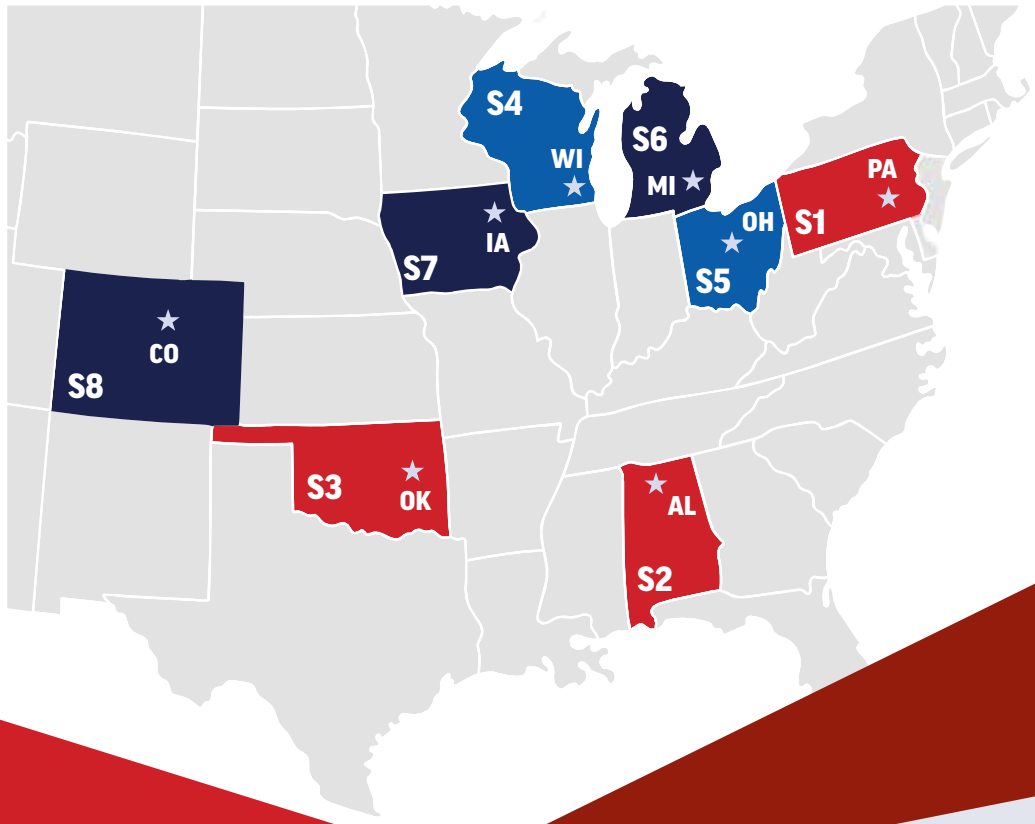
2024 | 2026

THE LAST TACTICAL MILE [LTM] SEMINAR SERIES

ADDITIVE MANUFACTURING FOR METAL CASTING

Raising the bar on high-impact education and networking for foundries and government/domestic supply chain partners.



METAL CASTING IMPACT 2.0

ALL-DAY EVENTS **FREE OF CHARGE**

8+ SEMINAR LOCATIONS

11+ EXPERTS

LINKEDIN

7 (CLPs)

Defense Acquisition Professionals earn **7 Continuous Learning Points** (CLPs) for attending, contact Brittany Engel for details!

Government and OEM casting consumers require increased agility in the casting sector to enable operational availability of critical platforms. Additive manufacturing for metal casting offers reduced lead times, ability to cast complex parts and reduce scrap.

Key Workshop Takeaways: You will understand how the technology facilitates more agile casting production for your organization and your supply chain partners. Presenters will share best practices on current technology applications for tooling and toolingless approaches to mold design. Networking sessions will connect you with experts and early adopters who will broaden your team's vision of how to leverage this advanced manufacturing approach to reduce lead times and produce challenging cast parts.

Who should attend this training? Government engineers and procurement professionals, OEM, Tier I/II casting consumers, foundry technical staff, engineering and technical students.

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THE EXPERTS & WORKSHOP HIGH**LIGHTS**

Nate **BRYANT**

With over 12 years of experience in additive manufacturing, specializing in 3D sand printing, Nate brings technical expertise contextualized by direct operation of large-format 3D sand printers. He holds both undergraduate and graduate degrees in Manufacturing Engineering Technology from the University of Northern Iowa and he is currently pursuing a Doctor of Technology degree, expecting to graduate in May 2025. His educational background blends technical skills with a passion for developing the next generation of the metal casting workforce. In this seminar series, he explores the critical aspects of machine parameter optimization and how they impact the physical characteristics of 3D printed sand molds and cores. Furthermore, he discusses the implications of Industry 4.0 and how 3D sand printing can serve as a gateway to the digital future of metal casting.

Dr. Dustin **GILMER**

Dr. Dustin Gilmer is an Assistant Professor of material science at the University of Tennessee where he focuses on advanced materials and manufacturing. He has expertise in 3D sand printing and Additive Manufacturing (AM) and his previous work at Oak Ridge National Laboratory was focused on various AM processes relevant to the foundry industry. His career began developing binder systems for 3D printing (binder jetting) systems and he is now working to grow the casting and forging workforce and research base at the University of Tennessee and attract new talent to these areas. His presentation will look at the development of binders and material systems for AM that are relevant to the foundry industry.

Kelley **KERNS**

Kelley Kerns, a key leader at HA International, drives innovation in the Cast Metals industry with expertise in 3D sand printing and Additive Manufacturing consumables. His seasoned career, which began developing binder systems for 3D printing in metal casting, spans roles at Fairmount Minerals, Ashland Chemical, and John Deere Foundry. Kerns has been instrumental in advancing binder jetting systems for high-quality sand molds and cores, optimizing system materials for various casting applications. His presentation will provide key insights into the availability and optimization of select consumables for 3D sand printing, crucial for operational success, while also exploring new material developments that drive lower cost-in-use. Kerns' diverse background and focus on foundry technologies position him as a leading voice in the evolution of digital manufacturing for the casting industry.

Brandon **LAMONCHA**

Brandon Lamoncha is a 3rd Generation VP of Humtown Products. Brandon has an extensive background in tooling for the foundry industry, has worked in project management and Sales for the company. For the past 10 years he has managed and help the team at Humtown grow to the largest 3D Sand printing operation in the Americas. He has helped Humtown grow in Germany and Europe and has worked with some of the largest OEM's in the world to deliver foundry solutions through the use of 3D Printed Molds and cores in prototype and beyond in series production.

Rich **LONARDO**

Rich is the principal consultant at Defense & Energy Systems and a former uniformed acquisition professional in the military. Rich has significant experience in technology transition to enable manufacturers to be more globally competitive and valuable to OEMs and the defense procurement enterprise. Rich is passionate about this world class team of casting experts sharing their knowledge on additive manufacturing to raise the industry.

Marshall **MILLER**

Marshall Miller is currently employed by 3D Systems as an Applications Engineer for additive applications in the foundry processes. Marshall has a 47-year career in the foundry industry as Customer Service Manager, Technical Management and Quality Management for automotive high production green sand operations. The last 10 years have him targeting the utilization of additive processes in the foundry industry to solve problems in quality, cost, and delivery for foundries primarily in North America and continuing engagement of overseas foundries. Technologies engaged are 3D printed polymer tools for sand, SLA and Jetted Wax for Investment and Polymer and Metal tools for Lost Foam molds. Marshall is engaged for the future with the American Foundry Society on additive research projects for pattern wear studies, printed lost foam molds and printed investment molds in heat conductive polymers with the target to produce tooling for the foundry at half the cost and time.

THE EXPERTS & WORKSHOP HIGHLIGHTS

Dave RITTMEYER

With over two decades as a journeyman patternmaker, Dave Rittmeyer brings a wealth of hands-on expertise to the field of 3D sand printing. His extensive background in traditional patternmaking allows him to bridge the gap between conventional foundry techniques and cutting-edge additive manufacturing. Dave uses his deep understanding of mold design, and casting processes to help foundries and OEMs effectively integrate 3D sand printing into their operations. By leveraging his craftsmanship and technical knowledge, he assists clients in creating complex, high-precision molds that are not possible with traditional methods. Dave's unique combination of practical patternmaking skills, mold design, and 3D printing expertise helps businesses improve efficiency, reduce costs, and enhance the overall quality of their castings, transforming the way they approach production.

Dr. Kirk ROGERS

Dr. Kirk Rogers is a manufacturing technology expert with 25+ years of experience in materials processing, metal additive manufacturing, powder metallurgy, and ceramic matrix composites. In 2018, after leading the technical team that launched a $40M Additive Manufacturing R&D center, he began consulting full-time. Dr. Rogers has collaborated with over 200 organizations across aerospace, medical devices, energy, space exploration, and transportation sectors. His expertise spans casting specification, forging, and raw materials qualification. His current work focuses on additive manufacturing adoption in the foundry industry, helping organizations understand and implement advanced manufacturing technologies for casting applications.

In this seminar series, his role is to introduce additive manufacturing (AKA 3D printing) and how it fits into the needs of the foundry industry and OEM casting buyer.

Jerry THIEL

Jerry recently retired from the University of Northern Iowa where as Director of the Foundry 4.0 Center, he guided research activities in foundry material characterization and advanced manufacturing including additive manufacturing for the foundry industry. He's presented worldwide and published over 50 technical papers providing the science behind the metal casting process. His over fifty years' experience in the industry including operating foundries with the last 32 in university level materials research allowed the university to be the first educational institution with an industrial size 3D sand printer. The center was successful in developing multiple domestic sources of consumable materials as well as research into the effect of machine settings and operation. His presentation will look at the materials science side of 3D sand printing and enable a deeper understanding of the process.

Dr. Jason WALKER

Jason M. Walker, PhD is the Director of the Materials & Process at OSU's Center for Design and Manufacturing Excellence (CDME). His research interests include the development and application of additive tooling for metal castings, novel gating and risering methods, process simulation, and the instrumentation of molds for in situ data collection. He also serves as an affiliated faculty at the Advanced Casting Research Center (ACRC), headquartered at the University of California, Irvine. Prior to joining CDME in 2022, he served as an assistant professor of manufacturing engineering at Youngstown State University. At YSU, Walker was the founding faculty advisor and FEF Key Professor for the AFS Student Chapter. He has published more than 35 peer-reviewed academic research papers related to additive manufacturing.

[LTM] Impact 2.0 Seminar Series Schedule

S1	10.30.2024	Donsco Inc.	Wrightsville, PA
S2	02.18.2025	Vulcan Museum	Birmingham, AL
S3	05.14.2025	Rose State College	Midwest City, OK
S4	**07.16.2025**	**TBA**	**Milwaukee, WI**
S5	**10.15.2025**	**OSU CDME**	**Columbus, OH**
S6	**02.18.2026**	**TBA**	**Detroit, MI**
S7	**05.13.2026**	**UNI Foundry 4.0 Center**	**Waterloo, IA**
S8	**07.15.2026**	**Colorado School of Mines**	**Golden, CO**
S9	**10.14.2026**	**TBA**	**TBA**

UPCOMING [LTM] SEMINAR EVENTBRITE REGISTRATION QR-CODES

S4 Milwaukee, WI July 16, 2025

S5 Columbus, OH October 15, 2025

S6 Detroit MI February 18, 2026

S7 Waterloo, IA May 13, 2026

S8 Golden, CO July 15, 2026

S9 TBA

CONTACT **Brittany Engel,** Engineering Project Manager bengel@ybi.org HTTPS://YBI.ORG

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SEMINAR AGENDA

MORNING AGENDA

8:15 - 8:30	**DOORS OPEN FOR CHECK-IN**	
8:30 - 8:40	**Opening Remarks and Introductions**	**Rich LONARDO,** Principal, Defense & Energy Systems
8:40 - 9:05	**The OEM Perspective**	01 — **Dr. Kirk ROGERS,** Ph.D., Principal Consultant for M&P Gravity Works **Marshall MILLER,** Applications Engineer, Pellet Extrusion Technology for the foundry, 3D Systems
9:05 - 10:05	**Printed Mold and Core Design Fundamentals**	02 — **Dave RITTMEYER,** Director, Business Development at Matthews Additive Technologies **Dr. Jason WALKER,** Ohio State University CDME, Director, Materials and Processes
10:05 - 10:20	**NETWORKING BREAK**	
10:20 - 11:20	**Extrusion Technology for Production Patterns and Core Equipment**	03 — **Marshall MILLER,** Applications Engineer, Pellet Extrusion Technology for the foundry, 3D Systems
11:20 - 12:20	**Large Format Sand Printer Lessons Learned and Best Practices**	04 — **Nathaniel BRYANT,** Project Engineering Manager, Metal Casting Center, University of Northern Iowa **Jerry THIEL,** Retired Director of the UNI Metal Casting and Foundry 4.0 Centers

AFTERNOON AGENDA

12:20 - 12:35	**LUNCH WILL BE SERVED**	
12:35 - 1:20	**Innovations and Panel Discussion**	05 — **All PRESENTERS**
1:20 - 2:10	**Printer Materials and Innovation**	06 — **Kelley KERNS**, Director, New Business Development HA International, LLC **Dr. Dustin GILMER**, Assistant Professor, Material Science and Engineering at the University of Tennessee & UT Space Institute
2:10 - 2:30	**NETWORKING BREAK**	
2:30 - 3:30	**Buying versus Making: All you need to know about printed mold and core production**	07 — **Brandon LAMONCHA**, Director of Additive Manufacturing, Humtown Additive **Dave RITTMEYER,** Director, Business Development at Matthews Additive Technologies
3:30 - 4:00	**Innovations and Panel Discussion**	08 — **All PRESENTERS**
4:30 - 5:30	**Tour & Pour**	09 — **Tours and pours** at local and nearby facilities vary with each seminar location. Download a separate agenda for each individual loaction for details or contact Brittany Engel.

7 (CLPs)

NOTE: This one- day workshop accounts for **7 CONTINUOUS LEARNING POINTS (CLPS)** for defense acquisition professionals, contact Brittany Engel for details.

OUR PARTNERS

Matthews Additive Technologies · HA Group · 3D Systems · M&P Gravity Works · Defense & Energy Systems · UNI University of Northern Iowa · The University of Tennessee Knoxville · The Ohio State University · YBI Youngstown Business Incubator · Humtown Products

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