

ON THEIR WAY UP...

Emerging Leaders are the key to Manufacturing Success



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NTMA

2019 NATIONAL EVENTS

For more information visit: www.ntma.org/upcoming-events

BACK BY POPULAR DEMAND: TOP SHOPS SEMINARS

February 20 Dallas, TX | May 22 Phoenix, AZ | August 21 Hartford, CT

Tap into your company's full potential and learn how your shop can become a Top Shop. Expand your knowledge in multiple facets of your shop. Topics will focus on Shop Floor Management, Shop Technology, Human Resources and Financial Analytics.

IN PARTNERSHIP WITH:



CHAPTER LEADERSHIP SUMMIT

January 30 - February 1 Nashville, TN

Connect, Learn, Lead. Chapter Leadership Summit is all about maximizing your NTMA membership at the local level. Learn ways to engage your chapter and build your regional coalition for stronger companies and a stronger industry.

THE MFG MEETING

March 6 - 9 Tucson, AZ

NTMA partners with the Association for Manufacturing Technology (AMT) for this interactive 4-day discussion of technological advances, innovative strategies and real-life case studies. It's the perfect platform for manufacturers to gain and share industry knowledge.

EUROPEAN TECH TOUR

March 31 - April 6 Munich to Milan

Take this opportunity to learn and observe global best practices that can be applied in your own company. We've scheduled strategic stops and tours to highlight some of Europe's most successful manufacturing companies.

LEGISLATIVE CONFERENCE

April 8 - 10 Washington, D.C.

There's power in our collective voice. Join NTMA member companies from across the country as we converge in Washington to meet with legislators and policy makers.

EMERGING LEADERS CONFERENCE

April 29 - May 1 Louisville, KY

To insure the future successes of our businesses and our industry, we have to build the future today. NTMA gathers the best and brightest up-and-coming industry leaders to network, share knowledge and brainstorm about tomorrow's manufacturing industry.

NATIONAL ROBOTICS LEAGUE COMPETITION

May 17 - 18 California, PA

Crunching metal, flying sparks-- it's a gladiator-style competition between robots designed and built by students. Come witness tomorrow's workforce in action today. It's a battle of epic proportions that truly is a win for both students and industry.

FALL CONFERENCE

October 15 - 18 Austin, TX

NTMA's signature event is not to be missed! Our annual conference pulls together all that is great about NTMA into three days packed with networking, advocacy and learning. You'll enjoy nationally acclaimed speakers, roundtable discussions, social events and sessions designed to educate and inspire—consider it an opportunity to recharge both personally and professionally.

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LOOK FOR THIS SYMBOL THROUGHOUT THE ISSUE FOR STORIES
RELATED TO THIS MONTH'S FEATURED TOPIC.

WELCOMES
NEW MEMBERS

BREWSTER WASHERS

Philadelphia Delaware Valley
Chapter
Salvatore Freda
16 Kulick Rd
Fairfield, NJ 07004

CARROLL CUSTOM MACHINING, LLC

General
George Jarrard
1029 Stone Rd
Westminster, MD 21158

COMPONENT REPAIR TECHNOLOGIES, INC.

Cleveland Chapter
John Gallagher
8507 Tyler Boulevard
Mentor, OH 44060

INTEGRATED MACHINE CO., INC.

NW Pennsylvania Chapter
Mary Jo Light
3952 West 12Th Street
Erie, PA 16505

LAB TESTING, INC.

Philadelphia Delaware Valley
Chapter
Brad McVaugh
2331 Topaz Drive
Hatfield, PA 19440

LEGACY ADVISORS NETWORK, LLC

Aaron M. Harrison
60 Public Square, Suite 100
Medina, OH 44256-4406

MENNE TOOL & DIE, LC

St. Louis Chapter
Kevin Menne
P.O. Box 10
Moscow Mills, MO 63362

3 MAJOR TAKEAWAYS FROM THE 2019
FEDEX AND UPS RATE INCREASES

CONTRIBUTED BY PARTNERSHIP

FedEx and UPS rates are going up in 2019, and it's more important than ever that NTMA Members know how to mitigate the impact to their business. Here are a few things you should know about the changes to come:

1. FedEx and UPS small package rates increased an average of 4.9%.
2. Your actual costs will vary. Depending on the service you use and your package characteristics, you could see increases above or below the average.
3. Many common surcharges are also increasing. On top of the base rates, you need to be aware of the charges that apply to your shipments and how they'll affect your total costs.

PartnerShip®, the benefit provider that manages the NTMA Shipping Program, has analyzed the FedEx and UPS increases so NTMA members can accurately prepare for the new year. Download the free white paper to see a breakdown of where you'll find the highest increases and get a simplified explanation of the complicated changes of which you need to be aware. You'll find it here: <https://www.partnership.com/blog/post/your-guide-to-the-2019-fedex-and-ups-rate-increases>

NTMA members receive exclusive discounts with FedEx that can help offset these increases. If you're not yet enrolled in the NTMA Shipping Program, now's the time. Sign up today to start taking advantage of this free benefit.

For more information, visit: <http://www.ntma.org/benefits/discount-programs/shipping/>





PRESIDENT'S UPDATE

DEAN BARTLES / NTMA PRESIDENT

75
YEARS
MADE
STRONG

In January, my message surrounded the key concepts of optimization and value, and how the pillars of the NTMA are designed to help you realize both through your membership. They are important to the future of this association, but by far, are not the only focuses necessary for that future. The NTMA is a membership driven association, and we thank each of our members for their contributions to not just this group, but also to the growth and future of the precision manufacturing industry. In this issue of The Record, we look to celebrate the emerging leaders in manufacturing, and the processes and programs our members and National Associate Members have in place to grow the next generation of manufacturing.

The three pillars of the NTMA, — Advocacy, Learning, and Networking

are all part of the idea of highlighting the emerging leaders in this industry. We will learn how to fill the pipeline with young people through the National Robotics League Program. There will be a snapshot of what programs are available through the NTMA once you have people on board. We will take a journey into some programs that our members have created, learning the best practices of our colleagues to develop homegrown talent. We will hear what chapters are doing to build localized Emerging Leaders programs. And, we are launching a program to celebrate the youth in our industry, the NTMA 30 Under 30, which I think is very exciting.

As I travel the country, meeting our members and attending events, I cannot help but be impressed by the quality of people in our association. I want this

association to grow, and for it to bring the value to you that each of you desire. My call to action for our members is to continue giving us feedback. Whether to Kelly, James, Doug, or myself, we need to know what your idea of a perfect association is, and how you think we can accomplish that goal.

I hope you enjoy this issue.

DEAN BARTLES / NTMA PRESIDENT

A handwritten signature in black ink, appearing to read 'Dean Bartles', written over a light blue background.



THE RECORD

OPERATIONS & EDITORIAL

Dean Bartles, President

Molly West, Editor

NTMA EXECUTIVE COMMITTEE

Mark Lashinske, Chairman

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Alan Ortner, Vice Chairman

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Mark Vaughn, Board Member

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Tom Sothard, Board Member

Gillen Young, Board Member

Custom Tool, Cookeville, TN

ADVERTISING INQUIRIES

To advertise in The Record, or for information on publishing your corporate newsletter or sales literature, contact NTMA at (216) 264-2847 or jmayer@ntma.org for advertising, mwest@ntma.org for editorial content.

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dave@DaveZgraphics.com



NATIONAL TOOLING & MACHINING ASSOCIATION

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Cleveland, OH 44134

1-800-248-6862

www.ntma.org

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NTMA NEWS

Do you have a great training program?

Are you using innovative methods to attract and maintain top talent to your shop?

We'd like feature your company in an upcoming issue of The Record!

Please email Molly West (mwest@ntma.org) with the details of what's working at your company and how you're making a difference in the future of manufacturing.

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SAVE THE DATE

11th Annual

NTMA/PMA One Voice

Legislative Conference

April 9-10, 2019

The Dupont Circle Hotel | Washington, D.C.



The 2018 elections brought many changes to Washington with Democrats now in control of the House and a solidified Republican majority in the Senate. A new Congress means a new opportunity to spread our message! Help bring common-sense solutions to Washington, D.C. by joining us for the 11th annual NTMA/PMA One Voice Legislative Conference on April 9-10, 2019.



One Voice will schedule meetings for all attendees, who will have the chance to meet with lawmakers and top aides to discuss how tariffs and a lack of qualified workers affect their business. The federal government plays an outsized role in manufacturing and the Legislative Conference is how we can educate our elected officials about the issues most important to our industry.

Join together to speak with One Voice, April 9-10 in Washington, D.C.

LEGISLATIVE CONFERENCE AGENDA

Monday, April 8, 2019

4:00 p.m. – 5:30 p.m.

Early Conference Registration

5:30 p.m. – 6:30 p.m.

Optional Early Arrivals Reception

Tuesday, April 9, 2019

8:00 a.m. – 11:30 a.m.

Conference Registration

11:30 a.m. – 1:00 p.m.

Conference Opening Remarks, Briefing and Lunch

2:00 p.m. – 4:30 p.m.

Capitol Hill Visits

5:30 p.m. – 6:30 p.m.

Networking Reception

Wednesday, April 10, 2019

8:00 a.m. – 9:30 a.m.

Breakfast

10:00 a.m. – 4:00 p.m.

Capitol Hill Visits

(includes lunch with members of Congress)

TO REGISTER,

VISIT WWW.PMA.ORG/METALWORKINGADVOCATE.ORG

NTMA | PMA | WiM members \$299 per person

Nonmembers \$499 per person

Registration deadline March 15, 2019

Questions? Contact info@metalworkingadvocate.org or 202-393-8250.



CONFERENCE LOCATION/ HOTEL ACCOMMODATIONS

The Dupont Circle Hotel
1500 New Hampshire Ave., NW
Washington, DC 20036
Phone: 202-483-6000
Rate: \$299 per night (plus tax)

To make your hotel reservation, please call 202-483-6000 and reference NTMA/PMA One Voice Conference. Deadline to make reservations in our group block is **March 15**. Rooms reserved after this date are subject to space and rate availability.

THE 2019 EXECUTIVE COMPENSATION SURVEY IS CURRENTLY UNDERWAY

The 2019 NTMA Executive Compensation Survey is now underway. The survey has been scheduled around W-2 season with hopes to make completion more convenient for HR departments and to increase survey participation.

With the success of last year's Executive Compensation Survey, we will continue to separate it from the Operating Costs Survey for added convenience to participating members. The Operating Costs Survey will be launched in mid-March.

INNOVATIVE EXCEL DASHBOARD

The 2019 NTMA Executive Compensation Report also will be delivered in an Excel® dashboard that allows you to create a customized report in a more efficient and user-friendly format. The interactive dashboard allows you to select the specific columns of data you want to benchmark against your company. Please note the report is only FREE to participants!

Your participation in the survey helps provide the best industry data possible.

To view and download the surveys, please visit our webpage and search "compensation survey."

"The Executive Compensation Report and individual Financial Performance Report, as well as the Wage & Fringe Benefit Report, provide great value. I believe these three pieces of information alone justify the annual membership cost of the NTMA. The folks at Mackay Research Group do a great job. I use all the information to help guide me regarding operating results, matters of wages and standing within the industry. As a company which strives to be an employer of choice in the marketplace this information is so beneficial."

Rich Benward, President
Hubbs Machine & Manufacturing, Inc.
Cedar Hill, MO



IS YOUR RESPONSE CONFIDENTIAL?

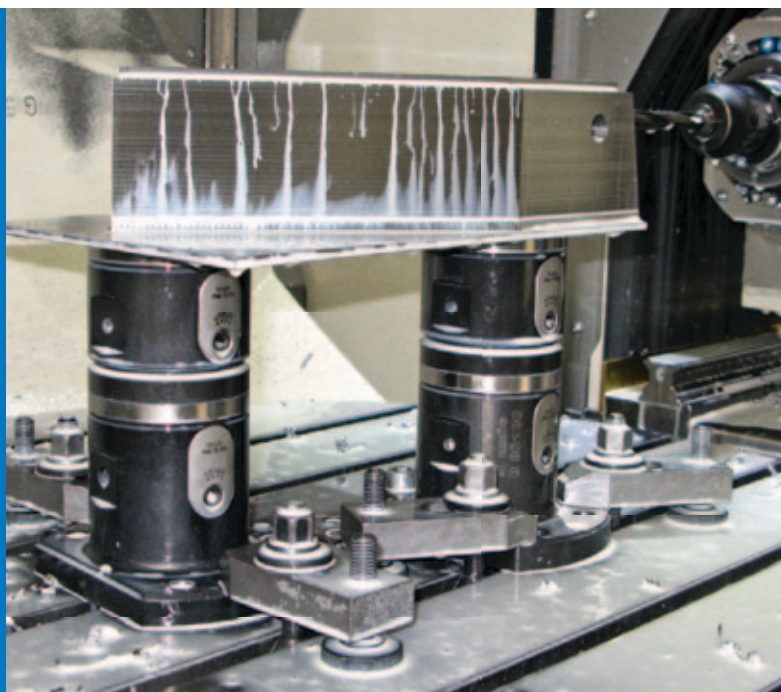
All responses are sent directly to Mackay Research Group – no one at NTMA will see your response, so you are assured of confidentiality! (See the confidentiality statement in the survey). Return your survey directly to Mackay Research Group surveys@mackayresearchgroup.com



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WHO:

Young professionals looking to advance their careers and companies through learning, engaging and networking.

2019**CONFERENCE**

WHERE: Marriott Downtown Louisville
280 West Jefferson Street
Louisville, KY 40202

Room rate: \$189 + tax per night
Cut-off date: Friday, April 5, 2019
Reservations: 502-627-5045

WHEN: April 29 – May 1, 2019*

*Conference starts 2pm 4/29 and ends 12pm 5/1

COST:

Members:

First Company Attendee: \$325

Additional Company Attendees: \$250

Non-members: \$500

To register, contact Brittany Belko at bbelko@ntma.org or 216-264-2848
Registration deadline is Monday, April 22nd

Time Management - Brandon Dempsey, Partner



Machine Metrics Data - Eric Fogg, COO



Performance Metrics Data - Erik Skie, Principal



**Advocacy & the Importance of Being Involved
- Omar Nashashibi, Founding Partner**



Moderated Roundtable Discussion

Do you have a hot button issue that you want peer feedback on? Do you ever wonder how others handle a problem you are facing? If so, this is your chance to discuss those items and more with your industry peers.

Campfire Chats

Your chance to sit down in a small group setting and discuss:

- Attracting good talent to your company
- Promoting a positive and inspiring environment among employees
- Negotiation tactics
- Performance review ideas and tips
- New technologies implemented on the shop floor

Welcome Reception

Start your conference experience off on the right foot by mixing and mingling with other conference attendees while enjoying hors d'oeuvres and drinks.

Plant Tour

Always a highlight of any NTMA event, this year's plant tour will be at Louisville Slugger!



Networking Night Out

When in Louisville, a bourbon experience is a must!

Join us for an evening at Patrick O'Shea's where you will have the chance to enjoy a bourbon tasting, participate in an old-fashioned making demonstration and fill up on delicious food and drinks.



NTMA'S 30 UNDER 30: A CELEBRATION OF EMERGING LEADERS

BY JAMES MAYER, NTMA, BUSINESS DEVELOPMENT MANAGER



The NTMA is happy to announce our new **30 Under 30** program! This program is designed to highlight and celebrate those employees working at your company that are the future of this industry. The NTMA's **30 Under 30** is now welcoming nominations from managers and supervisors of young, talented manufacturing professionals – under 30 – who show leadership promise for the future of the manufacturing industry.

Thirty individuals will be selected to join the **30 Under 30** for 2019, offering them an opportunity to connect with one another, gain valuable recognition and develop their skills and knowledge throughout the year. These 30 individuals will be recognized in the July issue of *The Record*, with their photo, pro-

fessional information and their accomplishments. Our **30 Under 30** will be invited to the 2019 Fall Conference at a discounted rate, and will be recognized on stage during the awards ceremony. They will be invited to attend the 2020 Emerging Leaders Conference, where they can continue to grow and learn in this great profession.

THE PROCESS TO NOMINATE IS SIMPLE.

Email James Mayer (jmayer@ntma.org) with the following information by May 17, 2019.

- Name of nominee
- Company name
- Contact information (name or email) for nominee
- Achievements and contributions

- Any additional information that is pertinent

Nominations will be judged by a group of members and staff, and the inaugural group will be notified by the first week in June to obtain more details for the issue of *The Record*. Nominations are open to all regular members, including our national associates.

Please do not hesitate, enter your outstanding emerging leaders today!



NTMA

TECHNOLOGY TOUR 2019 "MUNICH to MILAN" MARCH 31 – APRIL 6


SOLD OUT!


Break away from your routine and get inspired!

Reserve your spot on the NTMA 2019 Tech Tour and gain a fresh perspective when you go behind-the-scenes at world-class manufacturing facilities in Germany, Switzerland and Italy. Share experiences and exchange ideas with peers and National Associate Members. Gain insight and ideas that will improve your day-to-day operations in ways you can't even imagine. Leave your worries behind as your sponsors take care of the details from your arrival in Munich to departure from Milan at the end of the tour.

Preliminary Schedule for 2019

SAT 3/30 Departing flights from U.S. & Canada.

SUN 3/31 Arrivals day! Relax & enjoy Munich before a casual Bavarian welcome dinner. **[Munich hotel]**

MON 4/1 Visit & tour HEIDENHAIN world headquarters in Traunreut, Germany. **[Munich hotel]**

TUE 4/2 Tour & machining demonstrations at GROB Systems in Mindelheim. Head to Switzerland in the afternoon. **[Zurich hotel]**

WED 4/3 Visit the Swiss manufacturing/R&D facility of BIG KAISER. Enjoy an afternoon walking tour of Zurich before continuing south to Burgdorf. **[Burgdorf hotel]**

THU 4/4 Spend the morning at the laboratory and technical center of Blaser Swisslube. At lunch time, take a direct train from Bern, Switzerland, to Milan, Italy. **[Milan hotel]**

FRI 4/5 Tour the manufacturing facility of Speroni tool measuring systems. In the afternoon, enjoy free time in Milan before a farewell dinner party. **[Milan hotel]**

SAT 4/6 Flights departing Milan arrive in the U.S. & Canada same day.

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GROB

BIG KAISER

Blaser. SWISSLUBE

speroni

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- Ground transportation & airport transfers in Europe
- Hotel for 6 nights
- Most meals & activities

NTMA members are responsible for the \$495 NTMA Registration fee & flight to Munich/from Milan.

Questions? Contact Brittany Belko, bbelko@ntma.org, or Dana Super, d.super@us.bigkaiser.com.

Space is limited – Reserve today!

BILL PADNOS NOW NTMA WORKFORCE DEVELOPMENT MANAGER

Bill Padnos, who currently manages the NRL program and works closely with the NTMA Workforce Development Board has taken over the day-to-day management and oversight of NTMA-U. This is a natural fit, as Bill's passion is workforce development. He is a Marano Fellow as a graduate of The Aspen Institute's 2014 Sector Skills Academy.

Bill will be working directly with Carrie Marsico, Alice Overton and Bob Pevec to continue delivering our members the exceptional content of NTMA-U. Bill is also now the staff liaison for the NTMA Workforce Development Education Team. With this added role Bill's title is now workforce development manager.



2019 TOP SHOPS SEMINARS

MAY 22ND | PHOENIX, AZ

MEMBER RATE: \$200 | NON MEMBER RATE: \$450

*BREAKFAST & LUNCH INCLUDED

WHAT MAKES A TOP SHOP

Presented by Modern Machine Shop

INTERACTIVE DISCUSSION ABOUT TOP SHOPS' BEST PRACTICES

Presented by Modern Machine Shop

MODERATED ROUNDTABLE WITH OPEN DIALOGUE

Facilitated by Modern Machine Shop

SUCCESSION PLANNING IN TOP SHOPS

Presented by Legacy Business Advisors

EMPLOYMENT BACKGROUND CHECKS: ANATOMY, BEST PRACTICES AND COMPLIANCE

Presented by SafestHires

PULLING AND ANALYZING DATA IN TOP SHOPS

Presented by machinemetrics

INDUSTRY 4.0 AND AUTOMATION IN TOP SHOPS

Presented by Protected Flow Management

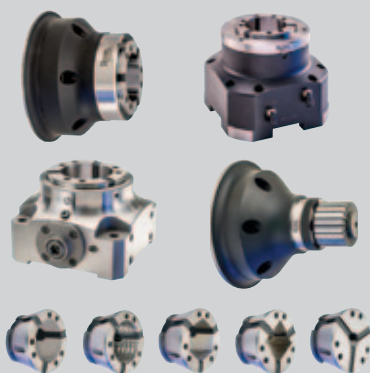
Plant Tour & Reception at the host site following the sessions!



Unable to join us for this date, mark your calendars for our third and final Top Shops Seminar taking place August 21 in Hartford, CT.

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WANT TO CREATE MANUFACTURING LEADERS? MENTOR THEM FOR SUCCESS

BY BILL PADNOS, NTMA, WORKFORCE DEVELOPMENT MANAGER

Throughout my career, I have been fortunate to have two mentors that have had a profound impact on me. These two professionals saw something in me that I had no idea that I possessed. They took a chance in not only hiring me for that particular position, but ensuring that I would succeed. Was everything perfect during the time that I worked for those mentors? Not even close. However, I look back fondly at those years and think about what I learned directly from them and indirectly by seeing them in action.

Carl Wangman at The Center for Association Growth (TCAG) in Glenview, IL, turned a JCC membership director into a certified meeting professional and a graduate of the Institute for Organizational Management. Carl invested his time in helping me to both succeed in my position at his company and to constantly improve as an association management professional. When I was first hired, I had absolutely no professional experience as a meeting professional yet I was on a plane three weeks into the job leading a site visit for a \$1 million conference at a five-star resort. I went from being the referee in an agreement between two members on proper clothing etiquette in a sauna to picking sea bass as the surf option for a 600-person awards banquet.

Carl was present at the site visit, but silent during the meetings with the hotel staff and vendors. He allowed for me to be the association's voice, asking the questions and provide the answers when needed. I was truly learning on the job and gaining perspective of what I potentially could do in this position. I never would have had this opportunity if Carl did not allow for me to take the lead. If there was a time that I needed his back-up, he would say, "I think that Bill is asking about this . . .".

I learned years later from our special event vendor that Carl was always checking in with him and others to make sure that everything was going OK. I had no idea that he was keeping close tabs on me and he was ready to pounce if needed. That never happened, because I felt in control — because he had so much confidence in me. The

conference went off perfectly — even with the car rental. We decided to prepay for an entire tank of gas and the light went on as we were pulling into the airport to return the car. Carl was speechless when that happened. He just said that it was just another indicator of how well I prepared and executed my first conference.

Over the eight years that I worked at TCAG, Carl invested in my education and training. He supported my attendance at local association and meetings management educational and networking programs. When I was able to qualify to take the certified meeting professional exam, he provided me with both the study guides and time to meet with a peer group. I passed the test and was rewarded with a bonus. When Carl wanted for me to gain a better perspective on all aspects of association management, he encouraged me to participate in the US Chamber of Commerce's Institute for Organizational Management. One week a year for four years, I spent learning with my peers from across the country about how to be a better association manager. Today, I still use the lessons that I learned from the classroom and from the sharing of best practices over a bottle of Jack.

I felt so appreciative of the investment that Carl made in me. I wanted to succeed in my position to prove that his was correct in believing in me. It was not always perfect during my eight years at TCAG. I did make mistakes and have disagreements with Carl about how things should work. However, I learned from those mistakes and was always respectful if I had a difference in opinion with Carl. I knew that I had opportunities to leave TCAG if I wanted to for better pay, but I stayed until my family decided to move to Pittsburgh. I had a mentor that believed in me, and that was more valuable than a few more bucks in my pocket.

I fast forward to my time working at New Century Careers and serving as the executive director of the SWPA BotsIQ program. I never stepped foot in a manu-



facturing facility until my first interview for the position, and in that role, I would be responsible for promoting manufacturing as a viable career option to our youth. I barely passed science for business majors, yet now I was applying to be in charge of one of the largest STEM programs in Pittsburgh. My only experience with the program was watching the old BattleBots TV Show on Comedy Central.

I was very fortunate that the SWPA BotsIQ Executive Committee saw the potential in me that Carl did almost 15 years earlier. Also, the position provided me with an added bonus. I was able to work for Paul Anselmo, the president at New Century Careers. Paul was a different mentor to me than Carl. I was not a newbie to association management, but very raw when it came to manufacturing workforce development. Carl instilled in me the confidence to be able to learn how to manage the program. What I received from Paul, was the knowledge on how to be successful in it.

I learned from Paul about what manufacturing workforce development is all about and the importance of collaboration. I saw how he was able to recruit others to join his cause through both passion and common sense. Paul encouraged me to apply to the Aspen Institute's Sector Skills Academy and their Marano Fellowship program. I am sure that he did something behind the scenes to ensure that I was accepted into the yearlong training program. He helped to justify my participation in the program. I still remember hopping off the airplane and racing to the NTMA Pittsburgh Chapter Holiday Party right after my final Sector Skills Academy retreat in Baltimore. I was so pumped up and full of energy — wanting to make a difference. At the party, I saw Dave Tilstone and jumped at the opportunity to tell him that I wanted

CONTINUED NEXT PAGE



to make an impact nationally by connecting students to manufacturing careers through the NRL program. I wanted to share what I had learned from the academy with all of the NTMA chapters. Little did I know that the wheels were already in motion to make this happen.

I still try to figure out why Carl and Paul invested their own professional reputations on me. Both took a chance on me based not on my industry experience. They saw potential and provided me with every opportunity to succeed. Every time that I am at an NRL competition, I see hundreds of students with aptitude to thrive in careers in manufacturing if given a chance. I also see many of those students leave the competition having never being approached by an industry professional telling them why they should come work for them.

If I was asked at my Maine East High School graduation what I would be doing 30 years later, being the director of Youth Engagement for the NTMA would have never entered my mind. Two mentors helped to shape my career and gave it direction. The NRL program provides an amazing opportunity for students to learn the technical and critical thinking skills needed for a career in manufacturing. It is up to you to invest your time in giving them the confidence to explore that career and tell them that they can come work for you. The skills gap will never close unless new students feel the self-assurance from you that they can enter the pipeline.



THE 2019 SCHOLARSHIP SEASON IS HERE!

APPLICATIONS ARE DUE APRIL 1, 2019.

The National Tooling and Machining Foundation is a 501(c)3 nonprofit designed to fund manufacturing education — building skills while increasing awareness. All contributions to the foundation are fully tax-deductible.

In 2018, the National Tooling and Machining Foundation awarded \$2,500 scholarships to 17 students across the country, for a total of \$42,500. This was double the amount of scholarships awarded in 2017. This \$2,500 in scholarship money makes an impact for students. These scholarships can mean the difference between a student taking classes, or dropping out for a semester — or for good.

We need your help getting more qualified applicants for the Brock Babb and Edwin Vobeda Scholarships for 2019. Do you know a deserving, dedicated student in your shop, your NRL team, your community, your chapter or your family that is pursuing their post-secondary education in manufacturing or a related field?

Students who apply for either scholarship must have a letter of recommendation from an NTMA member in good standing. Please check out our website (www.ntma.org) for more information on each scholarship, as well as downloadable applications.

Please share the scholarship information below with your employees, interns, co-ops, and educators and others in your community to help connect people with financial assistance for their educational pursuits in the machining, tool and die, and other related industries.

BROCK BABB MEMORIAL SCHOLARSHIP

The Brock Babb Memorial Scholarship is an annual scholarship in support of students advancing their education and pursuing careers in manufacturing. The scholarship is named in honor and memory of Sergeant Brock A. Babb who gave his life defending our country and our freedom. Babb is the son of one of our long time members Terry Babb, Apex Tool & Manufacturing, Inc. in Evansville, IN.

EDWIN VOBEDA MEMORIAL SCHOLARSHIP

The Edwin Vobeda Memorial Scholarship is an annual scholarship created through a charitable donation from the Edwin F. and Mildred Vobeda Charitable Remainder Trust in support of students residing in the Central Time Zone advancing their education to pursue a career in the tool and die industry.

Applications are available for download at: <http://www.ntma.org/initiatives/foundation/>.

Please contact Bill Padnos at bpadnos@ntma.org with any questions, or to submit completed applications.



Neil Chapman cleans a part to ensure accurate measurement

VETERAN FINDS SUCCESS IN PRECISION MANUFACTURING

BY NEIL CHAPMAN, HOMEYER PRECISION MANUFACTURING

In just one year, I have grown and achieved a level of professional success that I was desperately searching for-- thanks to the Precision Machining Apprenticeship Program at the East Central College Center (ECC) for Workforce Development and Homeyer Precision Manufacturing.

After my decision not to reenlist in the Navy, I was faced with a greater challenge than I expected: finding a way to thrive as a civilian. With two retired

teachers as my parents, college seemed the obvious and most encouraging option. I decided to pursue a degree in mechanical engineering. Though I had success in training for the Navy Nuclear Program, I found it difficult to study and succeed in college. After some loss of hope and finding new optimism, I interviewed at Homeyer Precision Manufacturing. None of us were entirely sure how I would fit in at Homeyer, since I had no experience directly involving manufacturing.

The Center for Workforce Development at ECC works in cooperation with the Missouri Registered Apprenticeship Program to provide specialized training in many fields. Only a month after starting at Homeyer, I was enrolled in classes at ECC in the Precision Machining Program. The apprenticeship style of training involved in this program has worked in my favor. It turns out that I learn much more effectively when the material I'm digesting

CONTINUED NEXT PAGE

is made tangible. This is something that I lacked in the more traditional classroom environment involved in the mechanical engineering degree. There just wasn't much hands-on learning, and even in labs, what was hands on was not very relevant.

My desire for success motivated me to excel at every task I was given at Homeyer, and much to my surprise my efforts were noticed. I progressed from one task to another, gaining complexity and responsibility along the way. Out of the blue, I got stuck in the quality lab one Friday. I had wanted a shot in quality control since the day I walked in. I saw quality control as a position of leadership and responsibility. Through my experience in the Navy, I was somewhat familiar with what it entailed and with my education for my unfinished mechanical engineering degree, quality control has been a great fit for me.

Almost all my training in leadership took place in the Navy. Honor, courage and commitment, the three core values of the Navy, still play a role in my job. As part of quality control, I must have the honor and integrity to do what is right. I must have the courage to tackle new challenges, make mistakes and learn. I must be committed to the team I help support and to the many other teams in other companies that Homeyer works to supply with quality parts.

I am conscious of the role that leadership skills play in manufacturing and look to improve my ability to lead. With many new responsibilities and challenges in the quality lab, I continue to grow and realize the value of furthering my understanding of manufacturing.



Right: Conferring with Homeyer master machinist Scott Wedel.
Below: Speaking to ECC External Relations Vice President Joel Doecker.



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NTMA'S NEWEST EMERGING LEADERS GROUP



The Arizona Chapter NTMA started an Emerging Leaders group in October, and it's off to a great start! Pictured, the initial group, and NTMA Chairman Mark Lashinske playing cornhole at the inaugural event.



THE FUTURE OF MANUFACTURING STARTS WITH THE UP AND COMING LEADERS AMONG US

BY KEVIN HARTFORD, ALLE-KISKI INDUSTRIES



This edition of the record promotes NTMA's new program — 30 Under 30. While that group is certainly vital to our industry's future, there is another group of emerging leaders who are between the ages of 30 and 40. They are equally as important for us to retain if we are to grow our businesses with consistency and continuity.

When I was president of the NTMA's Pittsburgh Chapter, one of the things that stood out to me when I attended our Fall Conferences, MFG Conference, purchasing fairs or showcases was that everyone was around my age (60+) or older. That was a concern for not only me and Alle-Kiski Industries, but it was a much larger concern for our industry. Many companies in our industry used to be "family businesses." It appears that is a waning practice. We need look no further than our own chapters and some of the recent acquisitions that have taken place.

When Jeff Kelly, CEO of Hamill, was president of NTMA National several years ago, his mission was to "Fill The Pipeline."

While we've made strides as an industry in filling our pipeline, there is still a lot of space yet to be filled.

One of the areas that hasn't really been addressed is the managerial levels within our companies. For example, we at Alle-Kiski Industries have six young journeymen (machinists who have graduated from our Pittsburgh Chapter Apprenticeship Program) who are between the ages of 22 and 34. We also have three other young apprentices going through the program. For a shop with 40 employees that's actually pretty good. However, we have a wide age gap between those younger machinists and the older machinists, whose average age is around 50. We've gone to great efforts to keep our people. We've promoted from within. We've used the NTMA's Wage Surveys to pay our people the going rate. We've kept them engaged with our customers.

With the exception of our general manager, Ron Smith, we have no one on our management team under 50, so we recently hired a bright "young" 38-year-old who brings a great deal of knowledge and experience in our industry. Jeremy Miller is our new business development manager. Jeremy comes to us from Parker-Hannifin, where he held several positions including product marketing manager, and territory manager. In his few months with us, our customers have been

impressed with his understanding of complicated parts and components, as well as his ability to help them solve problems.

Jeremy literally grew up in our industry and has an innate understanding of what it means to be a contract precision manufacturer. He received his BS from Penn State and his MBA from Pitt. He is going to be a leader in our industry because not only does he have the background, experience and skillset to do so, but he also has a passion for it and is very motivated to succeed.

Too often we've seen bright, talented and highly skilled 30-somethings leave our companies to join an OEM or a larger manufacturer. So, how do we counteract this challenge? It's difficult, especially when you're competing with the salaries that larger manufacturers are capable of paying. But we do have certain perks we can offer: flextime, vacation, bonuses, a sense of proprietorship and the family-based culture of a small business. Hopefully they'll be enticed to stay the course. But one thing is for sure — we can never take them for granted.



Jeremy Miller, Alle-Kiski Industries business development manager.



MILTON CONTRERAS IS THIS MONTH'S LOS ANGELES CHAPTER NTMF SCHOLARSHIP RECIPIENT

SUBMITTED BY COLLEEN TOUMAYAN, LA CHAPTER NTMA MANAGER



Fortunately, not all high schools have eliminated machine shop classes. Milton Contreras was introduced to his future career at Will Rogers High School in Van Nuys, California. There, he began to understand the vital role manufacturing plays in all of our lives. Now at Glendale Community College, Milton has taken advanced machining courses and has learned skills on CNC lathes and mills. He's earned CNC Machinist I Level certification and is on his way to become proficient at CNC programming.

The foundation's scholarship is very important to Milton, who also works part-time to support himself. He is currently registering for his final classes and will use the money toward tuition.



FEATURE

NATIONAL TOOLING AND MACHINING ASSOCIATION

HOW THE SKILLS GAP CAN BE A KEY DRIVER FOR INTELLIGENT MANUFACTURING

BY SEAN HOLT, PRESIDENT, SANDVIK COROMANT, SALES AREA AMERICAS

Quote: "While many of the benefits that the fourth industrial revolution promises are predicated on hardware, software, systems and solutions, they are fundamentally designed to reduce the reliance on certain skills that may have been more readily available in the past."

Anyone who works in manufacturing is acutely aware that finding employees with the right technical skills and production engineering knowledge is a continual and growing challenge. The lack of availability of technically competent individuals is often cited as one of the most significant threats to the successful growth of global manufacturing.

Many reasons exist for the emergence of the impending skills gap. For one, the age profile of the "baby boom" generation means that companies are faced with the prospect of having unprecedented numbers of their highly experienced, long-serving individuals approach or enter retirement over a relatively short period of time. And, those individuals will be taking their valuable machining knowledge and experience

out the door with them. The problem is further exacerbated by the fact that there are not enough young people choosing to enter the metal-cutting industry to balance the exodus of older talent and expertise.

Another possibility is that education systems have reduced the focus on engineering or manufacturing as a career path. There still exists a perception of "manual" engineering that is associated with manufacturing and that negative connotation may come from parents, grandparents and even schools. While this perception is a long way from the truth, many young people today would prefer to see their future in communications, design or software rather than engineering and manufacturing. The irony, of course, is that modern production is heavily based around communications, design and software.

NEW SKILLSETS FOR INDUSTRY 4.0

So how do companies remain competitive and grow their businesses in an era when they have less access to competent resources? One way is for organizations to truly embrace the concept of Industry 4.0

and the intelligent factory. While many of the benefits that the fourth industrial revolution promises are predicated on hardware, software, systems and solutions, they are fundamentally designed to reduce the reliance on certain skills that may have been more readily available in the past. As a result, adoption of the technologies that form the bedrock of Industry 4.0 can go far to mitigate the challenges posed by the dwindling pool of technical talent.

Now, aptitudes that were once considered to be "soft skills" and not necessarily important for those on the shop floor, such as critical and analytical thinking, problem solving and decision making and people skills like teamwork and communication, will be more valuable than ever. The growing availability and sophistication of process planning software and integrated tool libraries, for example, minimizes the levels of machining skills needed to optimize end-to-end manufacturing processes.

AUGMENTED WORKFORCE OF THE FUTURE

Using machining process recommenda-

SEE "SKILLS GAP" PAGE 22



Allied Machine & Engineering honors four precision machining graduates in 2018 with job offers and a "Signing Day" event.

ALLIED MACHINE HARNESSES THE HOME FIELD ADVANTAGE WHEN CULTIVATING FUTURE MANUFACTURING TALENT

BY DEBORAH A. FROELICH

Chatter heard in manufacturing today isn't run-out from a bad spindle or tool deflection. The buzz humming through the industry centers is about workforce recruitment and development. Two factors are amplifying the struggle to find (and keep) great employees in recent years. First, a large portion of manufacturing talent will be eligible to retire by 2020 according to the Bureau of Labor Statistics (BLS). The second factor is the new and next generations' disinterest in manufacturing careers.

Manufacturers are not short on the supply of jobs in their sector, but they are short on demand for those jobs. So how can they reignite interest in manufacturing careers ... in both the new and next generations?

THE HOME FIELD ADVANTAGE

Allied Machine & Engineering is sparking curiosity in the classroom and re-shaping community views about worklife on the plant floor. They cultivate talent from home field via two avenues, and both paths

lead students to a high-tech, high-wage manufacturing career, right in their own community.

ROUTE #1: STRENGTH TRAINING AND INSPIRATION IN THE CLASSROOM

According to sources, the skills gap was caused partly by the lack of STEM-educated students in America. Not enough students are prepared to join the high-tech world of manufacturing. With this in mind, Allied Machine started reaching out to classrooms to get students excited about science, technology, engineering, and math (STEM).

Steve Stokey, Allied Machine's executive vice president, began work with community leaders, educators, and business owners throughout the county to integrate more hands-on STEM courses in local classrooms. A curriculum model created by a nationwide nonprofit called Project Lead the Way (PLTW) helped provide the structure and support needed to start.

PLTW curriculum introduces the fundamentals of STEM to kindergarten through fifth grade classes. Sixth through eighth graders learn about design and modeling, automation and robotics and the magic of electrons. At the high school level, students choose from pre-engineering, biomedical and computer science strands. Mr. Stokey calls this curriculum structure strength training for young minds. "We needed a way to develop engineers and technicians with the complete spectrum of skills, including good work ethic, integrity and the aptitude for continuous learning," Stokey said.

An annual STEM project competition boasts county-wide participation from elementary students through high school seniors. Engineers from Allied Machine and other local businesses volunteer as judges for this event, and participation grows exponentially every year. In fact, in 2018 more than 300 students competed for accolades

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in STEM.

Another vehicle Allied uses focuses on encouraging young women to consider pursuing a degree in engineering. According to BLS, although women make up 47% of the U.S. labor force, only about 14% of engineers are women. Allied Machine realized this is a great opportunity to grow the talent pool for manufacturers.

Two Allied engineers, Mary Jo Hanlon and Jamie Rosenberger, have more than 38 years of manufacturing and engineering experience collectively. Since they enjoy inspiring young women to get excited about engineering and technical careers, they volunteer annually to speak at the Women in Engineering event held at Kent State University Tuscarawas campus.

Allied Machine also builds incredible partnerships with local technical schools like Buckeye Career Center (BCC). In fact, Allied Machine humbly accepted BCC's 2017 Spotlight Award for their support and contributions to scholarships for area students. They also coordinated with BCC to arrange a New Hire Signing Day event, where they honored four exceptional precision machining students and offered them full-time positions upon graduation. The event was designed to celebrate the students' achievements in academia just as exceptional athletes are celebrated on signing day.

ROUTE #2: CREATE GREAT CURB APPEAL

At times, members of the community can inadvertently discourage interest in skilled-labor careers by sharing negative stereotypes of manufacturing work life. After all, the plant floor they knew was dark, dirty and dangerous. To this day, a lot of folks have never seen a modern, high-tech pro-

duction facility.

With this in mind, Allied Machine piques interest and reframes thinking by creating great curb appeal and opening their doors to the public. Groups from the area visit throughout the year to see modern manufacturing in action. Over the past year, Allied has given facility tours to students, educators, career counselors and many others.

Each year Allied welcomes participants of the Tuscarawas County Dale Lauren Foland Manufacturing Camp and demonstrates the lean manufacturing process. They've also hosted tours for Kent State University engineering students in automated manufacturing and process materials courses. Instructors from the Buckeye Career Center spent their 2018 Teacher In Service Day touring the plant floor and gathering input for their curriculum planning.

Allied Machine realizes the industry can't rest on its laurels in the current en-

SEE "ALLIED" PAGE 22

Above: Area students tour Allied's shop floor to witness CNC and robotics in action and participate in lean manufacturing demonstrations.

Below: Participants in the Tuscarawas County Dale Lauren Foland Manufacturing Camp see STEM in action while touring Allied's manufacturing floor.



"ALLIED" CONTINUED

vironment. Fortunately, they can build bridges with children and community leaders, create wonder and excitement about manufacturing and cultivate strong manufacturing talent in their own backyards.

ABOUT ALLIED MACHINE & ENGINEERING CORP.:

Allied Machine & Engineering Corp is a leading manufacturer of holmaking and finishing tooling systems. Allied devotes its advanced engineering and manufacturing capabilities to create the widest selection of value-added tooling available to metal-cutting industries around the world. Located in Dover, Ohio, Allied's precision holmaking technologies provide end users worldwide with the highest level of drill performance.



Allied engineers volunteer alongside other local engineers to judge K – 12 grade students' STEM projects at the annual Project Lead the Way Showcase event.

"SKILLS GAP" CONTINUED

tions, manufacturers can quickly and easily identify the combination of machines, fixtures, tool holders, cutting tools, insert geometries and grades needed for a given



Sandvik Coromant offers connected solutions to help manufacturers optimize their machining and decision-making processes.

machining task. And then, by creating a "digital twin" of the machining task made for CAM simulation software, they can ensure they have the best possible set-up for a given production requirement long before real-time machining starts.

In addition, the digital solutions that are emerging in support of Industry 4.0 promise a much greater ability to monitor and record every aspect of the production process. By combining these enhanced monitoring capabilities with advanced connectivity solutions, it becomes possible to collect large volumes of data that may not have been available to a production engineer or machine operator. Combining this data with powerful software analysis tools has the potential to provide companies with unprecedented insight into every aspect of the manufacturing process. In turn, this manufacturing system intelligence allows



The suite of connectivity solutions from Sandvik Coromant helps manufacturers prepare for Industry 4.0.

managers to make informed decisions that lead to improved productivity and security, while reducing unplanned stops in the production and overall reliance on skilled personnel.

The remote monitoring and control capabilities of the industrial Internet of Things (IIoT) also will augment the skills within a manufacturing organization. Take, for example, a scenario where connected solutions might allow key tool parameters to be set via a modern touch screen. This technology is bound to make manufacturing more attractive to the younger generation entering the workforce in the coming years.

As we move toward a fully augmented workforce, where a synergy exists between people and machines, advanced hardware and software solutions for process planning, simulation, control and monitoring will not require the same in-depth machining knowledge required by the previous generation. Instead, new skill sets and different ways of working will emerge for production engineers and machine operators to help them analyze and interpret machin-

ing data so they make better decisions for an optimal manufacturing process.

SEAN HOLT

Sean Holt has more than 25 years of engineering, business development, sales and executive management experience. Joining Sandvik Coromant in 2000 as a sales engineer, Sean has built his career as an application development specialist, aerospace manager and vice president of engineering. Now as president of Sandvik Coromant responsible for North and South America, Sean's international business experience provides a critical foundation in an era where manufacturing and production transcends geographical borders. Focused on improving the customer experience, Sean actively works to deliver high-value solutions. He recognizes the importance of digitalization and fully drives and supports the future of manufacturing.

ABOUT SANDVIK COROMANT

Part of global industrial engineering group Sandvik, Sandvik Coromant is at the forefront of manufacturing tools, machining solutions and knowledge that drive industry standards and innovations demanded by the metalworking industry now and into the next industrial era. Educational support, extensive R&D investment and strong customer partnerships ensure the development of machining technologies that change, lead and drive the future of manufacturing.





HEIDENHAIN announces that Community College of Denver (CCD) is their first Authorized Training Partner for HEIDENHAIN TNC controls in North America.

COMMUNITY COLLEGE OF DENVER BECOMES FIRST ATP OF HEIDENHAIN CONTROLS IN NORTH AMERICA

HEIDENHAIN is proud to announce Community College of Denver's (CCD) Advanced Manufacturing Center (AMC) as the first HEIDENHAIN authorized training partner (ATP) focusing on its CNC controls in North America. Here, both students and industry stakeholders alike can now access and train on the latest in state-of-the-art manufacturing equipment.

To become a HEIDENHAIN ATP, CCD staff completed several rounds of advanced training on the 5-Axis HEIDENHAIN TNC machine controls and successfully passed an extensive exam.

"We are thrilled to be able to contribute to domestic manufacturing with these advanced capabilities," said Matthew Sweeney, AMC director. "It's exciting to see what can now be done just by knowing what buttons to push on these conversational and effective HEIDENHAIN

controls. And we are just scratching the surface of what these HEIDENHAIN controllers can do. Even the most experienced machinist can benefit from these advanced capabilities."

HEIDENHAIN's TNC Business Development Manager Gisbert Ledvon explained that, "HEIDENHAIN has been in a relationship with CCD and their Advanced Manufacturing Center in Colorado since 2015, including participating in multiple joint workshops held at CCD for 5-axis machining covering theoretical and practical parts." There are multiple HEIDENHAIN TNC controls in operation at the AMC, and student classes are currently being offered there from basic to advanced control programming and training.

More information on HEIDENHAIN control training opportunities at CCD can be obtained from CCD Machining

Instructor Eric Miller at 303.352.3060 or online at CCD.edu/Machining.

CCD is now listed online as one of the global ATPs of DR. JOHANNES HEIDENHAIN GmbH, and other North American institutions are now invited to apply to the ATP program as well. More information about ATP program partnership is available from HEIDENHAIN.

This expanded HEIDENHAIN ATP program is part of a larger North American TNC support initiative. This new support includes increased control training at HEIDENHAIN offices in the Schaumburg, IL, an establishment of a controls application group with dedicated contact information (TNCApplications@heidenhain.com), as well as a hotline for on-the-go technical support (847-490-0351, ext. 2).



HEIDENHAIN

NATIONAL TOOLING & MACHINING ASSOCIATION

1357 Rockside Rd.
Cleveland, OH 44134



MANUFACTURING AMERICA'S FUTURE

THE RECORD

2019 EMERGING LEADERS CONFERENCE

A photograph of four people (three men and one woman) gathered around a whiteboard. The woman, with blonde hair and wearing a blue button-down shirt, is pointing at the whiteboard with a yellow marker. The other three people are looking at the whiteboard with interest. The whiteboard has some handwritten text and a star drawn on it.

*Today's best and
brightest are gearing
up for tomorrow's
manufacturing
industry.*

APRIL 29, 2019

LOUISVILLE, KY



Additional details inside,
or visit: www.NTMA.org