



How do you measure the value of a mentor? Translating the impact that teachers, friends, and colleagues can have on one's career path into some quantifiable unit is a nearly impossible task. Yet when you hear students and mentees talk about their mentors, you begin to realize the tremendous impact that just one person can have on another.

At the TMS 2018 Annual Meeting & Exhibition (TMS2018) last March, the TMS Foundation kicked off its 25th Anniversary Celebration by honoring the important role that mentors play in shaping the careers of TMS members and, by extension, the minerals, metals, and materials community. Meeting participants were asked to write the name of their mentor on a leaf that was added to

the TMS "family tree."

Throughout the week at TMS2018, 80 individuals added 140 mentor leaves to the tree. To see who is participated and who was named a mentor, visit www.TMSFoundation.org/MentorTree and use the dropdown list to search for names and view both mentors and mentees on the interactive mentor tree. If you would like to add the name of your mentor, fill out the easy-to-use mentor submission form. You must be a TMS member to add to the tree, but mentors do not need to be members.

See the importance of mentoring for yourself. Read on for the stories of four TMS members—how they met their mentors, sage advice they've received, and how they are now looking to pay it forward.

Honor Your Mentor with a Gift to the TMS Foundation



The TMS Foundation chose the image of a tree as the symbol of its 25th anniversary celebration to represent its impact on growing the materials community through mentorship and support to students and young professionals. Remember your mentor by making a gift in their name to the TMS Foundation

during the 2018 year-end appeal.

Because the TMS Foundation nurtures future leaders of science and engineering, a gift in honor or memory of an influential mentor or colleague ensures that their work will be continued by future generations. Identify your gift as a tribute on the online contribution form at www.TMSFoundation.org/Contribute. In addition to recognition on the Annual Giving Honor Roll and promotional materials, a special tribute card will also be sent to your designated recipient. For questions or to discuss your donation personally, contact TMS Foundation staff at 1-724-776-9000 or TMSFoundation@tms.org.

Name: Kester Clarke, *Forging Industry Education and Research Foundation Professor, Assistant Professor, Colorado School of Mines*

Mentor: David Matlock, Chester Van Tyne

Kester's Mentoring Story:

"I learned a lot from David Matlock, but two things stand out to me. The first is that I was always hesitant to speak in public and didn't have much experience, but the Advanced Steel Processing and Products Research Center (ASPPRC) at the Colorado School of Mines (Mines) gave me opportunity to present my work to the sponsors of the center twice a year in a formal setting, and to present at technical conferences. These experiences really improved my ability to give a technical talk and prepare appropriate content for a given audience. Second, I found that having a network of colleagues who know your technical and interpersonal skills is a great benefit moving forward in a career.

The best thing Chester Van Tyne did for me as a Ph.D. advisor and mentor was to let me try things on my own, and to expose me to a broader range of networking and professional society activities. Chet gave me the opportunity to attend, speak, and publish manuscripts at the Forging Industry Technical Conference and my first Materials Science & Technology Conference in 2007. Since I've completed my Ph.D., I've been lucky that Los Alamos National Laboratory (LANL), and now Mines, support conference attendance. I have only missed a couple

of MS&T and TMS annual meetings since my Ph.D., and have become much more active within the Society, which has been a great way to broaden my network.

My mentors equipped me with the tools I needed to succeed. I like to think of the three legs of a stool that support your career as 1) technical competence, 2) the ability to clearly and concisely write technical documents, and 3) the ability to give high-quality technical presentations to a range of audiences. Being active in professional societies is a great way to practice each of those!

Mentoring is the key to engaging students and young professionals in minerals, metals, and materials careers. I've had the opportunity to supervise students and postdocs at both LANL and Mines, and one of the main things I try to do is understand the personal and career goals of each individual (or help develop them) and then make sure we work toward building a set of skills and experiences that enable them to realize these goals. Professional societies such as TMS play an important role in creating interest in minerals, metals, and materials and provide young professionals the opportunity to meet colleagues and mentors who support their career development, along with developing technical, writing, and speaking skills."



Kester Clarke

Name: Ellen Cerreta, *Deputy Division Leader, Los Alamos National Laboratory*

Mentors: George T. "Rusty" Gray, Subhash Mahajan, Tresa Pollock

Ellen's Mentoring Story:

"As a graduate student and then as a postdoc, I was formally mentored by three people. I met Tresa Pollock before I even went to graduate school during a summer internship. She encouraged me to apply to Carnegie Mellon University and ultimately became one of my Ph.D. mentors. My other Ph.D. mentor, Subhash Mahajan, I did not meet until I started school and took a class from him. My postdoc mentor, Rusty Gray, I met at a TMS annual meeting when I was getting close to graduating. I was looking for a job and he invited me to apply for a postdoc position at Los Alamos National Laboratory.

Long after graduate school and my postdoctoral appointment were finished, all three of my mentors remained resources for me. Their technical mentorship has

been invaluable. But they have also talked over job opportunities or next steps in my career, and given me advice on how to handle different leadership roles. Because all three are deeply involved with TMS, I have always been encouraged to be an active volunteer.

I think what has been most valuable to me is being so close to three different styles of leadership and to have some insight into at least a small set of the choices that they have made. As such, I call upon these examples when I question my own next steps. I try to pass on that there isn't one path to success to others who are looking to a future career in materials. There are many choices to make in a career, and having someone who you trust to talk over these decisions can be extremely valuable."



Ellen Cerreta

Name: Christina Meskers, *Senior Manager Open Innovation, Umicore (Belgium)*

Mentor: Diran Apelian, Ray Peterson, TMS Young Leaders Program

Christina's Mentoring Story:

"I have a number of mentors and see great value in having more than one, as each brings his or her own perspectives and experiences. When I first met my mentors, there was no indication that they would become my mentors; that just kind of happened and became clear only later. Others I met at TMS, in particular at the Board of Directors meeting that I was able to observe as a part of the Young Leaders Professional Development Awards program, and the interactions with different TMS leadership during that annual meeting.

My mentors have helped me to find my way, in the sense of understanding what I like to do, what I am good at, and what I can do better, including finding a balance between work and life and bringing me into contact with others that could help me. My TMS mentors have indeed helped me to become more active within TMS by showing me the possibilities, encouraging me to try new things, and sometimes giving a gentle push by assigning me a role or proposing me for a committee.

I try to apply these experiences into interactions with the people I lead or work together with, not only with people I mentor or coach. I'm still getting used to this different role. First, I was a mentee; now, I am both mentee and mentor. It's part of giving back to the society, beyond TMS, from which I have benefitted by providing others with the same opportunities that I had.



Christina Meskers

Mentoring is very important to get the outside perspective on your own thinking, actions, and views. It is rewarding for both mentor and mentee as you learn from each other—it is not one-directional. I have also developed a great peer-to-peer network with sparring partners. Both mentors and peers have become good friends of mine over the years. It is great to have a network of 'professional' friends and feel you're part of a community. As an almost 15-year attendee of the TMS annual meeting, I look forward to seeing and reconnecting with my (continuously expanding) TMS family."

Name: Garry W. Warren, *Professor Emeritus, University of Alabama*

Mentor: J. Keith Brimacombe, Joe Defilippi, Jan D. Miller, Milton E. Wadsworth

Garry's Mentoring Story:

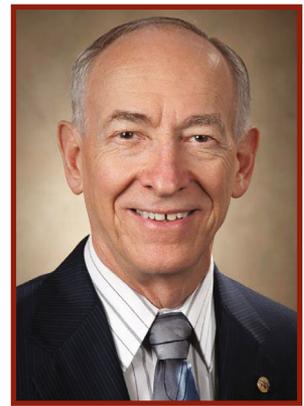
"Milton Wadsworth was my Ph.D. supervisor at the University of Utah. Milt set an example for me by his dedication to the profession serving as a TMS symposium organizer and chair, 1983 TMS President, and 1991 American Institute of Mining, Metallurgical, and Petroleum Engineers (AIME) President. His support was a real boon to me as I began my career. He encouraged his students to get involved and make contributions to the Society. Using him as my example, I have attempted to do the same. He taught me that helping people to succeed helps everyone.

I also have to credit Joe Defilippi and Keith Brimacombe for helping me believe that I could serve on the TMS Board of Directors; prior to that I didn't think I was 'cut out for it.' Keith was TMS President when our division structure was first established. He was heavily involved in encouraging young engineers to lead the divisions, and encouraged me

and many others to become active in the Technical Division Councils. His leadership was enthusiastic and stimulated everyone around him.

Joe Defilippi was the first Financial Planning Committee Director that I recall as a young man. He impressed me as an engineer that understood finances—something which really intimidated me at the time. He gave me hope that I might be able to grasp financials beyond any course that I took as a student.

Without these great mentors I truly doubt that my career would have taken the path it did. I'll be forever grateful for their support and hope to be able to continue to emulate them by mentoring others. Those that are interested are the best volunteers."



Garry W. Warren

