



During the second half of 2020, Pontists: Historic Bridge Forum posted a series of ten interviews designed to help our members get to know each other better. This is a compilation of the original ten interviews, plus a bonus eleventh interview with David Simmons.

Maria Grazia Bruschi, PE

Vice President and Program Director, Parsons Corporation

Q | How old were you when you first became interested in bridges, and what inspired you?

A | “I was probably 14 or 15 years old when my dad was in charge of the design of the concrete structures for the cable stayed Zárate–Brazo Largo Bridges in Argentina. The construction company, Techint, organized annual social events for the people who worked on the project and their families, and they would take us on tours of the various areas of the project site. My father would give me and my three siblings detailed explanations of what was going on. One year, when the main towers were already built, my father and another engineer went up to the tower top in the bucket of a crane. I wanted to go, but since I was a girl, they took my younger brothers instead—I wasn’t happy about that! It was awesome to see the bridges advance from visit to visit, and to finally to see them open to traffic in 1977. My love for cable stayed bridges was born there.”



Liliana Bird (CC BY-SA 4.0)

Dr. Frank Griggs

Independent consulting engineer specializing in restoration of iron bridges

Q | If you could go back in time to meet a bridge engineer no longer alive today, who would you choose and why?

A | “I would sit down with Squire Whipple and talk about the problems he faced introducing iron bridges to the Erie Canal Commissioners and how he decided to write his book on bridges in 1847. I wrote an article for the Boston Society of Civil Engineers, entitled “A Forerunner in Iron Bridge Construction: An Interview with Squire Whipple,” in 1988, in which I asked him the questions I would have liked to hear him answer.”



Vischer’s Ferry Bridge | Frank Griggs

Q | How old were you when you first became interested in bridges, and what inspired you?

A | “I was 45 when I became Chair of the Civil Engineering Department at Union College in Schenectady, NY. They had just moved a Whipple bridge from Johnstown, NY, and planned to restore it across a stream on campus. Prof. Dick Pikel was advising the students and asked me to become involved. I knew nothing about Whipple, who graduated from Union in 1830 and became one of the leading bridge engineers of the mid-19th century. Reading about him led to my interest in writing about and restoring iron bridges.”



Rebecca Burrow, PE

Bridge Preservation Engineer, Oregon Department of Transportation

Co-author, [Oregon's Historic Bridge Field Guide](#)

Q | Tell us about a historic bridge discovery that amazed you.

A | "The Dry Canyon Creek Bridge near Rowena, Oregon, is a single-span reinforced concrete arch on the bluff over the Columbia River Gorge. It is a beautiful site, as long as you're not afraid of heights. The bridge was one of the last to be built on the Historic Columbia River Highway in 1921, and one of the first in Conde McCullough's time with the Oregon Highway Department. When we were designing a rehabilitation project, we came across a lot of surprising things, such as how soft the concrete was. During construction, they had multiple cylinders break at less than 1,000 psi, and we found similar results testing cores. And yet the bridge's design still allowed it to carry all legal loads. We also found where someone had climbed up just a few years after the original construction and written their name in pencil near the top of the arch. Due to the dry climate and protected location, the scribble had survived nearly 100 years. We protected it during the work, and hopefully it will survive another hundred."



Mike Goff via Bridgehunter.com

Vernon Mesler

*Welding instructor, Lansing Community College
Coordinator, Iron and Steel Preservation Conference
Restoration Project Manager, Calhoun County,
Michigan, Historic Bridge Park*

Vern was inspired by a previous question about time travel.

A | "If I were to travel back in time, I would like to meet bridge craftsmen. I am a craftsman with sixty years' experience in steel fabrication. My most memorable life experience was restoring five riveted truss bridges for the Historic Bridge Park. I learned about wrought iron and riveting, but the most valuable discovery was the craftsmen's record--not words as found in the voluminous books written by engineers, but the record in the metals they forged to build a bridge. No major industrial museum in the United States has exhibits on the craftsmen or the industrial rivet processes used in the fabrication of legendary U.S. buildings and bridges."



Nan Jackson



Jet Lowe

Internationally known photographer of industrial heritage and former staff photographer, Historic American Engineering Record

Jet's favorite bridge is the Viaduct de Millau, "alone worth a trip across the pond," and until that's a possibility again, you can see this and many other bridges on his website, jetlowe.com

Q | If you could go back in time to meet a bridge engineer who's no longer alive today, who would you choose and why?

A | "Conde B. McCullough, one of the few American bridge designers, along with the Roeblings, who had a terrific sense of visual design."

Dr. Thomas E. Boothby

Professor of Architectural Engineering, Pennsylvania State University

Author, [Empirical Structural Design for Architects, Engineers, and Builders](#) (ICE Publishing)

Author, [Engineering Iron and Stone](#) (ASCE Press)

Q | Tell us about a historic bridge discovery that amazed you.

A | "In trying to reverse-engineer the calculations for the main trusses of a lenticular truss bridge, I was surprised that engineers in the 1880s and 1890s doing routine calculations were using four significant figures. I didn't think this the result of hand calculations or a mechanical calculator. I wrote to the Oughtred Society (oughtred.org) with this question and was told this level of precision was obtainable with a Thacher calculator. From that point, I wondered whether this might be the device used at the Berlin Iron Bridge Company. A few years later, in the Victor Darnell Archive, I found a photo of the company employees that included the engineers with a Thacher calculator on the ground in front of them."



Viaduct de Millau | Jet Lowe



Darnell Bridge Collection, Burndy Library, The Huntington, San Marino, California



Patrick Sparks, PE

Principal and founder, Sparks Engineering, Inc.,
San Antonio, Texas

Q | Whom do you consider a mentor, and what is the most important thing you learned from him or her?

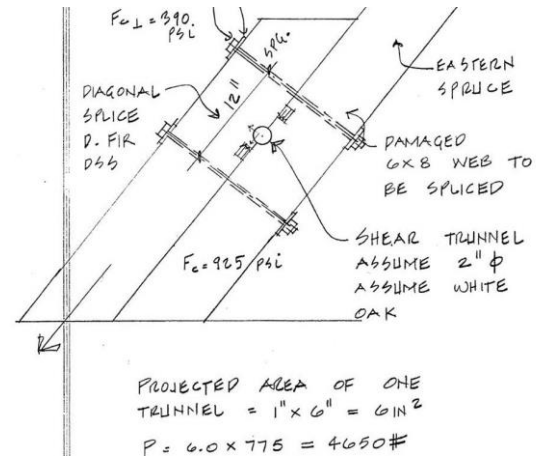
A | "The late David C. Fischetti, PE, was definitely my greatest mentor. He was an expert in timber bridges, among other things. He had gone to a technical high school in New York, graduated from Clemson, and married a beautiful Carolina girl, so he became a southerner but never lost his accent. I learned the value of simple, elegant analysis combined with judgment. The first thing I noticed about Dave was that he always used a black felt-tip pen instead of a pencil, and that he rarely made a mistake. If he did, he just crossed it out. His diagrams were very clean and clear; his calculations direct, never convoluted. To this day I prefer a felt tip pen for calculations. It reminds me of Dave, and of the importance of simplicity."

Dr. Dario Gasparini

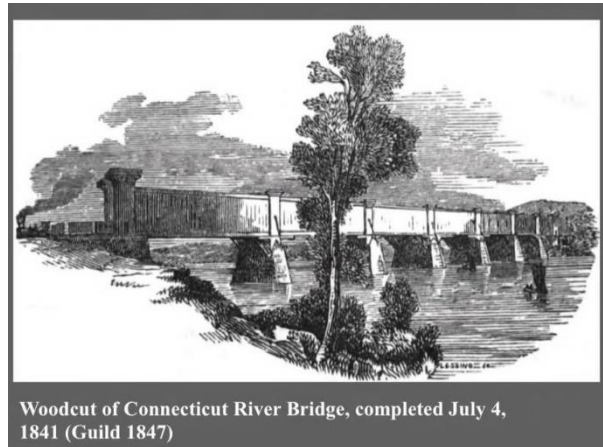
Professor of Civil Engineering, Case Western Reserve
University

Q | Tell us about a favorite bridge.

A | "As you know, I've had an interest in the origin of analysis-based design of truss bridges in the U.S., specially for railroads. In this context, I recorded [a talk on the Western Railroad's Connecticut River Bridge](#). It's intended to show the Navier-Long-Howe-Whistler lineage for railroad truss bridge design and its worldwide influence, especially for the development of railroads in Russia. It's certainly one of the least-known, most influential bridges ever built in the U.S.! So, I suppose you could say it's my favorite bridge!"



Fischetti's calculations for rehabilitation of the Cornish-Windsor Covered Bridge | New Hampshire Department of Transportation



Woodcut of Connecticut River Bridge, completed July 4, 1841 (Guild 1847)



Amy Squitieri

*Environment & Infrastructure Group Leader,
Mead & Hunt, Madison, Wisconsin*

Q | Have you ever operated a movable bridge or been on a span that was moving? Tell us about the experience.

A | "In 2015 while preparing a long-term management plan for the Judge Seeber Bridge in New Orleans, I had an opportunity to 'take the elevator up' to the operator's room as it was put to me by the DOTD maintenance staff who was giving us the tour. We're shown here side by side on the way up. You can see that he's much more comfortable than I was. Though I was seated safely on the counterweight, I'm afraid of heights. My colleague who took the photo—Mead & Hunt bridge engineer Darrell Berry—described it as the ride of his life. I wouldn't have skipped it for anything and the view of the adjacent 9th Ward neighborhood, which was still recovering from Hurricane Katrina, is unmatched from up top. This 1957 vertical lift bridge spans the Industrial Canal. The Louisiana DOTD rehabilitated the bridge in 2013 and, with the management plan in place, committed to preservation of this National Register-eligible bridge as part of the state's historic bridge program."



Darrell Berry

Dr. Stephen Buonopane

*Civil & Environmental Engineering Department Chair,
Bucknell University*

Q | Tell us about a favorite bridge.

A | "My favorite bridge is one that no longer exists—John A. Roebling's Niagara Railroad Suspension Bridge (1855–1896). Roebling's hallmark of combining suspension cables with diagonal stays created an exceedingly complex structural system, and Niagara was where he achieved breakthroughs in his understanding of how to design a stayed suspension bridge. Roebling's success at Niagara catapulted him to international engineering fame, as it was not clear that suspension bridges could be made stiff and strong enough to carry railroads.



"The Niagara Bridge was not just a means of passage, but an engineering marvel, a cultural icon, and a destination in and of itself. References to the bridge are found in Mark Twain's writings and Harriet Tubman's biography. It was in the right place at the right time. Niagara Falls was a tourist destination in the 1800s and the recent development of photography, in particular stereo-photography, as an early form of mass media entertainment meant that stunning images of the bridge were circulated widely.

"Roebling's Niagara Railroad Suspension Bridge is arguably the world's first 'signature bridge.'"



David Simmons

Senior Editor, [TIMELINE](#), Ohio History Connection

Q | Tell us about a favorite bridge.

A | "I don't remember the first time I saw the Howard Bridge, but I do recall being blown away by its mind-boggling splendor of nineteenth-century detailing. I couldn't recall ever seeing such details on an engineering structure. The stylized cast-iron acorn finials, originally in groups of three at the junction of the top chord and end post, were unlike anything I had ever seen. But the other details of the bridge—right down to the trussing under the floor beams—made it into a virtual museum of nineteenth-century bridge building, especially that of its builder, David H. Morrison. I got to know the family of the builder and their remarkable collection of original drawings and photographs and used them as the subject of my first solo paper at an annual Society for Industrial Archeology meeting in 1980. The bridge also had a connection to the 1913 Flood, a transformative event in Ohio bridge history when hundreds of bridges were washed out, including one of the Howard Bridge spans. It was replaced by a Mt. Vernon Bridge Company truss, the same firm that provided the steelwork for the celebrated Ohio Stadium. Both trusses are visible in the Joe Elliott portal photo taken for HAER in 1992. It was a wonderful pairing of the nineteenth and twentieth centuries.



Joseph E. B. Elliott, HAER OHIO,42-HOW,1--1

"The bridge has, however, less pleasant associations. Long ago bypassed and abandoned, youth would climb to the top chord and dive into the Kokosing River below. To my knowledge, no one was ever injured, but it drew the attention of the Knox County engineer who organized an effort—unbeknownst to me—to scrap out the two spans. So it serves as a reminder of the fragility of our engineering heritage and the need for constant monitoring of history spans."