

# BUILDING THE FUTURE



The Foundation of the Fabricators & Manufacturers Association, Int'l.

## LETTER FROM THE BOARD CHAIRMAN

NBT has finished a record year which would not have been possible without the strong support of people like you. I've had the privilege of participating in this organization's development for the past four years and I could not be more pleased with the progress. NBT funded a record number of summer manufacturing camps in 2014 and a record number of scholarships.

Since the camp program started in 2004 we've influenced the lives of more than 2,685 young people through 140 camps in 34 states by introducing them to the vast number of career opportunities available in manufacturing. The majority of these 12-16 year olds had never before experienced the satisfaction of making something with their own hands; they had never set foot inside a manufacturing facility, or talked with an engineer, a laser operator or a plant manager. The NBT camp program opened these doors and sparked an interest in what may become a career path for many of them. Even those who do not ultimately go into manufacturing will always have a greater understanding of and respect for the sector of the economy that provides every item they touch in their daily lives.

NBT scholarship recipients run the gamut from recent high school graduates to mid-life career changers who return to school full-time to pursue a career in a manufacturing technology. We are pleased to be able to support these people as they prepare for their dream careers in the industry whether as an engineer, machine operator, tool and die maker, welder, or CAD designer. **The skilled labor crisis in manufacturing is so profound; we're gratified that we can play a part in helping to overcome it.**

Thank you for your support of NBT. We appreciate your generous gifts and the volunteer time you offer as scholarship application reviewers and camp mentors. You are making a difference in the lives of our next generation of manufacturers.

Best wishes for 2015,



Rory DeJohn,  
Sr. Vice President  
Turner Construction Co.



## NBT SCHOLARSHIPS REDUCE THE SKILLED LABOR CRISIS IN AMERICA

If you work in manufacturing – especially if you are engaged in the hiring or retention of skilled employees for your company – you are probably aware of the manufacturing skilled labor shortage. Dr. Chris Kuehl, FMA's economic analyst and managing partner of Armada Corporate Intelligence, has been describing the crisis and warning about its potential escalation for years. Because the majority of skilled workers currently employed in manufacturing came into the workforce in the 1960's and 70's, they are all preparing to retire at about the same time.

"During the period when they should have been training the next generation of skilled workers, society as a whole turned its back on manufacturing, and the blue collar professions in general", says Dr. Kuehl. "This was to be the post-industrial age, and everybody would be bound for college and white collar jobs while manufacturing would be done in low-wage nations, and technology would replace people in these avocations. Although some of that forecast proved correct, it wasn't the whole story. Jobs moved overseas and machines replaced people in many jobs, but at the same time the people who were needed were expected to have higher level skills. There was no attempt to address that need, and today there are serious gaps that are affecting the ability of companies and whole regions to grow."

**Today there are two jobs for every unemployed person in the country, according to the Federal Reserve. The problem is that almost none of the applicants for these jobs have the qualifications needed, so they remain without work, and businesses remain short of workers.**

To think that NBT can solve this national manufacturing dilemma alone is unrealistic. It is a problem that will take significant attention on many fronts. But the NBT summer manufacturing camps introduce hundreds of young people each year to the concept of manufacturing and the opportunities offered in its careers. In

the same way, the NBT scholarship program makes it possible for many young – and not so young – adults to prepare to fill those higher skill jobs that are so critical to North America's manufacturing future. Here is the most recent group to receive scholarships as the result of your support. **Each scholarship recipient will receive a \$2500.00 award to help pay for their college expenses.**

- Joshua Smith, Loveland, CO - Biomedical Engineering & Mechanical Engineering - dual BS degrees, Colorado State University
- Titus Shumaker, Oxford, MI - Mechanical Engineering, BSME, Kettering University
- Sydney Tefft, Salem, IL - Mechanical Engineering, BS, Saint Louis University
- Louis Bogowith, Gainesville, MO - Welding Certification, Lincoln College of Technology
- John Dubravec, Rockford, MI - Manufacturing Engineering, BS, University of Michigan
- Morgan Nash, Kettering, OH - Mechanical Engineering, BS, The Ohio State University
- Mark Emond, Jr., Oxford, WI - Automated Manufacturing Systems Technology (AMST) AAS, Madison Area Technical College
- Angela Aviles, Palatine, IL - Welding Technology/ Maintenance Technology AAS- Welding Technology, Certification in Maintenance Technology, Harper College
- Daniel Eatchel, Harrisville, UT - Production Welder Certificate of Completion, Ogden-Weber Applied Technology College
- Michael Murphy, Marion, IA - CNC Machining, AAS, Kirkwood Community College
- James McClure, Zimmerman, MN - Mechanical Drafting, AAS, Anoka Technical College
- Jovani Blas, Franklin Park, IL - Engineering Technology/ Mechanical Design, AAS, Triton College
- Robert Robinson, Niceville, FL - Drafting and Design, AAS, Northwest Florida State College
- \*Michael Czerniakowski, Toledo, OH - Engineering, BS, The Ohio State University

\*OPC scholarship endowment

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## SCHOLARSHIP RECIPIENTS – DIFFERENT BACKGROUNDS, SIMILAR PASSION ABOUT HOW THINGS WORK AND MAKING A DIFFERENCE IN THE WORLD

In 2014 NBT received more than 700 scholarship applications. Applicants came from many walks of life, a range of experiences, and range in age from 17 to 50. Despite varied backgrounds, a similar trait was exhibited by all of these people – a curiosity about how things “work” and a desire to find ways to make things work better.

Twenty-five individuals attended colleges and trade schools during the spring and fall semesters of 2014 assisted by NBT scholarships made possible by your generous donations. We hope you find it interesting to learn a bit more about some of the people whose lives will be forever changed by your commitment to the future of manufacturing.

### SIMILAR BUT DIFFERENT – THE ILLINOIS GUYS

Kirk Dickson and Alex Kinney are young men who grew up in the same part of Illinois, but could not be more different. The scholarship review teams gave both very high marks and as a result they began their post-secondary education this fall with NBT scholarships.



**Alex Kinney** is from the small town of Shirland, and grew up influenced by a father who could “make or fix anything”. Alex worked alongside his dad on a number of projects and loved working with wood. The engineering technologies teacher at his high school felt he was ready

for a bigger challenge and introduced him to welding. He is working on his welding certification program at Rock Valley College in Rockford, Ill., and hopes to combine his love of travel and the outdoors with his welding skills and start his career path with work on an oil pipeline. “For me welding is a new and exciting path to travel down, and the many different career choices available in the manufacturing industry are astounding”, he says. “I have been blessed to have some amazing teachers this semester. I was lucky to have been asked to help with a project building a monitor display mount for the aviation department at Jefferson High School in association with UTC Aerospace. It was a great learning experience and was a fantastic feeling to know that I was able to help in that project.”

**Kirk Dickson** is an NBT “legacy” – the second student in his family to win an NBT scholarship and to use it to attend Rose-Hulman Institute of Technology to study mechanical engineering. Kirk’s older brother was his role model, having won an NBT scholarship five years earlier.



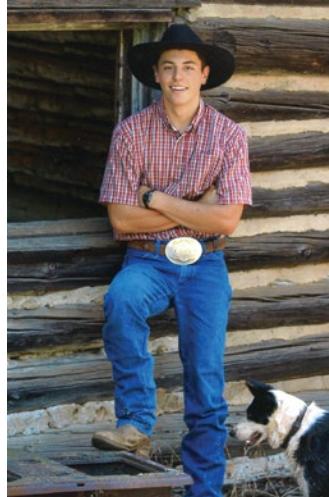
Kirk receives a ceremonial check from NBT president, Ed Youdell

Raised in Grayslake, Ill., Kirk was involved in Project Lead the Way – a new class at his high school in Engineering Design. It was that class experience – which involved designing and improving a “cable car” using just a handful of everyday materials like notecards, nails, waxed paper labels, a rubber glove, a wheel, and a wooden skewer that first sparked his interest in pursuing a career in mechanical engineering. There he could “be in charge of a design team with the goal of making innovations that would help improve daily life.” He cemented his decision after another project in PLTW where he was part of a team that designed a rocket ship on Autodesk Inventor and created a model via 3-D printing. Kirk’s plan is to complete his education and land the kind of “dream job” that his older brother has already achieved as an engineer.



## CATTLE RANCHER FROM CALIFORNIA

**Cody Butterfield** started young - at 14 to be exact - by purchasing his first truck with money he earned by selling the steers he raised for fair competition. Cody's passionate essay about how long and hard he worked on his \$500 truck to make it not just drivable but a vehicle he could be proud of, went a long way towards earning him the high marks he received from the industry scholarship reviewers. "Doing all this to my truck has not only allowed me to build my dream truck, but has taught me a lot about working on vehicles, given me time with my dad, and lessons in patience." If the work on his own truck was not enough, his senior year in high school included an auto shop class which seems to have cemented his future. "The class was one of my favorites... to be able to walk away each day learning something I know I will use has been great. To be able to work on something as intricate as an engine is awesome", he proclaimed. "Diesels are my favorite and with all the advanced technology in them, I know this will be a job in high demand." Cody is enrolled in the diesel mechanics program at San Joaquin Delta College.



## STARTING OVER HAS ITS CHALLENGES

Many companies closed their doors during the recession of 2008-10. **Don Cimaglia** of Marion, Iowa was one of the thousands of workers who lost their job because of such a closure. He made the tough choice - to go back to school at nearly age 50 to learn a new set of skills that would make him employable in the current economy. "I enjoy being a student at the age of 50. I'm surprised at how well I am received by the younger students. It is not without its challenges though."



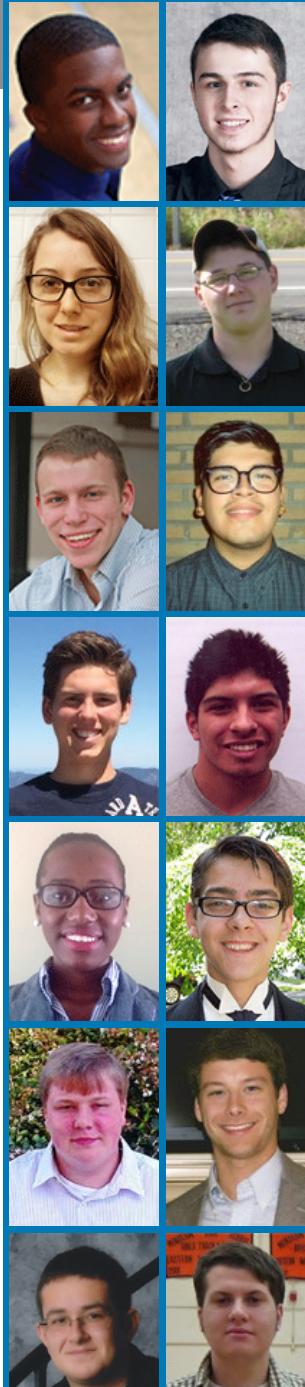
Getting up to speed with classes has meant many extra hours at the desk to complete my homework on time. However, I will be eligible to apply for both the honors program and the All-USA Academic Team in Nov. (2014)." Don is preparing for his second career by completing his AAS degree in CNC technology at Kirkwood Community College in Cedar Rapids as an NBT scholarship winner.

## There are many more ...

These are just four of the many scholarship applicants who find their way to Nuts, Bolts & Thingamajigs to seek financial assistance to fulfill their manufacturing goals. For example, the foundation has also been able to provide scholarships to two amazing young women this year, both immigrants to the U.S. - one from Rwanda and the other from Poland - with drive, maturity, and academic achievement that demonstrate how hard they have worked to overcome a challenging past. And the number of bright, articulate young Americans who have achieved scholarship awards from NBT would give anyone a sense of confidence about the future of manufacturing in this country.

Yes, there still is a skills gap and a shortage of qualified applicants for available jobs in manufacturing, but with your support NBT can continue to overcome this challenge by helping more future manufacturers build their skills and achieve their dreams of making our world a better place to live. Please consider a gift today at [nutsandboltsfoundation.org/donate](http://nutsandboltsfoundation.org/donate).

## 2014 Scholarship Winners



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## THERE'S NOTHING WRONG WITH A LITTLE FUN – ESPECIALLY WHEN IT'S FOR A GREAT CAUSE

There are many ways to support an organization like Nuts, Bolts & Thingamajigs. Over the years it has become apparent that people who work in or are connected to manufacturing enjoy combining philanthropy with a little fun. For example, on one summer day each year Midwestern manufacturers and other supporters gather at a Chicago-area golf course to help raise funds for NBT by participating in **GOLF4MFG**. Its 2014 location was historic Itasca Country Club and more than 70 determined golfers defied the rain threats of Mother Nature to enjoy a wonderful day of camaraderie while helping to **raise more than \$13,600 for the programs of NBT**.



Manufacturers also seem to love auctions; two of NBT's biggest fundraisers of the year are silent auctions. **The annual silent auction held each February** during FMA's co-located Leadership Summit and Toll Processing Conference brings out the competitive spirit in all participants. In the most recent auction more than 50 auction items ranging from a chain saw to a custom-made guitar to a signed Chicago Blackhawks jersey **brought in \$14,000**.

**The very unique metal processing services auction** held each summer by the members of the Outside Processors Council (OPC) of FMA netted more than \$34,000 for the scholarship endowment.



### 2015 Events

We need your support in 2015 more than ever. If you can donate an item for the annual silent auction in February, **please contact Diane Engel at 815-381-1338 or at DianeE@fmanet.org** to request a donation form. The form will also contain a list of past donation items – a great way to get some ideas about what might make an appropriate donation. If you plan on attending the Leadership Summit or the Toll Processing Conference, please plan to bid on items that strike your fancy!

If your company is in the metal processing business, please consider making a donation of services for the annual summer OPC service auction. Does your company buy metal processing services on a regular basis? As a winning bidder in the services auction you may get a really great buy on some services you need and help a worthy cause. **To learn more contact Cindy Day at 815-227-8208 or at CindyD@fmanet.org.**

And golfers – the next Golf4Mfg event will be held **Monday, Aug. 24, 2015**. The location will be announced in February at [nutsandboltsfoundation.org/golf4mfg](http://nutsandboltsfoundation.org/golf4mfg). The event will be actively seeking sponsors and players at that time. Please plan to participate.

## COMMUNITY COLLEGES LEAD TO MANUFACTURING CAREER SUCCESS

Community and technical colleges offer affordable paths to in-demand manufacturing careers. It's the reason that NBT focuses so much of its scholarship awards on students who attend these programs. Want to know more about why this is such a positive way to achieve career success? Visit the FMA Facebook page ([www.facebook.com/metalfab](http://www.facebook.com/metalfab)) and read the post called *Community College: Surprisingly Useful?* or visit the originating website: [www.ozy.com](http://www.ozy.com) and search for the title.