



# TOOL BITS

**Bulletin of the Society of Manufacturing Engineers, Minnesota Chapter 11**

Chapter website link: [SME Minnesota 11 Website](http://www.sme.org)

## Chair's Message

Hello SME members, friends, and associates!

I'm sorry to report that our April and May meetings have been cancelled. We will resume tours in September, when we plan to visit Air Automation in Fridley. The executive committee is working on tours for October (we'd liked to meet jointly with the St. Cloud State University student chapter) and November (avoiding deer hunting, of course), and our annual officer installation will take place the first week in December.

In the meantime, former bulletin editor Len Jennings has graciously agreed to take us on a virtual trip to *Paris' Old-World Science and Industry Museum*, which he and his wife, Mimi, visited earlier this year. As Len said to me, who would have expected a monument to technology in the city of arts and romance?

I've been reading the *SME Connects* postings lately. A good discussion of small manufacturing companies and CAD vs ERP systems has been taking place. Some of you have mentioned this as a meeting topic, so I wanted to point out there is a national discussion going on among SME members. Log into your account at [www.sme.org](http://www.sme.org) and join the discussion.

I've also been reading the business section of the newspaper and am amazed by the number of local companies who are involved in modifying their manufacturing plans to help out during the pandemic. Wyoming Machine, Twin Cities Die Castings and others are making parts for ventilators. Delkor Systems is expanding and on overtime making new food packaging machines. We all know manufacturing is an essential service, it's great that the rest of our community is being made aware of that!

Stay safe, stay well!

Naomi  
[chair@smechapter11.org](mailto:chair@smechapter11.org)

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## Chapter Leadership

### Chapter Officers

Chairperson:	Naomi Brill*
Chair-elect:	open
Secretary:	David Vetter
Treasurer:	James Stertz *

### Activity Leaders

Program Chair:	Lee Rensberger
Assistants:	Anish Shah Tim Lange Richard Cole
Webmaster:	Lee Taylor *
Auditor:	John Pietruszewski

### The Tool Bits Team

Editor:	Naomi Brill *
Reporter:	Lee Rensberger
Advertising:	Rob Manthey *
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## An Afternoon in Paris: My Trip Report *Submitted by Len Jennings*

Just prior to the coronavirus outbreak, my wife and I were on a family trip to Europe (February 9 through March 3) where we watched the virus outbreak spreading across that continent as it developed. We returned to Minnesota just as the restraints on international travel were falling into place. Here's what we observed:

Week 1- Edinburgh, Scotland, early warning signs, no panic; Week 2 - Toulouse, France, some awareness of outbreaks in Italy and Spain; Week 3 - Paris, France, major focus of all news channels as the virus spread across the country. By the time we departed, the country had already started to address the pandemic and we were beginning to wonder if we would make the return trip or be quarantined in France. (We're home!)

The good news: As someone originally raised in the United Kingdom, I've lost track of the number of times I've been to Paris, city of countless museums. How, I wonder, did I never make it to a museum dedicated to the history of manufacturing, the field where I spent most of my working life. As it turned out we did not allow anywhere near enough time for the visit, we spent an afternoon there and only saw about a third of the exhibits. We were fascinated by the history section, spent way too much time discussing tools, models, and techniques we remembered from our own schooldays, and didn't make it to the large exhibits. Needless to say, we will visit again. What follows is an excerpt from the museum's own materials:

### Musée des Arts et Métiers, Paris, France

*Highlights of the Permanent Collection: The permanent collection at the Musee des Arts et Metiers is divided across seven main areas. Each section brings you through a chronological exploration of how each area of technology evolved over hundreds of years of trial and error and innovation.*

*Continued on page 5*

### 2020 Meeting Schedule

- May 5-7 - Leadership Committee Meeting, via email, contact Naomi for details and inclusion.
- August 4 - Leadership Committee Meeting, Davanni's Brooklyn Center 5:30 p.m.
- Sept 1 - Leadership Committee Meeting, Davanni's Brooklyn Center 5:30 p.m.
- Sept 15 - Air Automation Engineering, Fridley

*Leadership committee planning meetings are the FIRST TUESDAY of each month at 5:30 p.m. Contact Naomi Brill for location and agenda.*

*Proposals for future programming are always welcome. If you have a program suggestion, contact any member of the leadership team (contact information on page 1).*





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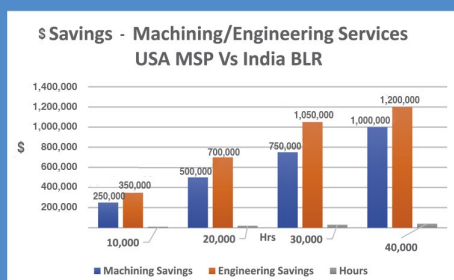
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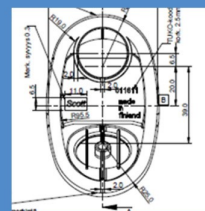
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### Len's Afternoon in Paris, continued from page 3

*Scientific Instruments:* In this section of the museum, you'll learn about the history of scientific instruments, pre-1750 to the present. From the abacus to the sun-dial, the early microscope to rudimentary multiplication machines, this section shows the evolution over hundreds of years of instruments that today have gained exponentially in sophistication and precision.



Len Jennings looks at Pascal's calculator, above, and solar mapping devices, right.



*Materials:* This section highlights the development of industrial materials and machinery, from glass to silk, textiles, iron or steel. The development of hydraulics and steam are a watershed moment in industrial manufacturing, leading to the explosion of commerce and exchange of goods at a new scale in the Industrial Revolution. The development of new materials, such as plastic and aluminum, leads to more and more sophisticated techniques and unprecedented choices for manufacturers.

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*Communication: In this fascinating section, the history of communications, from the telephone to the telegraph and the radio, are highlighted. The visit begins with a close look at one of the first printing presses, dating to the 15th century.*

*Energy: From hydraulic windmills to steam, electricity, or nuclear energy, this section offers a pointed look at the evolution of energy sources and technologies.*

*Mechanics: Take a closer look at the development of machinery in this section, observing how machines were initially developed for only a select number of activities and industries, before being adopted in virtually every domain of human activity starting from the 19th century, when mechanization exploded.*



*Above: The lab of Lavoisier and his wife, Marie, who did his sketching.*

*Left: Mimi Jennings admires Clement Adler's wonderful flying machine.*

*Transportation: This is one of the most popular sections of the museum, and features models for some of the first airplanes ever imagined, vintage cars, wheels, train cars, and other artifacts displaying the exciting development of transportation methods across the centuries.*

*Temporary Exhibitions: Temporary exhibitions at the museum tend to focus on one area or historical period of technological development, highlighting specific artifacts in the museum's permanent collection or bringing in objects from the collections of other museums. Recent temporary exhibitions included a look at the history of robotics and the invention of radio.*

More information and photos from the museum's collection can be seen by going to:  
<https://francetravelplanner.com/go/paris/museums/arts-metiers.html>

*About the author: Len Jennings, LSME, served as Chapter Chair in the 1990's, and as Editor of Toolbits for ten-plus years.*

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