

You are invited to the . . .

Precision Valley Symposium

. . . exploring the *past and future* of precision manufacturing in the region.



Image: Springfield Armory workers, May 1918

Friday, May 15th, 2015

Sponsored by: Springfield Armory National Historic Site
and Springfield Technical Community College

Location: Room 102, Putnam Hall, Bldg. 17
Springfield, Massachusetts 01105

Contact information

Richard Colton, Historian, Springfield Armory National Historic Site
413-734-8551 x235 www.nps.gov/spar

&

Office of Dean Arlene Rodriguez, Springfield Technical Community College
413-755-4218 www.stcc.edu

PROGRAM

9:00 AM Coffee

9:10 AM Welcome James Woolsey, Superintendent, Springfield Armory NHS
Opening Remarks Arlene Rodriguez, Dean, School of Arts, Humanities, and
Social Sciences, Springfield Technical Community College

9:30 AM **Yankee Armorers and the Union war machine: A technological perspective on the American Civil War**

Merritt Roe Smith, Ph.D., *Leverett Howell and William King Cutten Professor of the History of Technology (STS and History), MIT*

10:20 AM **As the Valley Falls: Deindustrialization After the Second World War**

Bob Forrant, Ph.D., *Professor, Co-Director, Senior Research Fellow,
Univ. of Massachusetts at Lowell*

10:50 AM **Hartford, CT (late 1800s): Factory Town Puts the Pieces Together in Explosive New Ways**

Eric S. Hintz, Ph.D.
*Historian, Lemelson Center for the Study of Invention and Innovation
National Museum of American History, Smithsonian Institution*

11:20 AM **BREAK**

11:30 AM **PANEL DISCUSSION**, moderated by Dean Arlene Rodriguez, with audience on
“Where do we go from here?” and the future of precision manufacturing in the region that includes Dave Cruise,
President and CEO of the Regional Employment Board of Hampden County, Inc., that is a prime occupational
training/education unit funneling trained machinists into the expanding precision industries here in the region. Also
attending will be Rodney Grover, Executive Director, Society of Manufacturing Engineers Educational Foundation. The
Soc. of Manuf. Engineers (SME) are sponsors of the EASTEC Show which will be ending the day before the symposium
across the Connecticut River in West Springfield’s BIG E.

12:15 PM **LUNCH** followed by 1:00 PM **AFTERNOON TOURS**

The afternoon offers a selection of one among several activities. These include a trip to the main Springfield Armory
collection room with its thousands of military firearms (mostly a reference collection for R&D as well as some production
jigs & gages & machines), a trip to & tour of the Coltsville site in Hartford, or a tour of Smith & Wesson’s factory (S&W
tour only is limited to twelve and applications will be closed by May 1st. Bus transportation will be available for the
Hartford tour.)

***Please write Richard Colton (richard_colton@nps.gov) of your plan to attend the Symposium and whether you
wish to go on one of the afternoon tours. This will help make the SYMPOSIUM a success!**

ABSTRACTS

Yankee Armorers and the Union war machine: A technological perspective on the American Civil War

Merritt Roe Smith, Ph.D.

Much has been made of Confederate General Lee’s farewell upon the surrender of the Army of Northern Virginia at
Appomattox. To be sure, his observation about the Union army’s “overwhelming numbers and resources” was telling—
especially in the spring of 1865.

My intent in this essay, and the book that I am currently writing, seeks to put some flesh on the bare bones of the numbers
and resources argument by examining the state of American technology prior to, during, and after the Civil War. I have
two primary objectives: first, to understand better the technological and industrial basis of the war and how it affected the

conflict's outcome; and, second, to gain a perspective on how the war's technological and industrial nature influenced what happened in postwar America and around the world. My research focuses mainly on three questions: Exactly how and why did the North possess such an overwhelming technological advantage in 1861? To what extent did this technological advantage make a difference in winning the war? And, finally, how did the North's war machine and its associated management system influence what happened in the United States after the war? None of these questions has a simple answer.

As the Valley Falls: Deindustrialization after the Second World War Bob Farrant, Ph.D.

On February 4, 1986, at approximately 2:00 p.m., thousands of workers and their families' lives changed forever. On that day United Technologies Corporation ordered the closure of the seventy-six-year-old American Bosch manufacturing plant in Springfield, Massachusetts, capping a nearly thirty-year history of job loss and work relocation from the sprawling factory. Bosch's history represents the quintessence of the story of manufacturing companies in the Connecticut River Valley and across the northern tier of the United States. For over 150 years Springfield stood at the approximate center of a prosperous two-hundred-mile industrial corridor along the Connecticut River between Bridgeport, Connecticut, and Springfield, Vermont, populated with hundreds of machine-tool and metalworking plants and thousands of workers. But, in a stunning reversal of fortune, the region's notable competitive advantages dissipated, hastening massive job loss exemplified by the Bosch closing. A look into why this happened is the focus of this presentation.

Hartford, CT (late 1800s): Factory Town Puts the Pieces Together in Explosive New Ways

Eric S. Hintz, Ph.D.

In this talk, I'll present research underlying our forthcoming exhibition entitled, *Places of Invention*. Hartford, CT (late 1800s) is one of six featured communities in the new exhibition, opening July 2015 at the Smithsonian's National Museum of American History.

Hartford was one of America's key places of invention in the 19th century, and a leading industrial city. Founded in 1636, the state capital had long been a trading post, as merchants shipped goods along the Connecticut River to New York City and the Atlantic. In the 1850s and 60s, firms like Aetna and Travelers emerged to underwrite the maritime trade, making Hartford the "insurance capital of the world." Meanwhile, the Colt Armory and its neighboring firms perfected the techniques of interchangeable parts manufacturing, establishing Hartford as one of the birthplaces of American mass production. Thus, all kinds of products—including firearms, sewing machines, typewriters, bicycles, and automobiles—were manufactured in Hartford, making this New England city a hotbed of "Yankee ingenuity" from the late 1800s through the early 20th century. Unfortunately, Hartford's fortunes changed greatly after World War II, as the effects of deindustrialization turned the city into one of the poorest in the nation. However, Hartford's leaders have drawn inspiration from the city's innovative past to revitalize the city and muster a comeback.

