



September 2021

2021 Steering
Committee

Editors

Javier Miranda
Mathilde Luyckx
Kanay Jerath
Ishank Gupta
Mostafa Amin
Luis Enrique Navarro

Senior Editor
Siddharth Misra

SPWLAYP@SPWLA.ORG

In this edition:

*An Interview with
Shuvajit Bhattacharya:
Past SPWLA
Scholarship Recipient*

*An Interview with
Kurt Livo: Past SPWLA
Scholarship Recipient*

An Interview with Shuvajit Bhattacharya: Past SPWLA Scholarship Recipient



Shuvajit Bhattacharya is a researcher at the Bureau of Economic Geology (BEG) at the University of Texas at Austin. Prior to joining BEG, he was a regular faculty of applied geophysics and petrophysics at the University of Alaska Anchorage (2017–2020). He has 10 years of academic and industry experience in petrophysics and quantitative seismic interpretation. Shuvajit finished his PhD at West Virginia University and his MSc degree at the Indian Institute of Technology Mumbai.

When did you receive your SPWLA scholarship, how did you learn about it, how was the process applying for it, and how did that help you or influence your career?

I received the SPWLA Foundation scholarship twice, in 2013 and 2015. I also received a scholarship from the SPWLA Unconventional Resources Special Interest Group in 2014. I came to know about these opportunities from my advisor, Dr. Tim Carr, and peer, Dr. Matt Boyce. The process of application was very straightforward. I filled out the online application and emailed it. Yes, the scholarships were helpful to my research. I used them to do lab-based studies, such as XRF that was not possible without additional funds. The integration of XRF to my petrophysical models revealed a lot about fundamental processes in mudstone systems. I also used it for conference travels. Applying for these scholarships and grants also helped me develop a bit of grantsmanship, which I use a lot these days.

By the way, one of my graduate students received a scholarship from the SPWLA Foundation this year, and he is using it for his study and travel. So, it continues. Thanks to the committee for your support.

What do you think was the main reason SPWLA approved your scholarship?

Well, I think it was both technical and the career goal that I expressed in my application. One of the technical reasons may be related to my idea on quantitative classification and 3D modeling of mudstone facies in the upper and lower Bakken shale members at the basin scale using machine learning when many others were focusing on the middle Bakken reservoir. It was relatively new at that time.

Did the SPWLA scholarship have some influence on the path you took during your professional life and being a member?

Absolutely, I could do more research using that money, publish papers, and present them. I think that was instrumental in getting a job after my PhD. I'm also a member of SPWLA.

An Interview with Shuvajit Bhattacharya: Past SPWLA Scholarship Recipient

What do you remember from those times as a student and SPWLA scholarship recipient?

I was very excited about learning more about petrophysics since I was pursuing my MSc degree, especially the signal processing part of it and gleaned rock and fluid properties from signals. In the universities, I took three semester-long courses in log analysis and petrophysics from three professors with very different backgrounds, including geology, geophysics, and petroleum engineering. Each one of them taught it from a different perspective, including the tools, physics of measurement, log processing, log motifs, lab measurements, and quantitative analysis. I learned more about logging tools when I spent time on onshore and offshore rigs during coring and logging jobs. Had I not worked there, I would not have understood and appreciated this discipline much.

Was there an SPWLA professional or student chapter in your school? Were you a regular at SPWLA events, if any?

No. We did have other student chapters, though, such as AAPG and SEG. I was a vice president of the SEG student chapter. There were other professional societies, which were very active, such as the Pittsburgh Association of Petroleum Geologists and Geophysical Society of Pittsburgh. They used to bring petrophysicists and geophysicists frequently to give talks. I used to attend those meetings religiously. I have heard there is a new SPWLA Appalachia Chapter in Pittsburgh now.

What was your biggest challenge during graduate school, and how did you overcome it?

Well, I think networking with the operators in the Williston Basin was a big challenge when I needed the Bakken core data during my PhD at West Virginia University. Therefore, I started attending and presenting my work at the AAPG and SPWLA annual meetings, which helped me grow my professional connections. I could eventually receive data and valuable feedback about my work from at least four oil companies. I also received internship offers due to my networking at the conferences.

Is there a mistake you made in school that you want to share with others to avoid?

Because I did work in the industry for a short while before starting my PhD, I had gained a bit of teamwork experience that was very helpful in graduate school. Collaboration with people matters. These days, I collaborate with people, primarily based on two things: 1. They complement my skills, and 2. I have respect and appreciation for them as a person and for their work. This goes both ways. It's so critical to building a meaningful collaboration either in academia or industry. Academia is a little different than the industry in this regard. As a researcher in academia, I can choose whom I want to work with to produce value-added research and keep my research life happy. So, find the right people for collaboration at the beginning.

Who was your role model at school, and when you started your career? You can name more than one.

I have had several role models working in academia and industry. Some of them are geologists, geophysicists, and petroleum engineers; many of them are stalwarts in their own field. Dr. Shahab Mohaghegh, Dr. Kurt Marfurt, Satinder Chopra, Dr. Tim Carr (my advisor), and Fred Jenson, to name a few. I have also read numerous articles and listened to several talks by many other experts, whom I deeply respect. I have learned so much from them.

How did you start your career in petrophysics and formation evaluation?

In 2009, I worked on a project with a professor on designing an instrument to measure resistivity and water saturation of core samples. That's how I started my work in petrophysics.

How do you convey the importance of petrophysics/formation evaluation to your colleagues from other disciplines when collaborating on a project?

Petrophysics is fundamental, just like facies in geology. I explain to my colleagues the need for a deep understanding and quantification of critical rock and fluid properties. We do not have ubiquitous core samples. Moreover, subsurface data come with uncertainties. By integrating and fusing multiscale data, we can develop a better picture of the subsurface with reduced uncertainties.

An Interview with Shuvajit Bhattacharya: Past SPWLA Scholarship Recipient

Where do you see yourself in five years?

Learning new things and doing quality research in diverse areas, including oil and gas, geothermal resources, carbon sequestration, hydrogen storage, etc. I am already working on many of these aspects now. I am more interested in the “science” or “processes” of the subsurface than a specific software-based solution or a technique.

What do you recommend to current students in petroleum engineering and geosciences, especially with work/research in the field of petrophysics/formation evaluation?

Explore and find your own path and do what you like, making sure that it positively impacts the community. Try to gather more knowledge about the discipline itself. Look for opportunities to work on small projects. Get involved in professional societies, such as SPWLA, AAPG, SEG, and SPE. Network with people. I would also recommend getting a job (regardless of the industry) either after your BS or MS degree before embarking on the next academic degree, MS or PhD, whichever it might be. It's beneficial to you and the program.

How do you see the future of SPWLA, and what do you think we need to do to keep our society current?

I think it's brighter. As I said, petrophysics is based on a solid foundation of science and engineering. As long as we care about the fundamentals and their diverse applications, not just about a specific resource or industry, and convey that message effectively, it should be fine.

Anything else you want to add?

Chase your dream. Put your head down and do the work. There is so much distraction in the world these days.