

Engineers' News

January 2019

Vol. 82 No. 5

www.FortWayneEngineersClub.org



Find us on 

January Tour

THERMA TRU[®]
DOORS

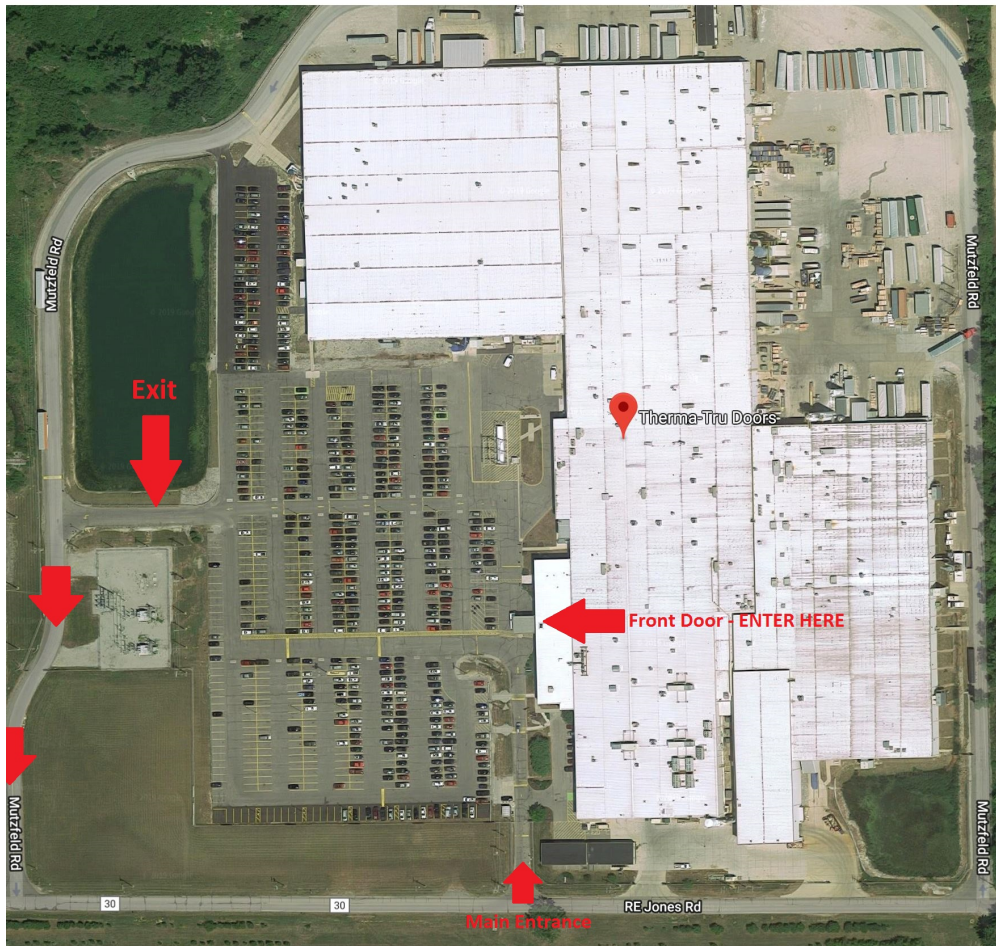
Therma-Tru Doors

Date: Thursday, January 23

Time: 1:30 pm

Location: 601 RE Jones Rd, Butler, IN 46721

All guests must be over 18. Safety glasses will be available at site and must be worn at all times. No open toed shoes allowed. Guests are to inform the guard that they are with FWEC and follow the map below to get to front door. To learn more [click here!](#)



Upcoming Events

February Tour: United States Postal Service (Automated Sorting and Shipping)

Date: Thursday, February 27

Time: 7:00 PM

Location: 1501 S Clinton St, Fort Wayne, IN 46802

March Tour: Embassy Theater (Organ)

Date: TBD

Time: TBD

Location: 125 W Jefferson Blvd, Fort Wayne, IN 46802

April Tour: Indiana Tech (Geothermal and Wind Energy Systems)

Date: Thursday, April 23

Time: TBD

Location: 1600 E Washington Blvd, Fort Wayne, IN 46803

December Social Summary

A FWECC Social was held on a Thursday, December 19, 2019. About 22 people attended ranging in age from 4 to perhaps 74. The 2018 social had been held on a Saturday early in December. The different timings seemed to have little effect on attendance except international representation was effectively nil this year, in part due to travel plans around Holidays of various faiths and nations.

Considerable discussions ensued regarding real-world patent law, legal support services including translations, personal business ventures, and do's/don'ts of inventing. There were contrasts between various individuals who need to spend time with other inventors versus others who prefer uninterrupted focus on their own. Marketing is perhaps the weak point of successful ventures. Some feel that attracting capital is the most crucial. Underlying the conversations was the need to avoid copy-conflicts with other people. Fort Wayne Inventors Club meets regularly at TekVenture and includes a patent lawyer.

Machine-shop oriented professions continue to seem vibrant careers, reasonably positive working environments, and actively represented in our Club. Employment is not limited to actually machining. It also seems relatively resilient across economic cycles, with exceptions such as boom/bust government defense specialties.

A nearly pervasive theme across generations is that skills outside a college degree are what matter for employment. Ultimately, the degree will still help, but being able to even apply for internships or employment have increasingly (over the last two decades) hinged on documentable technical skill sets. Interesting financial advice on public TV recently was to avoid student loans and use credit cards, if debt is necessary, because cards can be negotiated downwards or declared bankrupt. (Ed.: Many people across my daily life, including my own children aged 24-36, have stated that the world is awash in college degrees including Masters and PhDs.)

Members with engineering degrees have proved better than the rest of us at discerning future trends versus hype. Most of our Engineers were dubious about blood testing on a chip by Theranos, which proved outright fraud. Most members in the vehicle industry were skeptical of fully complying with diesel emissions, although none seemed aware of the frauds in progress. Fully autonomous passenger vehicles are at least a decade behind predictions, and some current driver assist systems are not acceptable. As predicted by informed members, some long-haul trucking routes are almost always carrying human drivers but automation is further along in practice than some regulators want the public to know. Many railroad freight trains are down to one person aboard, and trains are a platform for further

development of artificial intelligence.

Resistance to 5G wireless is mounting. Most age groups equate it to enhanced surveillance. They are also tired of endless upgrade time, cost, and dysfunction. The business of troubleshooting, upgrading, and/or relocating a wide range of "old" equipment or facilities is in significant demand. The employment is relatively constant, with changes of industry or focus from time to time. Troubleshooting and changing situations keep the work interesting. The most versatile background for this tends to be electrical with working knowledge of some software language(s).

There were multiple discussions across age groups regarding how to improve participation in FWEC. We seem to be doing at least as well as similar groups, some of which are dormant. FWEC is also undergoing an orderly gradual transition to younger leadership. A major challenge across the area is travel through Fort Wayne. A specific example was travel time between our social in Ludwig Park (effectively Smith Field) and roughly Indiana Tech (which has long hosted FWEC Board meetings) is 35-45 minutes. For years, similar trips took 12 minutes.

Another obvious trend is employment for engineers and related activities has been steadily pushed outward across much greater travel distances around or away from Fort Wayne. Interest in genealogy continues to grow (reportedly 20%/year). The downtown Allen County Public Library is considered #2 in the nation for resources. DNA testing is become evermore refined and specific, but has limits as currently performed.

The City of Fort Wayne is undergoing retirements of longtime staff. Most of its "rivers" have been recently stabilized (erosion, brush, dead trees, submerged hazards) and a "next generation of caretakers" trained to maintain them.

Several members at the social had lifetimes of very small boat experience. These vessels can and probably have moved around the globe for eons, if only by following marine food sources. The crucial factor is multiple vessels have to be involved, with at least one person per boat. That allows someone to stand watch or assist anyone fallen overboard. All of us have had the rude experience that small boats are hard or impossible to climb into from the water without assistance.

World population trends have dropped well below their logarithmic growth phase of the 20th Century, while farm technology had been transferred globally in anticipation of a population bomb. Population is 7.85 billion instead of the 12 billion projected by 2020. The result has been a glut of global agricultural capacity and substantial retirement or repurposing of U.S. farmland.

Some of the farmland has become wetland, a clear trend when touring the nation or Google Earth. There was some discussion as to how much wetland is appropriate. A seldom recognized factor is wetlands are ephemeral due to inevitable

sedimentation, plant growth, animal activity, rainfall variations, and more. Vegetation can increase elevations by as much as 6"/year, plus consumes water through evapo-transpiration.

AEP's multi-billion dollar replacement of the region's power grid was revisited, using a section of high voltage sub conductor among FWEC's tour souvenirs. Wind turbines continue to be added nearby in Ohio. Others are approaching the end of their intended life or tax incentives. The industry provides significant employment including maintaining gravel access roads, mowing, and monitoring for bird kills. Overall, residential neighbors have accommodated to them. A turbine collapsed in high winds. We speculated about the potential processes of recycling old fiberglass windmill blades, as well as their enormous foundation and grounding systems.

California appears to have transitioned from unsustainable to culturally imploding. Three members noted that feces on the streets are reality. Representatives in Washington are often perceived as "fiddling" while their constituents literally or figuratively burn. Income tax incentives for electric vehicles are ending at the same time consumers became widely aware of entrapment when archaic grids were turned off over large distances. The foothill grid systems are often 115,000 volts, date prior to 1920.

Based on years of oil analyses as a business, synthetic motor oil is one of several technologies which have virtually eliminated metal to metal contact and extended life for both oil and drive trains. Original types of light mineral oils (literally liquid rock) are still routinely recovered in southern Ontario and northern Pennsylvania. Constituents of the mineral oils volatilize at atmospheric pressures and the remaining liquids visibly polymerize and oxidize over mere days and weeks. The odors from those former motor oils are sufficient to raise health questions when encountered at tourist sites. But, it seemed an improvement over whale oil!

Best wishes for 2020!

Interested in hosting a tour?

Contact us at info@fortwayneengineersclub.org

FWEC Board Meetings



The FWEC board meets eight times a year to plan and organize tours for our members. These meetings are open for anyone to attend. We are always looking for new members to join our team! If you are interested in being a board member please attend our next board meeting or contact us at info@fortwayneengineersclub.org.

Next Meeting

Date: Tuesday, February 4th

Time: 7:00 pm

Location: [Indiana Tech McMillen Library](#) Room ACC-201

FWEC roster for FY2019-2020

President: John Magsam

Vice President: Nate Berndt

Treasurer: Ryan Stark (info@fortwayneengineersclub.org, or phone 456-0809)

Secretary: Marna Renteria

First-year Board Members: John Renie, Craig Welch

Second-year Board Member: Rob Cisz, Bert Spellman

Third-year Board Member: Dave Gordon, Morgan Miller

Editor of Engineer News: Morgan Miller

Membership and Contact Chair: Dave Schaller

Northeast Indiana DiscoverE Chair: Rob Cisz

Local Opportunities

Ivy Tech Seeking Engineering Technology Adjunct Faculty

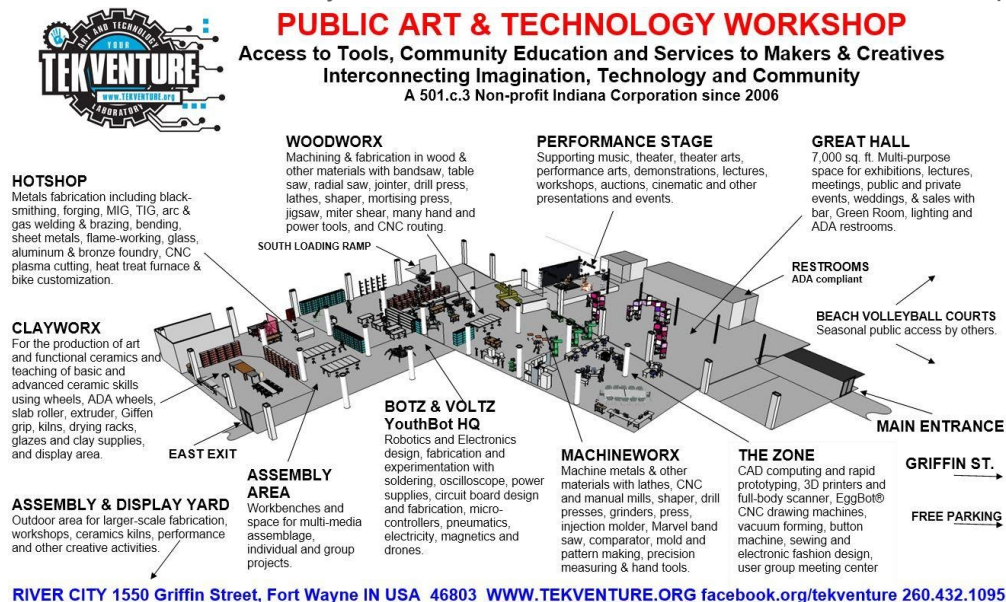
Ivy Tech Engineering Technology is looking for Adjunct (part-time) faculty to teach students in a variety of courses including C/C++ Programming, CAD in Mechanical Design, Mechanical Documentation, and Electrical Engineering Technology. Adjunct faculty assist students in reaching their goals by providing effective instruction and

assessment within the framework of common syllabi provided by the school. If you're interested in teaching the future engineering workforce, reach out to Cait Cramer at ccramer15@ivytech.edu. Applicants must have a bachelor's degree in Engineering or Engineering Technology and availability at least one night a week.

TekVenture Meetings Open to The Public

TekVentue holds a free public Open house and Social with pizza and drinks every last Friday of each month at 6 pm. All ages welcome. The first floor is 15,000 sq. ft and entirely handicap accessible. Various clubs meet there. The clay working area is booming. Computers are available. There are a stage and some theater. Productions each year. Some underutilized space is available for working on motor vehicles, near their machine shop.

Got something you want to make, a technique you want to learn or a tool you want to use? Come to TekVenture and start Making your future! See tekventure.org. This location has also substantially lowered their overheads and costs of membership.



Advertise in the Engineers' News

The FWEC provides advertising space within the Engineers' News. Advertisements are \$10 per issue and limited to ½ page of content. For submissions please contact info@fortwayneengineersclub.org.

