



**MINUTES OF THE MEETING
UNIVERSITY-INDUSTRY RELATIONS ROUNDTABLE
16 MAY 2022
PITTSBURGH, PA, USA**

Attendees:

Kelly Dallas (Chair), Cleveland-Cliffs Inc.	Karin Lund, G-Power Global
Bryan Allison, Penn State Behrend	Paul Lynch, Penn State Behrend
Ron Ashburn, AIST	Ted Lyon, Hatch
Steve Asseff, Cleveland-Cliffs Inc.	Mike Madar, Cleveland-Cliffs Cleveland Works
Karim Badr, RHI Magnesita	Chris McKelvey, AIST
Amy Beard, Quaker Houghton	B.N. Mukhopadhyay, AIST India
Staci Beiswanger, Steel Dynamics Inc.	Dave Nicol, Xtek Inc
James Bero, Danieli Corp.	Mark Olson, Pacific Stee Group
Lothar Birkhaeuser, Vallourec	Ron O'Malley, Missouri S&T
Kevin Bort, TMEIC Americas	Thomas Piccone, University of Pittsburgh
Marc Brooks, Nucor Corp.	Glenn Pushis, Steel Dynamics Inc.
Shannon Clark, ArcelorMittal Dofasco	Brandy Reese, MIDREX
Mark Didiano, AIST	Steven Roloff, The Systems Group
Jennifer Durbin, Commercial Metals Co.	Barry Schneider, Steel Dynamics Inc.
Joe Dzierzawski	Keith Shillam, Danieli Corp.
Autumn Edmiston, G-Power Global	Richard Smith, Carpenter Technologies
Terry Fedor, Cleveland-Cliffs Inc.	Rebekah Smith, Michigan Tech
Traci Forrester, Cleveland-Cliffs, Inc.	Kendra Snipe, Nucor Corp.
Susan Funk, University of Alabama	Charity Steele, RHI Magnesita
Chuck Greene, AM/NS Calvert	Kyle Toth, Purdue University Northwest CIVS
Steve Henderson, Commercial Metal Co.	Stacy Varmecky, AIST
Jessica Hilliard, SMS group Inc.	Lauren Veltre, AIST
Colby Johnson, The Systems Group	Christopher Welfel, CMC Steel Texas
Roger Kalinowski, The Sidock Group	Lori Wharrey, AIST
Kolin Keller, Commercial Metals Co.	Mingzhi Xu, Georgia Southern University
Nilesh Kumar, University of Alabama	Courtney Young, AIST
Mengying Liu, Washington and Lee University	Chenn Zhou, Purdue University Northwest CIVS
Monserrat Lopez, Instituto Tecnologico de Morelia	

1.0 CALL TO ORDER AND INTRODUCTIONS

Ms. Dallas welcomed all in attendance and noted the importance of this meeting, and communication between universities and the steel companies. Introductions were made around the room.

2.0 ANTI-TRUST GUIDELINE REVIEW

Ms. Dallas reminded all to adhere to the anti-trust guidelines provided with the agenda.

3.0 COMMITTEE PURPOSE AND OBJECTIVE

Ms. Dallas read the purpose and objectives of this roundtable meeting. The AIST Foundation University-Industry Relations Roundtable exists to foster communication between our university network and the

steel industry. The committee objectives are to increase the number of professors teaching a steel-related curriculum, and to increase the number of students interested in a career in the steel industry.

4.0 ROUNDTABLE OPEN DISCUSSION AND REPORTS

Ms. Dallas asked each table to discuss one or more of the topics provided, allowing for 30 minutes. Each table selected one person to take notes and report-out their discussions.

- How can companies increase the number of Young Professionals and Professionals in AIST?
 - Hire a professional marketing team to better communicate the good things of the steel industry.
 - The young generation likes to read online about what the new world is about. Online articles seating the steel industry stories will be effective. The book "Women in Steel" is a good example of marketing the steel industry. Online format marketing will help the young generation to change impression of the steel industry.
 - Advertising focus on social media.
 - Promote technology as selling point.
 - Encourage people to attend regional meetings and technology conferences.
 - Push benefits a AIST membership and to take leadership roles
 - Engage with teachers and professors.
 - Market industry as high-tech.
 - Encourage facility teams to open eyes – create excitement.
 - More funding for the steel-to-students program.
 - No funding for steel research – increase grants.
 - Establish chaired professorships with significant funding.
 - Leadership buy-in at the company level of AIST value. Show this value relationship between the company and AIST.
 - Career mapping.
 - Make it possible for company HR to offer internships earlier.
 - Market scholarships to students, through Handshake, to key faculty members or advisers, through Steel Professors, and company HR.
 - Explain the total value of the internship and scholarship, including wages, housing and \$6,000.
 - Improve applicant notifications for students knowing status of completion through text and email reminders.
 - Improve the perception of the industry through advisors, teachers, industry folks, talk positive about opportunities and careers.
 - Add scholarship success stories to website and promote to students.
 - Post a plant tour video to the website.
- How to engage students in the green and digital steel revolution.
 - Link industry 4.0 / green steel / sustainability / technology to steel industry and its future.
- How to engage Vocational and Technical Schools in the steel industry.
 - Hold road show events at technical schools within steel markets.
 - Curriculum Development Grants for technical schools.
 - Invite local technical schools to AIST events, such as AIStech.
 - Target schools in proximity to steel mills.
 - Reach out to provide plant tours and mini-projects (read drawings, then see it in real-life).
 - Competition within vocational/technical schools.
 - Have universities partner with local vocational schools. Set-up a program similar to the Materials Advantage program for technical/vocational students.
 - Let students know how they will use their skills in the mills.
 - Teach the technical schools about the industry and understand their business model, how to promote the industry to their students.
 - Establish scholarships and internships for vocation and technical school students.
 - Improve the perception of the industry.
 - Market the industry online to students. Have journalists write articles.
 - Develop a program specific to vocational and technical schools.
 - Build apprenticeship programs partnering with technical/vocational schools to entice students to attend technical/vocational schools.

- Build relationships with local vocational schools. Have actual plant people visit schools and show job opportunities.
- Job shadowing
- Also go to high schools and engage them to attend technical schools and let them know about the steel industry.
- Recruit people into plant and pay them to attend technical/vocational schools – “pre-apprenticeship” program.
- Get current steel mill equipment into vocational schools.
- Need mentors and champions, not just throw money, take an interest in a person, impact someone’s life. Find and create educational ambassadors.
- Help technical/vocational schools create courses geared toward the industry.
- Establish school/work programs.
- Identify trade school network.
- Signing ceremony for students accepted into vo-tech schools.
- Educate high school counselors that trade schools are a good path.
- University visits to trade schools.
- Poll steel companies to identify trade schools and contacts.

Other comments:

- The AIST Foundation has been doing a fantastic job supporting students.

5.0 WHERE SHOULD I SERVE MY SUMMER INTERNSHIP?

Ms. Wharrey reviewed the AIST Foundation mission statement is to “ensure the iron and steel industry of tomorrow will have a sufficient number of qualified professionals. She reported the Foundation will award over \$850,000 in scholarships, grants, and other student programs in 2022. The purpose of all programs, many of which stemmed from this meeting, provide the opportunity for students and professors to learn about the industry and get involved. Funding provided by the Foundation provides them access to steel companies and their people.

Ms. Wharrey noted the tremendous support from the industry with a record of nine large multi-year pledges to the Foundation, long with many smaller pledges and donations. Companies with multi-year pledges of \$50,000 per year are Cleveland-Cliffs, Nucor, Steel Dynamics, and U. S. Steel Corp. Multi-year pledges of \$25,000 per year are ArcelorMittal, ATI, Commercial Metals Company, Gerdau, Hatch, and SSAB Americas. Ms Wharrey also thanked the Foundation Trustees who make the programs work for the industry.

Ms. Wharrey stated the Foundation awards over \$250,000 in Steel Intern Scholarships annually, all to encourage engineering students to consider the industry as a great career option. These are one-year scholarships preceded by a paid summer internship at a North American steel or steel-related company. Applications are evaluated and selected by a committee of industry executives and HR personnel, many in attendance, chaired by Mike Madar of Cleveland-Cliffs Cleveland. Up to 39 scholarships of \$6,000 each, plus one premier scholarship of \$12,000, which goes to the highest scoring applicant, can be awarded. Two current scholars were in attendance and were introduced, Susan Funk from the University of Alabama. Susan has just started her summer internship at CMC South Carolina. Also, Rebekah Smith from Michigan Tech who is interning at Steel Dynamics.

Past scholars were surveyed a few years ago which resulted in our “Steel Industry Internship Guidelines,” which are available on our website. This year, 32 scholars were selected and all but one has been hired. We did notice that multiple offers are back this year, which resulted in a [survey](#) to the 32 recipients to determine what factors play a role in their decision-making. We received a 72% response rate. We first asked them how many internship offers they received, with a little over 30% having received 1 offer, slightly under 40% receiving 2 offers, about 20% receiving 3 offers, and 13% receiving 4 offers. Next, we asked them to rank 6 factors that may have influenced their decision on which offer to accept.

1. At 17% was the public image/reputation.
2. At about 16% each was lodging assistance and/or relocation, wages being offered, and that they want to work for that company after graduation.

3. At 11% was proximity to their home.
4. At 12% was that a representative from that company recruited them.

Ms. Wharrey thanked all the companies for hiring the scholars and supporting this program.

6.0 YOUNG PROFESSIONAL PROGRAM UPDATE

AIST's Lauren Veltre shared an update on our Young Professional membership statistics. Since the inception of the Young Professionals Program in 2014, we've experienced several consecutive years of tremendous growth — hitting the highest ever membership record at the close of 2019 with more than 1,800 young professional members — double what we had when we began the program back in 2014. However, 2020 hit us quite hard, and AIST young professional membership, in particular, really suffered — we finished that year down 31% in Young Professional (YP) membership, followed by another year of loss, finishing 2021 down 15% in YP membership. However, we're very happy to report that YP membership is officially trending upwards year on year: at the close of April last year, we had 856 young professional members, and we closed last month, April 2022, with 899 young professional members which is up 5%. We've put a lot of time and effort into building the Young Professionals programming the last few years, so it was quite disheartening to see such a drop; however, it's finally nice to see some of the hard work pay off and young professionals beginning to return to AIST.

After providing an update on Young Professional membership, Ms. Veltre reviewed some of the new resources and programs that AIST supports for the associations' young professionals.

The first new resource to highlight is the AIST Young Professionals' Best Practices Guide. We'll rewind for a moment back to AISTech 2021 in Nashville. For anyone that doesn't know, AIST also hosts a Young Professionals' Roundtable at AISTech every year, much like the UIRR. The Young Professionals' Roundtable is held on Sunday (usually), the day before the conference kicks off. The theme for last year's AISTech Young Professional's roundtable was "Transition and Growth, Navigating Your Way with AIST — discussing the support you need to triumph through change and set your career up for success." Last year's attendees were asked to reflect on a specific point within the early stages of their career, brainstorm resources that would have better supported them through that time and capture tactics they used to progress during that period. From last year's roundtable breakout discussion came unique insights and important lessons learned that AIST summarized into a Best Practices Guide.

The hope was that the summary of these findings and culmination of the Best Practices Guide would be useful for future iron and steel industry newcomers to anticipate speedbumps early on (even before they see them coming) and shed light on how they might be able to be better employees, colleagues and team members — this, in turn, would hopefully kick start and lead to a long and successful career. This Best Practices Guide is available on [AIST's website](#). So far, it's proven to be a valuable resource for our YPs, and would perhaps be something you'd like to share to pass along to your students or even new hires entering the industry.

Next, Ms. Veltre discussed how AIST is providing more opportunities for Young Professionals to get engaged in AIST and hold leadership roles. In January 2020, AIST appointed a designated representative in each Member Chapter and Technology Committee focused on getting more Young Professionals involved within that group — this position is called a Young Professional Chair or YP Chair.

It wasn't mandatory for all committees and chapters to adopt; however, many of them did and we have about 30 Young Professional Chairs now. The Young Professional Chair is responsible for outreach to try and increase YP engagement at the committee and chapter levels. Sometimes, we find that YPs join these groups, but it's really in 'name' only (they don't really attend meetings or get involved), so we ask these YP Chairs to try and make personal connections, open the lines of communication, and ensure other fellow YP members are aware, invited and involved in all meetings and events. The YP Chairs have been an extension of communication and a way for AIST to promote our YP programs and upcoming initiatives. We're very excited to share that, all-new this year, our Young Professional Chairs will be invited to our Leadership Conference in the Fall which will be great exposure and a wonderful learning opportunity for future hopeful industry leaders.

The next initiative AIST uses to engage and support our Young Professionals' is through Webinars. After another AISTech Young Professionals Roundtable a few years back, the attendees had asked that AIST offer more training specifically for Young Professionals. At the time, it wasn't something we really had the resources to do. While the pandemic may have been the catalyst for bringing them to fruition, Ms. Veltre was happy to share that the support and engagement for webinars has remained. Over the past couple years, we've been able to plan some training seminars specifically for YPs — albeit all virtual, they're still programs in place that bring relevant and unique content catered for our young members.

Last year, we held a webinar on soft skills titled, "Leading Change — Contributing and Helping to Lead a Culture of Engaged Teams" that discussed resources Young Professionals can use and apply to be more effective in their daily work. Just a couple months ago, we had AIST Member and representative from the Board of Directors, Becky Hites, deliver another webinar titled, "SteelGoNomics: Connecting the Dots" — An Introduction to the Economic Drivers of the Steel Industry. Her presentation provided an overview of the global and U.S. steel markets, and an overview of U.S. economic drivers and how they relate to steel product consumption. This session gave YPs a big picture view of the industry and helped them understand how their job fits into it all. Each of these webinars have been very successful — proven through both the sheer attendance numbers as well as the post-event survey results. We look to continue to build out this pipeline of Young Professional Training opportunities and are always open to suggestions — if you have any ideas on content that might be relevant and engaging to our younger member audience, feel free to share the feedback, as we look to plan more webinars in the future.

More along the lines of virtual programming opportunities for Young Professionals, Ms. Veltre shared an update on how AIST has provided mentorship opportunities for our younger members by way of our second annual Young Professionals' and Board of Directors Mentor Mixer held in March 2022 (first one was in April of 2021). This virtual mentor mixer provided an opportunity for young professionals to get firsthand advice from respected iron and steel industry leaders. Attendees engaged in small-sided, quality conversation and received facetime with a variety of members from AIST's Board of Directors and Board of Trustees. Board members were assigned their own Zoom breakout room and registrants participated in 5 rotations, so they had the opportunity to openly ask questions to 5 different board members. There was a range of about 5–8 Young Professionals per breakout room, so everyone had a chance to ask questions over a 15-minute period before the next rotation. AIST will look to host another Virtual Mentor Mixer next year, but potentially in the Fall, so it'll be after AISTech to give us some more time to promote it. We really love this event because it's a direct reflection of how much AIST's leadership values the growth and development of young professionals in our industry — they spend quality time talking to all the YP's and truly both the board members themselves and of course the YP's really enjoy it.

The last couple Young Professional Programs that Ms. Veltre highlighted focus on the ways that AIST's Young Professional members give back to students. While AIST is committed to planning events that contribute to the growth and development of YPs themselves, we also recognize that they find it rewarding to give back to the even younger generation.

The first program we have that YPs help support our students is our Young Professionals and Student Mentor Program. This program is designed to support students who are interested in pursuing a job in the steel industry after graduation. The goal is to educate these university students on the variety of jobs and opportunities available in the steel industry. It provides the student with an industry resource to help answer questions and offer guidance and insight from someone that was in their shoes not too long ago.

The mentorship happens over a phone conversation and the student just gets an opportunity to ask any questions they have about a career in steel. This means, it's truly not a huge commitment from the Young Professionals' perspective, but the short time for a phone call goes a long way in the eyes of the student. Students who are interested in being paired with an industry mentor simply fill out the application online and then AIST works to pair them with a YP Chair industry mentor. Since the program's launch in October 2020, we've matched 25 students with young professional industry mentors. While we feel excited and hopeful that we've made a difference for these 25 unique students, we'd love to see even more take advantage of this program, so encourage your students to apply. It's free to request a mentor and the application can be filled out [online](#).

Our next and last program tied to our Young Professionals is AIST's Virtual University Visits. A Virtual University Visit is essentially a presentation delivered via Zoom to a group of Materials Science and Engineering students. AIST staff members work with university professors to organize the virtual meeting. AIST's staff members review all our student programs with the group (scholarships, training funding, plant tours etc.) and then we invite a YP to talk to the students about their career, why they like their job, how they got into it and any advice they have for the students. The Young Professional volunteers have been doing a nice job portraying the career opportunities within the iron and steel industry.

Since many classes have returned to in person, we've seen a bit of a slowdown in scheduling opportunities, but we do expect it to pick up after summer. AIST is still supporting and scheduling these to take advantage of university outreach when and where possible. Overall, these have been a huge accomplishment — with limited staff and resources, AIST used to only be able to visit 1, 2, maybe 3 mostly local schools a year to talk about our programs and industry opportunities. The shift to have more of these virtually, and to be able to engage YP members to help share their stories have made a much greater impact and generated more exposure than we ever could've imagined. Since the Fall of 2020, AIST has conducted 55 virtual university visits with 36 unique universities reaching nearly 800 students (all within the US, Canada and Mexico). If you're interested in scheduling a University Visit, please reach out to Courtney Young or Lori Wharrey for more details.

7.0 MATERIAL ADVANTAGE RECRUITING AND RETENTION STRATEGY UPDATE

AIST's Courtney Young provided a update on student membership though the Material Advantage Student Program.

Material Advantage is a student membership program created for undergraduate and graduate students studying materials science, engineering and other technical engineering programs. Through this program, student members receive membership and benefits from four distinguished material societies: AIST, ASM International, ACerS and TMS. The annual dues rate is US\$30, and each active member can receive a free year of professional membership upon graduation. Material Advantage is overseen by the Material Advantage Committee (MAC) which is comprised of four representatives from each of the four societies. This group meets annually at MS&T and as needed throughout the year to manage and evolve the current membership program.

The AIST Foundation offers a wide variety of opportunities to encourage Material Advantage students to consider pursuing a career in the steel industry upon graduation, which includes a chance to earn tuition funding through two types of scholarships. Although student membership isn't required to be considered for Steel Intern or Member Chapter scholarships, an active membership can greatly increase their chances of receiving funding.

Student members also receive publication discounts, access to the AIST Digital Library, free registration to AIST events and more.

Throughout the past few years, the main focus of the Material Advantage liaisons and MAC has been to increase the number of members in the program by retaining active members and encouraging new members to join. There are currently two annual contests in place that work towards this goal.

The Material Advantage Recruit a Member Challenge encourages individual students to grow their chapter for a chance to earn some extra money. Throughout the month of February, active members can recruit and "register" new students for a chance to win US\$400 for themselves and US\$100 for one of the new members they recruited. Although we did see a decrease in participation in 2021 as students made the shift to virtual learning, this contest is typically well received, with 2022 being the second highest amount of engagement since the contest's conception.

In the fall, Material Advantage chapters have the opportunity to participate in the Fall Membership Challenge. Unlike the Recruit a Member Challenge, the Fall Membership Challenge encourages student groups to work together and come up with effective and creative tactics to increase the chapter's membership as a whole. The top prize for this contest is US\$1,000, which is awarded to the chapter with the highest percentage of

growth. There is also a US\$500 prize that's awarded to the chapter with the most creative recruitment strategies.

In the most recent MAC meeting, our group worked to come up with additional ways to encourage students to join Material Advantage and retain the current membership base. Through this meeting, we decided to explore the idea of sending text message communications to students to remind them to participate in Material Advantage activities, renew their membership, apply for scholarship funding and more. We are also planning to send targeted messaging to Chapter Chairs to encourage them to remind their peers of upcoming deadlines and opportunities.

We're excited to open-up this new line of communication with student members and plan to roll out the first campaign in this fall.

8.0 WOMEN IN STEEL PUBLICATION

Karin Lund from G-Power Global Enterprises provided insight on attracting and retaining students in the steel industry. She stated, to her knowledge the industry had never had a "calling card," "business card" or tool that companies can use to describe why someone should join the steel industry and helping a college student understand the various career options available within the industry.

The message in her book, entitled "Women in Steel, Women of Steel – Yesterday, Today & Tomorrow" (Vol. 1, is that the steel industry is a dynamic technology driven industry and career paths do not have to be linear, particularly in engineering. Readers learn how to rethink what a career can look like if open to saying "yes", learning new experiences and looking outside the box in terms of one's career path.

Based on an explanation provided to me, there are two different conversations that we have here today. One is how to attract new graduates and the second conversation is how to keep them motivated to stay in the industry. In terms of the first question, how to attract new students, it seems as if everyone is going after the same pool of talent. I had an experience through AISI called "Steel Fellows." It was a formalized program that gave young professionals in the industry, an opportunity to go and speak at different college and university campuses about career options in the steel industry. The program helped to develop communication and speaking skills. While a number of the engineers interviewed are doing this on a less formal basis, she feels this is a program that would help the industry and give young professionals an option to expand their abilities and help recruit new graduates. Secondly, US Steel Kosice in Slovakia offers two-year paid internships in many of their departments. This gives students an accurate picture of what jobs are available in the industry while allowing US Steel to see if the students fit into the culture of the company. Lastly, I would like to suggest that the industry reach out to organized groups that can give young people an insight into the steel industry. Groups like the Boys & Girls Clubs, and Junior Achievement. This way everyone isn't reinventing the wheel in terms of programs that attract young graduates and others into the steel industry.

The second question has to do with retention. Many industries, not just the steel industry, are experiencing a mass exodus of young professionals in the 4-11 year time frame. Something she believes would deter this exodus would be opening up our idea about succession planning. This group doesn't identify with obscure five year plans. They want a two-year plan that they can wrap their arms around. They want to know that if something piques their interest, they can change directions and follow that interest. Identify young professionals that show leadership and initiative and set up programs to motivate them. CMC offers 350 online courses including leadership and management for their employees. HarbisonWalker is organizing a HarbisonWalker University for their employees. A one plan fits all employee plan just doesn't work any longer.

Lastly, Women In Steel, is a book that can and should be given to suppliers, vendors and customers to let them know that the industry supports diversity and inclusion. Volume 2 is going to highlight the career areas of sustainability, utilities/energy, cyber-security, learning vs. training, media, HR and engineering.

A complimentary copy of this book was provided to all attendees.

9.0 REAL STEEL VIDEO CONTEST UPDATE

Ms. Beiswanger, from Steel Dynamics, provided an update on the 2022 contest. She reported the Theme was “*The Future of Steelmaking – Digitalization and Industry 4.0.*” The winner is Hardik Saluja from Indian Institute of Technology-Ropar entitled “Steel, Revolutionizing Mankind Development.” This [video](#) will be played just before the President’s Award Breakfast on Tuesday morning. The theme for the 2023 contest will be determined.

Ms. Beiswanger thanked committee members, Kip Findley from Colorado School of Mines, Casey Davis from Primetals, Kelly Dallas from Cleveland-Cliffs, and Adam Griffis from Michigan Technological University.

10.0 NEXT MEETING

Ms. Dallas reported the next meeting will be on Monday, 10 October, 10:30 a.m. –1:00 p.m. (ET) at MS&T'22, Pittsburgh, Pa., USA

11.0 ADJOURNMENT

After thanking all for attending, Ms. Dallas adjourned the meeting.

Minutes respectfully submitted,
Lori A. Wharrey, AIST – Sr. Board Services Administrator

The minutes have been electronically sent to the members of the UIRR attendees for review, corrections, additions, and approval. Information contained in these minutes is pertinent to the University-Industry Relations Roundtable of the Association for Iron & Steel Technology, Warrendale, Pennsylvania and is to be treated as confidential.

