. The DGS mystery hunt had 80 people in 20 teams solving challenges like crossword puzzles, 2D and 3D mazes, and Sudoku as well as physical activities like hopscotch, giant Jenga blocks, and "how do old things work". The 20 teams were engaged in a fierce competition for the chance to reach the final stage and hunt for the hidden coin. "We



puzzles were fun, yet challenging and definitely not solely for children. A lot of adults are also competing for the hidden coin. We're having a great time!" says Sonata Hait.

In overall, the DGS family festival and mystery hunt were huge successes. The DGS family festival and mystery hunt recorded its highest registration this year with over 1220 pre-registered guests, and more than 100% attending on the day. Moreover, the DGS festival snapchat filter was viewed over 8000 times.

The first-place winners of the DGS mystery hunt and the team that found the hidden coin were Michael Jones, Azlan Mohaideen, Shamsul Anuar, and Ferry Firmansyah. The second place winners were Saftar Kuliev, Basma Orri, Meshal Alhazmi, and Rail Kuliev, and at third place were Rahul Jain, Neha Gupta, Sauvik Das, and Sonata Hait.



DGS YP team and organizers after completing a successful event.



Scan the QR code using you mobile



Scan the QR code using you mobile

DGS Ideation Challenge

The first DGS Ideation Challenge, sponsored by Exploration Operations Support Department (EOSD) at Saudi Aramco, took place on April 22-29, 2018 at the EXPEC Auditorium. In which 46 participants from different departments within Exploration Organization and EXPEC ARC formed 14 teams to compete for the top prize and have the chance to implement their ideas in the new core lab facility. The event is composed of four different stages: presentation of challenges, ideation process, presentation of solutions and idea implementation.



EOSD SME explaining the Cuttings Archival, Viewing & Sampling challenge to the participants

Executive director of exploration at Saudi Aramco Misfir Az Zahrani gave the opening remarks on April 22, 2018. This was followed by a presentation by Sa'id Al Hajri, Manager of EOSD, showing the history of the core area and the importance of the core lab before transition to a presentation showcasing the new corelab facility design presented by EOSD SMEs. Finally, the three challenges were presented to the

participants in details. All participants attended a core lab facility tour where they had a chance to visualize these challenges and ask questions.



Core store facility tour facilitated by EOSD SMEs

These challenges are:

1. Cuttings Archival, Viewing & Sampling
2. Core Cage & Core Boxes
3. Core Processing V-table

Challenge and prize competitions are one tool to drive innovation and solve problems whether technical, scientific, or creative. One type of competition is ideation, which allows you to collect ideas from a wide and diverse population to solve a particular business problem. Ideation is the process of generating and developing new ideas to solve a problem or improve a product, process, or service. Ideas could include suggestions, approaches, plans, proposals, designs, or other proposed solutions in written, graphic, or video form. The ideation phase is the first of several stages, where ideas will be implemented in later phases.



Misfir Azzahrani, executive director of exploration at Saudi Aramco

On April 29th 2018, the 14 teams presented their ideas to a panel of 10 SMEs judges. Each judge evaluated each team based on their presented solution. The judging criteria was divided based on: creativity and innovation, quality of presentation, presentation skills, timing, validity and practicality of the idea, safety and audience vote.

The winning team will present their proposal to Exploration management and help incorporate their design in the new core-lab facility. This idea can be developed further after the competition to meet all necessary requirements before deployment.

Exploration management with the ideation challenge winning teams and DGS YP organizers



The ideation Challenge participants



The Ideation Challenge SMEs and judges

The winning Teams of the Ideation Challenge 2018 are:

First Place: Challenge 2 -
Fatimah Alsinan, Salma Saif, Fawwaz Khaldi

Second Place: Challenge 3 -
Talal Mutairi, Hassan Hulaily, Mohammed Altuwaijri

Third Place: Challenge 1 -
Waheed Basrawi, Hani Boukhamzin, Andrew Henderson

The 13th Middle East Geosciences Conference and Exhibition "GEO 2018" was the largest and best attended technical event of its kind in the region. A world-class exhibition and an exceptional technical conference for anyone focused on the future development of the Middle East's hydrocarbon resources. A total of 4,050 world energy leaders, stakeholders and executives from 53 countries converged in Bahrain for GEO 2018, and DGS was an important partner in this success. The DGS booth in GEO was one of the most active booths in the exhibition, with strong participation from young professional and students as well as senior professionals and management.



DGS booth at
GEO 2018



DGS course
given by Dr.
Mesbah Khalil



Meet N' Greet
audience
networking



Keynote
speaker Dr.
Mohammed Al
Qahtani, Saudi
Aramco SR Vice
President



SEG & DGS
Bowl Challenge
students



Technical
vs. Academic,
students panelist
& moderator

In addition, DGS hosted the Challenge Bowl in collaboration with the Society of Exploration Geophysicists (SEG). The Challenge Bowl aims at gaging students understanding across geoscience, where ten teams of two students each from the same university or college in the region went head-to-head in an exciting competition to win the challenge. The Challenge Bowl was an excellent opportunity for geosciences students to display their geophysical and geological knowledge in this fun, rapid fire, push-the-buzzer, who-can-answer-first contest. The winners will represent the Middle East and get an all-expenses-paid trip sponsored by DGS to Anaheim, CA, USA, for the SEG International Exposition and 88th Annual Meeting in October 2018.

DGS also organized a short course titled "Tectonics of the Arabian Plate Petroleum Systems from Basin to Prospect and Field Scales" delivered by Dr. Mesbah Khalil, a prominent petroleum geologist specializing in basin analysis, play concepts generation and structural geology applications with 40 years industry experience. The course introduced the fundamentals of Earth geological processes that continually evolve to develop petroleum systems with special emphasis on the Arabian plate from basin to prospect and field scales to 75 students, fresh graduates and young professionals.

Throughout the conference, three core workshops were organized by DGS and delivered by Dr. Saad Al-Awwad and Dr. Abdullah Al-Dhubaib of Saudi Aramco on "Understanding the Arab-D: A Focus on Processes Controlling Deposition of the Most Prolific Carbonate Reservoir". Each of the 2-hours core workshop covered the sedimentology and biostratigraphy of the Arab-D reservoir, the most prolific reservoir in the world. Fundamentals of core analysis were discussed with a focus on allochthonous and biotic components, sedimentary structures and depositional textures of the reservoir.



DGS core workshop delivered by Dr. Saad Al-Awwad and Dr. Abdullah Al-Dhubaib



Other than the mentioned activities, DGS young professionals were heavily involved in the Young Professionals and students program. Participating in the Meet and Greet session along with moderating the "Technical vs. Academic" panel session and judging the student posters.



Scan the QR code using you mobile



DGS course given by Dr. Mesbah Khalil



Scan the QR code using you mobile



Meet N' Greet with Shaikh Mohammed bin Khalifa Al Khalifa, Minister of Oil in Bahrain





DGS Workshop Series

DGS offered Workshops in conjunction with Saudi Aramco exploration departments and other professional societies to enhance and further develop technical understanding of specific geologic techniques and software. Three reservoir characterization workshops were run in collaboration between Reservoir Characterization Department (RCD) and DGS, which focused on presenting the significant breakthroughs that RCD achieved during execution of its transformation process. A key significant development that was highlighted is the introduction of the 1D, 2D and 3D modeling workflows. These workshops were conducted in an interactive and an engaging manner, allowing the presenters and the audience to exchange ideas and identify areas for future workflow improvements.

DGS also organized in collaboration with the Saudi Arabia Chapter of the Society of Petrophysicists and Well Log Analysts a workshop to review the current methodologies used for geological facies characterization and petrophysical rock type determination for both clastic and carbonate reservoirs. The outcomes of this workshop should help geoscientists and reservoir engineers improve their understanding of static geological modeling and dynamic reservoir simulation.



In collaboration with The American Rock Mechanics Association (ARMA), DGS held a three-days' workshop on April 2018 on "the Role of Geomechanics in Stimulations" in Manama, Bahrain. The workshop did not only focus on the breadth and depth of fracturing technologies but also their values through field applications. Eight operators, fourteen service providers, and ten universities and national laboratories presented 33 technical topics. These included geomechanics training, operator perspectives, technology highlights, and case studies. A dedicated discussion session will explore collaborations among operators, technology developers, and service providers.



Scan the QR code using you mobile



DGS Students Outreach

Part of The Dhahran Geoscience Society (DGS) mission is to have an active role in the community, and as such school visits represent a vital element. Within the DGS, the student liaison section mission is to reach out to the Kingdom of Saudi Arabia schools to raise geosciences and oil and gas exploration awareness.

One of the visits was to the "Gifted" Mawhiba Program students, where DGS student section liaison officer presented an overview covering the society roles and activities to familiarize students with the DGS.



DGS this year has reached out to three top cities across the kingdom for the first time by visiting four schools in Al Hassa, Al Riyadh, and Jeddah

In addition, three schools have been visited by DGS volunteers. Two of those schools are female high schools in Al Hassa (Al Qarah High School and Al Rumaylah High School) and one male high school in Al Riyadh (Al Siddeq High School). DGS volunteers took the students through a fun oil and gas exploration journey to understand the hydrocarbon generation and exploration.



The DGS Distinguished Lecturer Program (DLP) invites DGS members who are leading experts in their fields to share their knowledge and expertise with university students and faculty members through visits and lectures. This term, Dr. Mohammad Al Khalifa has visited three top universities in the kingdom to conduct the DLP program. The visits took a place in Riyadh (King Saud University), Jeddah (King Abdulaziz University), and Dhahran (King Fahad University for Petroleum and Minerals). During these visits, Dr. Mohammad gave a lecture about "Subsurface Reservoirs Imaging through Characterization and 3D Modeling". The students showed a lot of enthusiasm and interaction with the lecture, which encourage the DGS to reach out even more to the university students in the future.

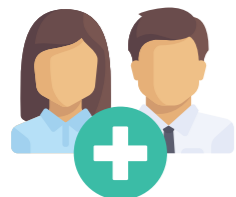


ANNIVERSARY

DGS through the years

In the year 1987, a non-profit organization was established with the name of the Dhahran Geological Society. 30 years later, the Dhahran Geoscience Society celebrated its 30th anniversary, and reaffirmed its promise to the Geoscience community by delivering variety of activities aligned with the founders' vision and mission. Here, we take you through a journey in time and show you glimpses of our rich history.

2017 - 2018 in Numbers



New Members
+500



Technical Meetings
15



YP Events
14



Award
1



Students Outreach
+5



Field Trips
7



Workshops
and Courses
6



Publications
+3



Interactions
+7000

Membership Update Become a member



To register scan this QR code

For more enquiries about membership, please
contact the membership liaison

Location	EXPEC ARC, Saudi Aramco Core Area, Dhahran
Name	Emad A. Al-Hemyari
Phone	+966 13 873-1316
Office	B-137, Floor 2, R-217
Email	membership@dgsonline.org

Get Involved

Become a Volunteer

Contact: volunteer@dgsonline.org



All Events 2017 - 2018



Date	Event
August 8, 2017	2nd DGS/RCD Workshop
August 16, 2017	Students Outreach visit to Mawhiba Students
September 12, 2017	DGS Technical Luncheon: The Shale Story
September 18, 2017	DGS Dinner Meeting hosting Jean-Jacques Bieau, president of the European Association of Geosciences and Engineers
September 21, 2017	The Jordan Field Trip
October 12, 2017	DGS Dinner Meeting hosting Craig Smith, CEO of Dhahran Valley Technology Development Company
October 15, 2017	Al Wahbah Crater Field Trip
October 30, 2017	DGS Young Professionals Section: Take the Lead, Stay Energized
October 31, 2017	DGS Technical Luncheon: Inverting Every Type of Arrival for Near-Surface Imaging
November 20, 2017	3rd DGS/RCD Workshop
November 28, 2017	DGS-SPWLA SAC Workshop: Linking Geological Facies and Petrophysical Rock types
December 6, 2017	Entrepreneurship by Experts Series: The Journey of an Entrepreneur
December 11, 2017	DGS Technical Luncheon: Full Waveform Seismic Modeling and Inversion in Complex Media
December 12, 2017	EXPEC ARC YRP & DGS YPS: Upstream Hackathon
January 3, 2018	DGS Winter Campaign
January 27, 2018	DGS Land Seismic Acquisition Field Trip
January 28, 2018	DGS Technical Luncheon: Modeling the Evolution of Permeability in Carbonates
February 1, 2018	Al Wahbah Crater and Taif Field Trip
February 4, 2018	DGS at the SGS Conference and Exhibition
February 8, 2018	DGS Technical Luncheon: Crustal-scale Seismology at the Red Sea Margin
February 9, 2018	DGS Mystery Hunt and Family Festival
February 11, 2018	DGS Distinguished Lecturer Program at KSU
February 12, 2018	DGS Distinguished Lecturer Program at KAU
February 21, 2018	DGS Technical Luncheon: Rock-Fluid Interactions and Diagnostic Processes in Carbonates with Application to 4D Seismic

Date	Event
February 24, 2018	Al-Hasa Safari Trip: An Adventure to the Yellow Lake
February 27, 2018	DGS Wellness Series: Running for Fitness with Olympic Runner Abdullah Al Joud
February 28, 2018	DGS Dinner Meeting hosting Nancy House, president of the Society of Exploration Geophysicists
February 28, 2018	DGS Student Outreach and Distinguished Lecturer Program at KFUPM
March 4, 2018	SEG/DGS Workshop on New Advances in Quant. Seismic Res. Characterization
March 5, 2018	DGS/AAPG Abdullah Al-Naim Award: presented during the AAPG regional award ceremony
March 5, 2018	DGS at GEO2018
March 13, 2018	DGS Technical Luncheon: The Role of Geoscience in Sustainable Energy Solutions
March 20, 2018	Dinner Meeting hosting Khalid Almudaifer, Ma'aden President and CEO
April 2, 2018	Technical Luncheon hosting Professor Mark Zoback, professor of Geophysics at Stanford University
April 3, 2018	DGS/ARMA Workshop: The Role of Geomechanics in Stimulation
April 7, 2018	Al Ahasa Trip
April 10, 2018	Technical Luncheon hosting Professor Eric Verschuur, Professor at Delft University of Technology
April 12, 2018	DGS Entrepreneurship by Experts Series hosting Khalid W. AlKhudair
April 19, 2018	DRRC/DGS: 3K Running Race
April 19, 2018	DGS YP hosting Andrew Pepper: Understanding the conventional and unconventional petroleum systems of the prolific Permian Basin
April 27, 2018	Hail Trip
April 29, 2018	DGS Ideation Challenge
May 1, 2018	Technical Luncheon Finale hosting Tariq Alkhalifah, Professor at KAUST
May 7, 2018	Female Football Clinic
May 7, 2018	DGS/EAGE Course: Reservoir Modelling Workflows under Uncertainty
May 9, 2018	DGS Dinner Meeting hosting Adam Sieminski, President of the King Abdullah Petroleum Studies & Research Center (KAPSARC)

Platinum Sponsors

أرامكو السعودية
saudi aramco



Gold Sponsors

سعودي جيوفيزيكل
Saudi Geophysical



Silver Sponsor



DGS Affiliations



Follow us on social media



To view and download a soft copy, visit DGS news website:
<http://dgsonline.org/news>

For correspondence with the publications committee, please write to:
publications@dgsonline.org