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President's page: emerging professionals, emerging technologies Lee, Madeline Dana

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As we welcome in a new year, we reflect on the past year's successes and hardships. The exploration market is dynamic, and, as geoscientists, we need to adapt. Periods of economic downturn can be especially overwhelming to recent graduates looking for their first jobs, or those who have never navigated an economic downturn and therefore are uncertain about job stability. As a professional society, we need to clearly identify how to effectively help these members — through the good times and the bad. The discussion of inspiring and supporting tomorrow's geoscientists has long been a focus of SEG. As stated in the "President's Page" in the May 2012 issue of *TLE*, it was the goal of the Board of Directors to "promote geophysics as a career to sustain constant growth of the profession and SEG." This is still critical more than four years later and will always be a goal of the Board of Directors. If a society is unable to retain new members, membership inevitably will decline.

The future generation of members includes students and emerging professionals. Student programs are typically well established, but emerging professionals are a unique demographic often overlooked because they are difficult to define. What is an *emerging professional*? Within SEG, an emerging professional is defined as a graduate with less than eight years of industry experience; however, capturing statistics is problematic since there is no formal membership category like there is for a student. Therefore, supporting the needs of these members is very challenging. In 2014, SEG took the first step in solving this issue with the inception of the Emerging Professionals International Committee (EPIC), the goal of which is to keep emerging professionals engaged within the Society. At the 2015 Annual Meeting in New Orleans, EPIC had its first social networking event that brought together professionals, emerging professionals, and graduate students. With each passing year, EPIC continues to define an identity and seek support from SEG in building its foundation. In the past year, EPIC social events have been held at a local scale, from Houston to Lisbon, and with many more scheduled for 2017.

Current studies indicate that many emerging professionals rely heavily on social media, are technologically advanced, and are involved in positive social impact missions. Professionally, this translates to an aspiration of working for an organization that operates ethically with strong corporate social responsibility. Socially responsible research has resulted in traditional geophysical methods being used for unconventional applications. SEG fostered this idea through Geoscientists *Without Borders* (GWB), founded in 2008. Since then, more than 350 students have been involved in 29 GWB projects, ranging from landslide preparedness to water management, in 23 countries. These projects promote local sustainability and train future geoscientists with the required soft and technical expertise for employment.

Social responsibility and advancing technology also applies to this month's *TLE* special section on remote sensing. We are well accustomed to traditional remote sensing applications in hydrocarbon and mineral exploration, but this capability also includes nontraditional applications such as forensic investigations and biomass studies. A great example of advancing technology, coupled with humanitarian interest, was the use of unmanned aerial systems in search-and-rescue operations during the 2014 Nepal earthquake.

As SEG members, we operate in a dynamic environment that requires us to wear different hats both daily and throughout our careers. Therefore soft skills, software and hardware experience, and fundamental theory may contribute to different geoscientific fields — not strictly industry. It is important both for SEG to promote geoscience opportunities outside of industry and for emerging professionals to realize the breadth of their learned skills. From personal experience, I never anticipated, upon completion of my graduate work in potential field theory, that my profession would call on my signal-processing capabilities to be applied on airborne thermal data in search-and-rescue efforts, or on hyperspectral data in mass grave detection. The many skills we learn as geoscientists are transferrable. SEG recently set up a Competency Management System, which provides an easy way for members to assess their current capabilities against specific competency models for key geoscience careers. Through online testing, members may identify competency gaps based on assessment results and obtain a recommended learning plan.

As SEG leaders, volunteers, and staff work toward a new strategic and sustainable plan in 2017, it is more important than ever for emerging professionals to get involved in SEG. The input by emerging professionals is also critical in tackling tough topics, including a membership tier structure and voting privileges. The first step in getting involved is to build an SEG volunteer profile; this will become an important database as we, the SEG Board of Directors, once again include future geoscientists as a key focus. As an emerging professional myself, I look forward to playing an active role in SEG's new strategies and promoting the needs of prospective geoscientists.

For more information on how to volunteer, visit <http://seg.org/About-SEG/Volunteer>, and for more information on EPIC, visit <http://seg.org/Education/Student-Early-Career/Emerging-Professionals>. ■■

— MADELINE DANA LEE
Second Vice President

Editor's note: Geoscientists *Without Borders* is a registered trademark of the SEG Foundation.