

Civil & Environmental Seminar Announcement

FRIDAY, APRIL 18, 2025 • ECSB 1202
SEMINAR 10:00 AM - 11:00 AM
Q & A 11:00 AM - 12:00 PM

"Pioneering On-Site Metal Waste Recycling: A New Era in Sustainable Manufacturing with Sun Metalon"

SPEAKERS:

Iulian Bobe, Ph.D. and Mr. William Shambley

Abstract: Sun Metalon Inc., based in Chicago, IL, is a technology company pioneering a breakthrough recycling system for metal waste generated through machining, grinding, and polishing. Designed to recover valuable metals that would otherwise end up in landfills, our modular system can be installed directly at the source of waste—on the factory floor. While our technology is metal-agnostic, we currently focus on recycling steel and aluminum. Recent collaborations with Toyota, Komatsu, and several steel mills have demonstrated our ability to recover high-quality metal suitable for reintroduction into manufacturing processes.

The Metalon process uses a combination of compression and electromagnetic heat to remove essentially all liquid contaminants from machining, grinding and polishing wastes. Our analytical results consistently show that the metallic chemistry for the output of our system is the same as the metal being poured or machined. Customers have verified through their own melt testing that the dry metal pucks can be used as feed stock - reducing the amount of raw materials that need to be purchased while achieving true circularity with their metal waste stream.

Biography (short bio):Dr. Iulian Bobe is an entrepreneur and technologist with a global career spanning biotech, cleantech, and deep tech. He began in Tokyo, where he played a key role in taking NanoCarrier public on the Tokyo Stock Exchange. After moving to the U.S., he co-founded CIRC Inc. in Virginia, pioneering textile recycling technology for poly-cotton blends. CIRC's innovation earned global recognition, including an Earth Shot Award win.

Currently, Dr. Bobe serves as Chief Strategy Officer at Sun Metalon Inc., a company focused on metal decarbonization. Based in Chicago with operations in Japan, Sun Metalon partners with industry leaders like Toyota and Komatsu to upcycle steel and aluminum, supporting circular economy goals and supply chain resilience.

Mr. William Shambley is also an entrepreneurial technologist whose experience is deep in metal casting and additive manufacturing. Mr. Shambley grew from process engineer to Director of Materials R&D for Z Corporation, developing materials and product development processes for the pioneering color 3D printing company. After a couple rounds of acquisition, Mr. Shambley led a large format open materials 3D printing startup, which is now part of the ExOne Company, and then later built ceramic binder jet 3D printer focused capable of building investment casting cores at 1200-2400 dpi, now in production at Beehive. For the last 10 years he has been heavily involved in the American Foundry Society's New England Chapter, reinvigorating the local student AFS network.

Mr. Shambley is currently the Director of Sales & Marketing at Sun Metalon Inc. and is once again introducing new technology to the metals manufacturing industry.



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