



tma news bulletin

THE VOICE OF ILLINOIS MANUFACTURING

HELP WANTED

SKILLED WORKFORCE FOR THE FUTURE
OF MANUFACTURING





tma news bulletin

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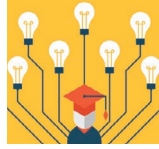
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technology & manufacturing association

The Technology & Manufacturing Association (TMA) was founded in 1925 by eight small manufacturing companies who believed they could better themselves by associating with one another. Through the years, members established programs and services that would help their businesses grow and prosper, train their employees, and provide medical and retirement benefits. As a result of these efforts, TMA has grown into a not-for-profit organization of precision manufacturing and supplier companies in the greater Chicago area.

TMA is governed by a Board of Directors, composed of executives from member firms. A full-time professional staff works closely with the Board, its committees and trust.

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message from the president



TMA Members & Friends,

It's the People.

We're all understandably proud of TMA's updated Schaumburg location with its state-of-the-art "*hands-on*" training center and six, well equipped classrooms. However, as you read this issue of the TMA News Bulletin, keep in mind that our unqualified success is ... the people.

First, we have members willing to invest in their employees. These members use TMA's training programs to help build the next generation of skilled workers by sending their best and brightest and paying their way.

Second, we have a Manufacturing Education & Careers Committee (MECC) that has patiently guided TMA staff over these last five years as we've rebuilt TMA's Training and Education program. These volunteers have invested countless hours reviewing curriculum, helping recruit instructors, supporting TMA's staff, and counseling the association in numerous ways.

Third, we have a fantastic group of instructors! These men and women work hard at TMA member companies. Following their shift, grab dinner on the fly, get on the road, and show up at TMA to teach the next generation. I cannot remember in my three plus years at TMA a single class being cancelled because an instructor did not show up. TMA has training for the industry by the industry, and we're proud of it.

Fourth, we can all be proud of Patrick Osborne and the Training & Education staff he's assembled. No task is too small, or challenge too big for Patrick or Jack Krikorian or Leigh Coglianesse to tackle and accomplish and make sure our classes work for our students and our members.

The suburbs are dotted with Community Colleges and training centers, some of them mostly empty. I sit in on several meetings each month as organizations come to TMA to find some of our secrets to success. And in meeting after meeting, it is clear to me that the secret to TMA's success in training and education is the people.

When you and your company pay your dues, purchase insurance from TMA, complete an IMEC survey, participate in our Grainger program, or ship by Yellow Freight, you help provide the financial infrastructure that makes our training and education possible. When you share an instructor or send a student to our classes you're helping to build the human capital we need to keep your company, your region and your country competitive in the future.

We're doing the right things, the right way, so take a minute to pat yourself on the back, and remember it is really about the people.




Steve Rauschenberger

HELP WANTED: SKILLED WORKFORCE FOR THE FUTURE OF MANUFACTURING

AVAILABLE: Six-figure position with limitless potential and opportunity that requires no education debt and offers employer-paid training in the high-demand STEM field.

Sound too good to be true?

Sixty-five percent of those responding to Industry Week's latest survey said their manufacturing companies had trouble filling skilled worker positions last year.

And finding qualified candidates is not expected to get easier in the near future.

A less-than-adequate technical training pipeline and the industry's inability to connect with young people as they decide on a career are leaving a worrisome void, the survey responders said.

Hold that thought ...

Now let's look at where those badly-needed, hard-to-find workforce candidates are.

The latest stats from the Illinois State Board of Education show that eighty-six percent of Illinois' students graduate from high school. In 2016, only twenty-five percent of those graduates were deemed "college-ready" in math, science, reading and English. And forty-nine percent of them were forced to take remedial courses in community college.

Things need to change badly, ISBE spokesperson Jackie Matthews told Illinois News Network's Ben Yount.

"It really is flipping the mindset. It's students graduating not college-ready, not career-ready. That's on us," she said. "That's on us – as the administrators, the policy makers, the educators, the leaders in the classrooms and schools."

"It's on school officials to make high school an engaging, important and meaningful experience that benefits students and helps create a launch pad for the rest of their adult lives," Matthews said.

"It's not just about 'Oh, what was my GPA?' It's about 'Did I learn skills that are going to benefit me the rest of my life?'" she said.

Illinois isn't alone in this devastating mismatch between the next generation and future career opportunities. It's an ongoing national dilemma.

The current schooling culture expects bright, talented teens to head for college – funded by either parents and/or scholarships or by loans and grants. More often than not, the "pay later" path places a financial burden of tens, if not hundreds, of thousands of dollars on students before they are able to embark on their careers.

Paying off those exorbitant college loans sets back twenty-somethings just as they enter the workplace with a diploma in one hand and a "bill due" notice in the other. Parents deal with the guilt of not being able



to help more, but they're working hard to pay for younger kids' college bills or trying to get their own mortgage paid off before they retire.

The good news is that more and more high schoolers are realizing a better choice may be available: a career in the fields of "STEM" – short for science, technology, engineering and math.

Indeed, years ago, similar classes had less-than-glamorous nicknames such as "shop class," "machine shop" or "vocational training." Now they're called "STEM" classes, polishing up a whole new image while recognizing the knowledge and skills manufacturing and technology careers demand in math, chemistry, metallurgy, physics, engineering, computers – and on and on.

Along with the no-nonsense "STEM" labels come visions of futuristic projects in aerospace, medicine, automotive, robotics and technology.

Chicago area high schools seem to slowly be responding to the call for more STEM class options.

In northwest suburban District 211, the number of students in Palatine and Schaumburg studying

manufacturing increased by 79% from 2014 to 2016. In nearby District 214, the number of manufacturing students in Wheeling, Rolling Meadows and Elk Grove grew by 82% in the same years, according to Northwest Educational Council for Student Success stats.

In 2016, more than 9000 students in the region engaged in course work teaching skills in demand in manufacturing.

Still, the stigma surrounding manufacturing careers remains an obstacle in attracting future tool & die makers, moldmakers and CNC machine operators.

Cook County and Chicago are plagued with 16- to 19-year-olds out of school and out of work with no high school diplomas. The most depressed Chicago wards show 44 percent of 16- to 19-year-olds and 45 percent of 20- to 24-year-olds are now on dangerous streets with little or no future ambitions – while manufacturers are going without jobs being filled.

The challenge manufacturers face is getting the message to those that would benefit the most from an energetic, collaborative plan.

TMA's Education Foundation is onto the need, and working on solutions to see more and more of the next generation pick STEM careers for brighter futures.

Thus far this year, the Foundation raised and distributed over \$166,000 in grants to local high schools to upgrade machines, buy new equipment and simulators.

The TMA Education Foundation is committed to strengthening and preparing the next generation of manufacturers, helping to develop skilled workers and increasing outreach efforts for recruiting those that can fill the increasing void as Baby Boomers retire.

At the same time, TMA is reaching out to high schoolers through its annual precision machining competition and sending another 38 new trained graduates into the workforce.

Finding skilled workers will be an ongoing challenge for manufacturers for years to come, but where there's a will, there's a way.

TMA is doing its part.

To learn more about TMA's Education Foundation, contact Greta Salamando at gsalamando@tmaef.org

TEACHING THE NEXT GENERATION OF DIE DESIGNERS

RAY PROEBER | ACCURATE DIE DESIGN SOFTWARE



By Fran Eaton

To say that designing dies has changed dramatically in the last two decades is an understatement, TMA instructor Ray Proeber says.

“15 years ago, if someone said they could design a 12-station die that’s a few feet long with 100 percent detail and not have any mistakes, any die designer would lose respect for him because you’d know it wasn’t going to happen,” Proeber, who is also owner of Accurate Die Design Software, told TMA’s News Bulletin.

“Today, designing virtually mistake-free dies with 3D die design software can and does happen every day, thanks to being able to build and tryout the die virtually on the computer screen,” he said. “It’s very much the real thing.”

Ray Proeber not only runs his own software business based near Milwaukee, he is also teaching the first 20-week die

design class TMA has offered in twelve years.

Teaching die design to the next generation with 3D software takes someone with skills and experience with 2D design – and a willingness to share hard-earned information with future die designers.

“We’ve all heard that question, ‘Where are the new workers?’ In my opinion, it all starts with design. That’s the foundation. It’s like building a house. The design of a die is the foundation,” Proeber said.

Before starting his die design business that ultimately evolved into a software business, Proeber worked on the bench as a tool & die maker for 15 years and served in management for 8 years. He says he’s heard many times that unless a person spends time building dies, he or she can’t be a good die designer.

“That’s no longer true,” Proeber said. “Now with 3D software, a person can design without toolmaking experience.” Today people build dies and run them on the computer screen as if they are in the press to gain experience, he said.

Proeber’s start in the industry was forty years ago – way before 3D software was used in the industry. He first became interested in manufacturing as a teenager.

“When I was in high school, I had lots of shop classes – everything that was available,” he said. After graduating, Proeber’s dad saw an ad in the paper for a tool & die maker in Racine, Wisconsin. “I wasn’t sure what they did, but I figured it was something like a machinist, so I applied for the job – and got it.”

For the next 15 years, Proeber built dies during the day. About 5 years into it, he also started designing them at home in the evenings with paper and pencil. This later transitioned to designing at home with 2D die design software.

Proeber eventually accepted an offer at a different company, where he served for 8 years as tool department manager and later as vice-president.

Shortly after taking a job with another company, the company owner was met with health challenges. He chose to downsize the company and encouraged Proeber to start his own business.

The idea appealed to Proeber. “As you get older, and it comes time to leave a job, you think, ‘Do I want to do this all over again for someone else?’” he said.

That was 16 years ago. Months before September 11, 2001 – when everything in the American economy took a major hit, Proeber started a die design business in the Milwaukee, WI area. After surviving a rough start the company grew within a few years to having 3 full-time die designers on staff, all using 2D die design software.

A few years after starting the business, 3D die designing was emerging and looked to be the future. But 3D design

software was slow and difficult to use in those early years.

On one hand, 2D software was a known entity and on the other hand, 3D software would be the future, and could do so much more. Proeber spent hours teaching himself 3D software, and even traveled to China to learn one company’s die design software from its originator before realizing that this product wasn’t a good solution. The trial and error of finding the right software was expensive and frustrating, Proeber said.

“We talk about being on the ‘bleeding edge’ of technology, we were there,” he said. “We take some of it for granted, but we were leading the way.”

Proeber’s company eventually became the US technical center for SolidWorks-based Logopress3 die design software, and before long, they were developing software more than designing dies. The company recently changed its name from Accurate Die Design to Accurate Die Design Software and moved to Brookfield, WI.

Proeber teaches the next generation of die designers at TMA using the most commonly-found 3D die design software – SolidWorks & Logopress3.

“It is a giving-back sort of thing,” Proeber said. “You have all this knowledge that you want to pass along. And yet at the same time I realize that there is so much more out there that I really don’t know.”

The wonderful thing about the tool & die business is that you’ll never know everything, Proeber said.

It is well known that the best teachers are the ones that realize how much there is yet to learn.

Maybe that thinking is what makes Ray Proeber so good at what he does.

Reach Ray Proeber | Accurate Die Design Software
www.diedesignsoftware.com | Brookfield, Wisconsin.



Ray Proeber (top right) teaching his die design class at TMA.

UNIVERSITY OF ILLINOIS GRAD STRONGLY RECOMMENDS TMA DIE DESIGN CLASS



By Fran Eaton

Holly Siwinski is the only girl in Technology & Manufacturing Association's new Die Design Class.

But that's not unusual for her, she says. The 25 year old's early interest in how things work set her into a career path dominated by males.

"I was always watching television shows about how things work and asking my mom how things are made, even when I was little," she told the News Bulletin. "I was also really good at math and physics. That's why a high school teacher recommended I go into mechanical engineering."

Holly was one of ten women that earned a mechanical engineering degree among a couple of hundred men at the University of Illinois in Chicago in 2013. That year, she interned for three months at Principal Manufacturing in Broadview, Illinois.

When she completed her degree, she went back to Principal and they hired her on as an engineer administrator and junior tool designer.

"My job is to design fixtures, gauges, make digits to dies and do digit analysis for our engineering department," she said.

All those tasks bring together the experiences and knowledge Holly acquired at the University of Illinois, where she worked on industrial engineering projects from making bus and train seats 50% lighter to redesigning their classroom to increase efficiency.

Holly took chemistry and physics classes, learned about metals, plastics, sand casting and molding – all information crucial to the work she does today.

So why, after all those advanced level classes, did she take TMA's new computer 3-D die design class now taught by TMA instructor Ray Proeber?

"It's amazing how much you can do with this program Ray's teaching us. It's insane. I don't know how tool & die makers did it back in the day," Holly said.

One of Holly's co-workers at Principal took the same class on AutoCAD and her boss asked her if she would like to take the class, thinking she would do really well.

He was right.

Learning in the TMA class how to use the Solidworks software is worth the time and effort, she said.

"I love the class. I use Solidworks every day at work," she said. "There's actually things I'm learning about Solidworks that I never knew before – just from what Ray is teaching us. Little shortcuts that I use at work every day now. It's very, very helpful."

And what does Holly think she'll be doing in ten years?

"I honestly don't know," she said. "I would like to see where this die design thing will take me – but something in aerospace would be really cool."

In the meantime, Holly says when she's not working, she'll be responding to her inquisitive young niece and baby nephew.

"My niece is a lot like I was, asking lots of questions," Holly said. "Maybe she'll follow my lead. I do hope more and more girls like her will take these TMA classes in the years ahead."



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TRAINING THE FUTURE

2017 RELATED THEORY GRADUATION

Thirty-eight students were honored for completing the Technology & Manufacturing Association's three-year Related Theory Apprentice Training program May 25, 2017.

"There's a critical shortage of skilled labor with the retirement of baby boomers creating a growing skills gap for manufacturers. This program helps close that margin and provide these students a bright future in manufacturing," Patrick Osborne, Vice President of TMA's Education & Training told the graduates, their families and friends.

"TMA's training is the gold standard for precision metalworking. The program is invaluable to students as they gain skills, opportunity and employment with little or no debt," Osborne said.

The TMA students attend a 3-hour class twice a week for 28 weeks a year while working full time at one of over 800 TMA member companies, who sponsor the cost of their employees' training.

During the first year, students are taught basic skills such as shop math, blueprint reading and machine tool basics.

In the second year, students focus on the basics of either mold making, tool & die, or computer numerical control (CNC) programming.

In the third year, students engage in the advanced study of their area of focus chosen in their second year.

CNC Programming instructor Jack Krikorian presented certificates to the 13 completing the CNC Programming three-year program:

- Michael Barnas
- Nicholas Baum
- Rodrigo Becerra
- Shaun Eller
- Robert Eschbach
- Michael Glisson
- Bryan Hale
- David Hernandez
- Jasen Horsfall
- Ben Johnson
- Gonzalo Lechuga
- Joshua Perez
- Juan Puga

Tool & Die Making Instructor Rich Nielsen recognized 19 Tool & Die Making graduates:

- Clayton Belcher
- Jeremiah Blakenbaker
- Steven Curry
- Joseph Ducato
- Jesse Gallois
- Alexander Glogowski
- Aaron Hadesman
- Anthony Hill
- Ryan Houck
- Bryan Kotlowski
- Zuriel Luna
- Jeffrey Misener
- Edgar Olivares
- Michael Parson
- Thomas Reynolds
- Eduardo Rodriguez
- Richard Schildgen
- Jaeik Shim
- Jeremy Wagner

Joe Genc, head Mold Making instructor, handed certificates for completing the Mold Making Program to:

- Colin Bodan
- Paul Boyer
- George Brumfield
- Craig Everhart
- Edward Pieszchala
- Patrick Walton



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TMA 2017 RELATED THEORY GRADUATION

MAY 25, 2017
STONEGATE CENTRE, HOFFMAN ESTATES, IL





FIND MORE PHOTOS ON TMA'S FACEBOOK PAGE

TMA EDUCATION FOUNDATION SUPPORTS STREAMWOOD HIGH SCHOOL



(R to L) Streamwood instructor Matt Erbech, Ryan Wiegel, TMA Chairman Aaron Wiegel

TMA's Education Foundation presented a check for \$6,500 to Streamwood High School's manufacturing education department to be used for updating the school's eleven Bridgeport-type manual milling machines.

The update is necessary in order to produce the National

Institute for Metalworking Skills Vertical Milling Operation project.

TMA Education Foundation board member Ryan Wiegel and TMA Chairman Aaron Wiegel visited Streamwood High to present the check.

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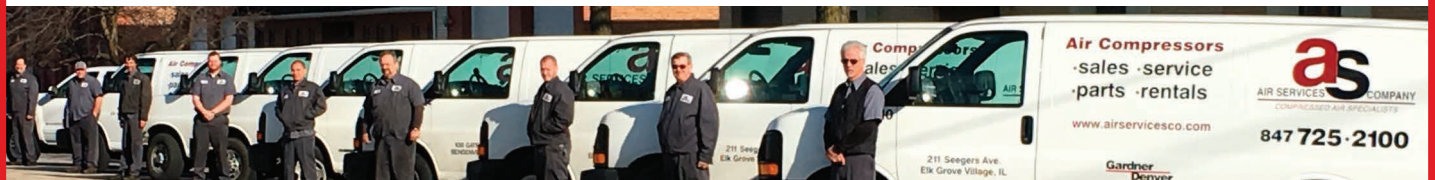


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ILLINOIS LIEUTENANT GOVERNOR KEYNOTES TMA 2017 GRADUATION



Illinois Lieutenant Governor Evelyn Sanguinetti was the keynote speaker at TMA's 2017 Related Theory Graduation.

"For three years, you've spent countless evenings away from the comforts of home to learn these skills so you can have a better future – not only for you, but your families," she told the graduates.

"You didn't believe in excuses. You didn't believe in 'get rich quick' schemes," she said. "You understand that to achieve dreams and visions, we must work hard, we must be dedicated, we must be willing to sacrifice - because nothing in life comes easy."

Sanguinetti said during her and Governor Bruce Rauner's visits to manufacturing companies throughout Illinois, she learned about the growing urgency in finding a trained workforce.

"Today, I'm looking at a lot of young professionals that can fill that gap. And I'm so proud to be here and welcome you into that incredibly well-qualified and well-paid workforce," she said.

Sanguinetti recognized TMA for providing training for the next generation of manufacturers. She thanked TMA member companies for sponsoring students and allowing them to further their education – at no cost to the students.

"Programs like this show that when we work collaboratively, we can do so much good for our

communities and our great state," Sanguinetti said.

Before the TMA graduation ceremony, the lieutenant governor privately met with a group representing the Women of TMA, which is chaired by Stacia Hobson, co-owner of Image Industries in Huntley, Illinois.

Sanguinetti told the women gathered that Governor Rauner is actively encouraging high schoolers to consider STEM educations that can lead to high-skilled jobs with bright futures.

"Bruce and I are big on that. We want people to find good-paying jobs to stay in Illinois," she said.

Mrs. Sanguinetti, an attorney from DuPage County, is the nation's first female Latino lieutenant governor.



TMA INSTRUCTOR JOE GENC RETIRES

HONORED AT 2017 RELATED THEORY GRADUATION



Joe Genc (seated second from left) with his family that surprised him by attending the TMA graduation and celebration honoring him.

At TMA's 2017 Related Theory Graduation, retiring Mold Making Instructor Joe Genc was honored by students, colleagues and family.

"The industry knows him as 'Two-Tenths Genc,' a nickname he received for his meticulous mold-making skills," former student Dan Haener, now a TMA instructor, told the audience. "Joe Genc is one of the kings of our industry."

In his fifty plus years in manufacturing, Genc founded Atron Tool with his father in 1964; taught mold making since the 1970s; advised both secondary and collegiate levels of vocational training; wrote the original moldmaking manual for American Mold Builders Association (AMBA); designed thousands of molds; and was most recently named AMBA's 2017 Mold Builder of the Year.

Haener told of Genc's gracious commitment to him early on in his career, when as a 19 year old apprentice, Haener lost his two moldmaking mentors. Genc stepped up to encourage Haener to stick with the industry.

"It wasn't the words he spoke as much as the passion in his voice which made me want to stay in manufacturing," Haener said. "You could see the enthusiasm in his face and the sparkle in his eyes, and it was contagious."

"Every time I step before one of my classes, I think of how Joe's boundless energy and passion inspired me, and hope that I may inspire the next generation of mentors in the same way," Haener said.

Genc celebrated the last chapter in his 26-year TMA teaching stint with a surprise appearance from his family. TMA presented Genc with its trademark honorary cannon, made by TMA instructors and students.

"I think that most mold makers would agree that they're a little sad when a mold or die or special machine project leaves the shop, because part of them is with that," Genc said. "That passion will remain here with TMA. It isn't going away."

"I want to thank you for honoring my life this way – and for a wonderful career," he said.



Joe Genc (right) with Patrick Osborne, TMA VP of Training & Education

tma | events

JULY 19

Manufacturers' Breakfast | Rockford

TMA and Midwest Community Bank of Rockford are hosting an informal manufacturers' breakfast event designed to build and strengthen the manufacturing community in the area.

TIME: 7:00am - 8:00am

COST: Free

LOCATION: Rockford, IL

JULY 20

Manufacturers' Breakfast | Tinley Park

Join fellow south suburban manufacturers for an informal manufacturers' breakfast with guest speaker Bryan Gay, North East Regional Manager of the Illinois Department of Commerce & Economic Development; and Mike Wilson, Instructor from Rich East High School's manufacturing program.

TIME: 7:00am - 8:30am

COST: Free

LOCATION: Tinley Park, IL

JULY 20

Lunch & Tour: Matrix4

The Women in TMA Committee is hosting a lunch and tour for all TMA members at Matrix4 - a customer-centric design and manufacturing house that collaborates with makers of all types to take ideas from mind to plastic.

TIME: 11:30am - 1:30pm

COST: \$35 (lunch included)

LOCATION: Woodstock, IL

JULY 28

TMA Bike Ride

Join TMA members for a 20-mile social bike ride that begins in Centennial Park in Naperville and ends with bites and beverages at Empire Burger Bar.

TIME: 1:30pm departure

COST: Free

LOCATION: Naperville, IL

AUGUST 10

Lunch & Tour: Made to Measure

Made to Measure is an ISO 17025 accredited precision measurement laboratory with a full array of measuring services, CMM machines, as well as training courses to support the field metrology.

TIME: 11:30am - 1:30pm

COST: \$35 (lunch included)

LOCATION: East Dundee, IL

AUGUST 10

Women in TMA: Conversations & Cocktails

The Women in TMA Committee is hosting an informal social networking event for women manufacturers.

The event includes guest speaker, Melissa Timberlake, who will be discussing "Communicating & Holding Boundaries."

TIME: 4:30pm - 6:30pm

COST: \$30

LOCATION: Chicago, IL

AUGUST 10

Young Leaders Happy Hour

Join the Young Leader's Committee for a Summer Happy Hour in downtown Palatine at Lamplighter Inn, located off of the Union Pacific Northwest Metra line. Come hang out on the patio and meet fellow industry members in a relaxed setting. Open to all members!

TIME: 5:00pm - 7:00pm

COST: \$35 (includes food and beverages)

LOCATION: Palatine, IL

AUGUST 22

Finance Peer Group

Join your CFO, comptroller and accounting peers to discuss challenges, strategies and solutions in the area of finance. For manufacturer members only.

TIME: 11:30am - 1:30pm

COST: Free

LOCATION: Schaumburg, IL

AUGUST 23

Safety Peer Group

Join your TMA peers. This month's topic: Personal Protective Equipment (PPE) Hazard Assessments. Providing PPE is not enough. Learn about OSHA's expectations regarding PPE and how a Hazard Assessment is completed.

TIME: 11:30am - 1:30pm

COST: Free

LOCATION: Schaumburg, IL

AUGUST 25

Golf Outing - Cog Hill Country Club

Join fellow TMA members for the final golf outing of 2017 at Cog Hill Golf & Country Club. The outing includes 18 holes with cart, prizes for the top 25%, BBQ ribs and chicken lunch, contests and watering holes. Sponsorships available.

TIME: 8:00am sign-in

COST: Early Bird ~ \$150/Ind. | \$550/foursome

Regular Price (After Aug. 11) ~ \$165 | \$625

LOCATION: Lemont, IL

AUGUST 29

Northern Illinois Food Bank

TMA's Christians in Manufacturing are hosting their second annual volunteer event at the Northern Illinois Food Bank in Geneva, IL. Consider participating in a good cause with great friends and fellow TMA members.

TIME: 5:30pm - 8:30pm

COST: \$10 (includes pizza)

LOCATION: Geneva, IL

SEPTEMBER 21

Arlington Race Day Event

The Supplier Network Committee is hosting an afternoon at Arlington International Race Course. Join your peers for food, libations and premium seating at the top of the stretch.

TIME: 1:00pm - 4:00pm

COST: \$75

LOCATION: Arlington Heights, IL

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TMA 2017 PRECISION MACHINING COMPETITION

PARTICIPATION SURGES AS EVENT CELEBRATES 26 YEARS

Hundreds of precision tools made by Chicago area high schoolers were on display at Mazak's Midwest Technology Center May 11, 2017, as the Technology & Manufacturing Association (TMA) held its 26th annual Precision Machining Competition Awards night.

Parents, high school instructors and manufacturing reps were on hand as students learned how their work rated in comparison to their peers.

"Every society's wealth and success comes from three things: from what they mine, what they grow, and what they make. All of you today are makers," TMA President Steve Rauschenberger told the students. "I represent 700 companies from the surrounding seven counties that have opportunities for you if you're interested in pursuing a career in manufacturing."

Manufacturers are eager to find talented tool and mold makers in a career field

that is enjoying newfound attention. This year's TMA competition drew the interest of a record-high 19 area high schools with nearly 300 machining projects, up from 100 five years ago.

Area manufacturers volunteered their professional engineers and toolmakers to judge the submissions. Forty-three different winners were awarded for their excellent work in machining projects such as precision vices, depth gauges, CNC turning, CNC milling and CNC programming.

"These students are the future of American manufacturing, and we're delighted that not only is the interest growing in this career, so is the quality of the work these students are submitting. This year we had four submissions that were graded at the highest level – perfect," said Patrick Osborne, Vice President of TMA Training & Education.

"That says a lot about the seriousness of the students and their instructors. We congratulate them all."

High schools that participated in this year's competition included: East Leyden, Elk Grove, Hampshire, Harvard, Homewood-Flossmoor, Jefferson, John Hersey, Lake Park, McHenry East & West, Palatine, Rich East, Rolling Meadows, Schaumburg, South Elgin, Streamwood, West Leyden, Wheeling and Woodstock.

ADDITIONAL PHOTOS OF THE 2017 TMA PRECISION MACHINING COMPETITION CAN BE FOUND ON THE TMA FACEBOOK PAGE





2017 PMC HOST:
Mazak

TMA INSTRUCTOR JACK KRİKORIAN ELECTED CHAIR OF NIMS ADVISORY COUNCIL



Jack Krikorian explaining some of the training equipment in TMA's state-of-the-art training center.

In June, the Technology & Manufacturing Association's Director of Curriculum and Instruction Jack Krikorian was elected to serve as Chairman of the National Institute for Metalworking Skills (NIMS) Advisory Council.

"I am excited to be able to have even more of an impact on the next generation of manufacturing leaders in the United States. Based on the drive I have seen in the students I've trained, as well as the growing demand for skilled workers, I believe manufacturing in the US has a bright future," said Krikorian when he learned of his new responsibility with NIMS.

A graduate of TMA's own apprenticeship program in the 1980s, Krikorian now heads curriculum and program development for the TMA, in addition to teaching both beginner and advanced computer numerical control (CNC) courses. He has over 30 years of experience in manufacturing and holds 24 NIMS credentials, the most of anyone in the US.

Formed in 1995 by the metalworking trade associations to develop and maintain a globally competitive American workforce, NIMS sets skills standards for the industry, certifies individual skills, and accredits training programs

that meet quality requirements. NIMS has a stakeholder base of over 6,000 metalworking companies and partners with a number of major trade associations in the industry.



Jack Krikorian recognizing students at the TMA Related Theory Graduation

ADVOCACY: TMA SUCCESS WITH COOK COUNTY ORDINANCE OPT-OUT CAMPAIGN

In May, the TMA Government Relations Committee reported that 32 Cook County municipalities had chosen to use their home rule authority to reject two new employee-related, anti-business ordinances the Cook County Board created despite numerous regulations already governing the employee/employer relationship.

Since then, the number of local cities and towns “opting out” has more than tripled. As of this printing, the number stands at 97.

One ordinance going into effect requires Cook County businesses to provide five paid days off for sick leave after 120 days being employed full- or part-time. The second raises the county’s minimum wage to \$13 per hour by the year 2020.



Below is an updated list of 97 of 134 municipalities that chose to “opt out”:

- | | | | | | |
|-------------------|--------------------|------------------|-----------------|------------------|-----------------|
| Alsip | Chicago Heights | Harwood Heights | Maywood | Palos Park | South Holland |
| Arlington Heights | Chicago Ridge | Hickory Hills | Melrose Park | Park Forest | Steger |
| Barrington | Cicero | Hillside | Midlothian | Park Ridge | Stickney |
| Bartlett | Country Club Hills | Hinsdale | Morton Grove | Posen | Streamwood |
| Bedford Park | Crestwood | Hodgkins | Mount Prospect | Prospect Heights | Summit |
| Bellwood | Des Plaines | Hoffman Estates | Niles | Richton Park | Thornton |
| Bensenville | East Hazel Crest | Homewood | Norridge | River Forest | Tinley Park |
| Berkeley | Elgin | Indian Head Park | North Riverside | River Grove | Westchester |
| Blue Island | Elk Grove Village | Inverness | Northbrook | Riverside | Western Springs |
| Bridgeview | Elmwood Park | Justice | Northlake | Rolling Meadows | Wheeling |
| Broadview | Evergreen Park | La Grange | Oak Forest | Roselle | Willow Springs |
| Brookfield | Flossmoor | La Grange Park | Oak Lawn | Rosemont | Wilmette |
| Buffalo Grove | Forest Park | Lansing | Orland Hills | Schaumburg | Worth |
| Burbank | Franklin Park | Lemont | Orland Park | Schiller Park | |
| Burnham | Glenview | Lincolnwood | Palatine | South Barrington | |
| Burr Ridge | Golf | Lynwood | Palos Heights | South Chicago | |
| Calumet Park | Hanover Park | Lyns | Palos Hills | Heights | |

WOMEN IN TMA SOCIAL NETWORK



Members of the Women in TMA enjoyed an evening of fun at Pinstripes in South Barrington. This social event included networking, dinner and Bocce Ball, hosted by Sussetti. A great opportunity to get out of work a little early and enjoy the summer weather with friends and colleagues alike.



consider serving on a committee

tma needs you

TMA's Manufacturing & Education Career's Committee, or MECC as it is commonly referred to, is openly recruiting new members onto this exciting committee. MECC's core mission is to assist the Association with the development, administration and evaluation of training and education classes that meet the needs of member manufacturing companies. Additionally, the committee works to promote the manufacturing sector as a viable career option while working with the Association staff to recruit students and to market the benefits of a manufacturing education.

The committee is charged with developing and coordinating training paths to increase both the skills and supply of manufacturing personnel. It also works to identify sources for metal working equipment for use in training and to actively develop career paths and implement the programs needed to support said paths.

Members of the committee are responsible for assisting in the recruiting of instructors for all aspects of manufacturing skills education. They assist in the monitoring and evaluation of all instructors, classes, facilities and programs.

MECC investigates and examines trends and innovations within the manufacturing industry. It is responsible for building a cooperative technical environment where member companies can unite in the pursuit of technical knowledge and expertise, and the promotion of the manufacturing sector to help members compete effectively in the world marketplace.

Over the course of the past 5-years, MECC has been instrumental in restructuring & developing many training initiatives, including, but not limited to the following:

- Re-launched Related Theory Apprentice Training
- Developed a new state of the art hands-on CNC training center
- Advancing technology & software initiatives in manufacturing
- Established a new workforce development track to fill the pipeline with skilled workers
- Re-establishing & creating new community college partnerships
- Working with local area high schools to create new metal cutting programs and councils
- Developed Careers in Manufacturing Guide & Careers in Manufacturing Roadmap
- Facilitating Annual Precision Machining Competition, now in its 26th year
- Facilitating annual student career fairs.

Next steps: Please sign up to participate on MECC now. Meetings are every other month at TMA and usually last 90 minutes. Bring your creativity and ideas. Help and assistance is particularly needed in the following areas of specialization:

- Tool & Die & Die Design
- Mold Making & Mold Design
- CNC Programming & Machining
- Marketing & Promoting Careers in Manufacturing
- Promoting TMA and Metals Trade to High Schools and Community Colleges

If interested in joining MECC, or for more information, please contact TMA at education@tmaillinois.org or call (847) 825-1120 ask to speak with Leigh Coglianese.

TMA LUNCH & TOUR: PRECISION ZONE



During Technology & Manufacturing Association's fourth "Lunch and Tour" in 2017, members discovered a Wheeling business where they can turn when their machines are in need of repair.

Precision Zone is a company that provides sales, exchange and repair services for a wide variety of industrial controls and components used in CNC, Robotics, Motion Control, Factory Automation, Crane, Elevator and related applications.

Founded in 2004, Precision Zone employs 25 people – many being focused on repairs to keep crucial machines online and valuable employees productive.

Their product range includes AC Drives, Motors, Controls, Encoders, Circuit Boards, Power Supplies, Operating Panels, Monitors, LCD Retrofits, a wide assortment of semiconductor parts and equipment accessories.

More at www.precisionzone.net



TMA AMBASSADORS | PAY IT FORWARD

TMA represents and advocates for members in state legislatures and classrooms, in the media and to opinion leaders.

However, TMA also helps members work *on* their businesses as well as *in* their businesses. We endeavor to understand our members' pain points, to solve their problems, and to complete and grow their companies through an array of benefits that meet the needs of today's manufacturers.

Help your fellow manufacturers. Bring them into TMA and become an ambassador for TMA and for your industry.



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