AGENDA

Shot Peening Training

2026 Shot Peening & Surface Treatment Workshop

Mashantucket, Connecticut

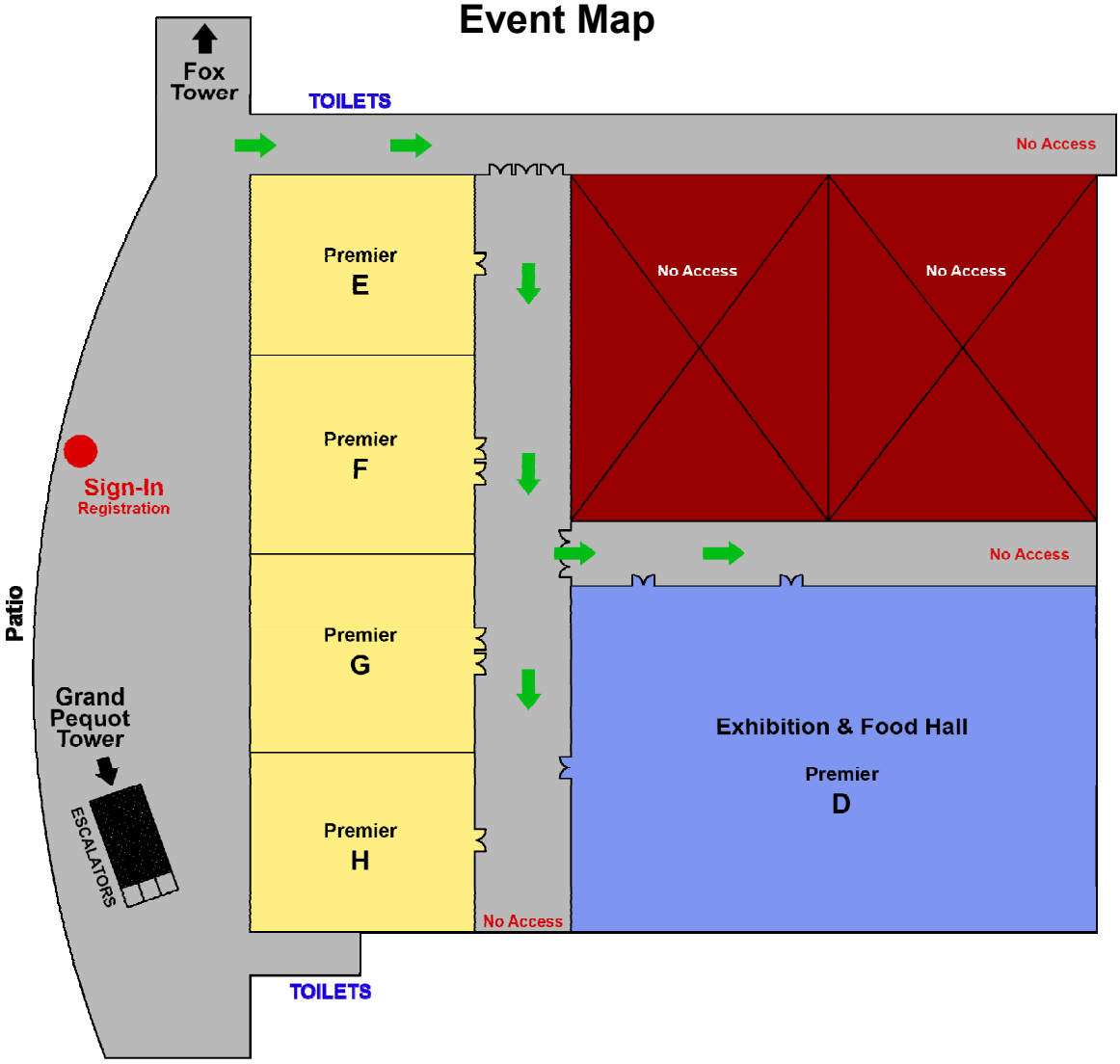
Class Schedule / Descriptions / Menu

Workshop Map - Exhibitor List

On-line version of this agenda

Registration and Setup	
Time	**Sunday, October 25, 2026**
3pm - 5pm	**Early Student / Instructor Sign-in and Material Distribution** **Exhibitor Sign-in and Booth Setup** **Registration / Check-in Counter** - Premier Pre-Function 1 (see map below)

Event Map



The Shot Peener

EI Shot Peening Training

WORKSHOP DAY 1

Monday, October 26, 2026

Time/Rooms	Premier E	Premier F	Premier G	Premier H
7:00 - 8:00	Breakfast Buffet			
8:00 - 8:25	**Opening Remarks / SPOTY Award / Group Photo** Make sure to wear your *"J443"* workshop tee shirt			
8:30 - 9:10		**Shot Peening Introduction** EI SPT Instructor L1 L2 FL		
9:10 - 9:40		**Peening Media** EI SPT Instructor L1 L2		
9:40 - 10:40		**Peening Intensity** EI SPT Instructor L1 L2 FL		
30 minutes	**Morning Trade Show Break**			
11:10 - 11:40		**Saturation Curve Generation** EI SPT Instructor L1 L2 FL		
11:40 - 12:30		**Peening Coverage & Masking** EI SPT Instructor L1 L2 FL		
12:30 - 1:30	**Chillin' & Grillin' Lunch Buffet**			
1:30 - 2:20	**Dry Airblast & Wetblast Techniques** Wright	**Peening Applications** *Scheduled Twice* Breuer	**AMS-2431 Media Specifications** Balan	
2:25 - 3:15	**Safety, Operation and Process Control in Automated Shot Peening** *Scheduled Twice* Niu	**Air Peening Machine Design and Setup** Coralic	**Cast Steel Shot** Stone	
30 minutes	**Afternoon Trade Show Break**			
3:45 - 4:35	**Cut Wire Media** Swenson	**Peening Techniques for Challenging Applications** Hoffman	**Essentials of Blast Cleaning** Balan/Stone	
4:40 - 5:30	**Rotary Flap Peening (Lecture)** FL Barkley	**Wheel Machine Design and Setup** Wright	**Shot Peening Masking Solutions** Shah	**Daily Review** (Español Disponible)
5:45 - 7:45	**EA Evening Reception - Come Hungry!**			

Classes marked ***L1*** & ***L2*** are recommended as preparation for Level 1 and 2 exams respectively. Classes marked **FL** are recommended for flapper peening exam however "Flapper Peening Practice / Practical" is required for any persons sitting for the flapper peening exam. All break out classes should be considered preparation for Level 3 exam as its questions concentrate on real world applications and on the job experience.

WORKSHOP DAY 2

Tuesday, October 27, 2026

Time/Rooms	Premier E	Premier F	Premier G	Premier H
7:00 - 8:00	Breakfast Buffet			
8:00 - 9:00		**Peening Media Inspection & Maintenance** EI SPT Instructor L2		
9:00 - 10:00		**Advanced Intensity & Parameter Adjustments** EI SPT Instructor L2		
30 minutes	**Morning Trade Show Break**			
10:30 - 11:00		**Saturation Curve Analysis** EI SPT Instructor L2		
11:00 - 12:00		**Advanced Coverage & Surface Texture** EI SPT Instructor L2		
12:00 - 1:00	**Trattoria (Italian) Lunch Buffet**			
1:00 - 1:50	**Peening Applications** *Scheduled Twice* Breuer	**Dynamic Image Analysis of Shot Media** Feltner	**Advanced / Other Topics** *Scheduled Twice* Balan / Barkley	**Media Quality Inspection** *Scheduled Twice* Chevrie ***Hands-On***
1:55 - 2:45	**Laser Peening** Breuer	**Shot Peen Process Development** Beach	**Residual Stress Measurement** *Scheduled Twice* Harrison	**Media Quality Inspection** *Scheduled Twice* Chevrie ***Hands-On***
30 minutes	**Afternoon Trade Show Break** *(Open exhibition 3:30-5pm)*			
3:15 - 4:05	**Equipment Design for Peen Forming** Wright	**Differences Between Blast Cleaning and Shot Peening** Balan	**Study of Fatigue / Best Peening Parameters** Loberti	**Almen Gage Calibration with R&R** *(Limited to 30 people)* Feltner
4:10 - 5:00	**Ultrasonic Peening Processes** Jeanneau	**Case Studies, Applying Peening Theory: Automotive and other industries** Balan	**MagnaValve Systems for Air and Wheel Blast Machines** Ingram	**Daily Review** (Español Disponible)

Classes marked ***L1*** & ***L2*** are recommended as preparation for Level 1 and 2 exams respectively. Classes marked **FL** are recommended for flapper peening exam however "Flapper Peening Practice / Practical" is required for any persons sitting for the flapper peening exam. All break out classes should be considered preparation for Level 3 exam as its questions concentrate on real world applications and on the job experience.

WORKSHOP DAY 3

Wednesday, October 28, 2026

Time/Rooms	Premier E	Premier F	Premier G	Premier H
7:00 - 8:00	Breakfast Buffet, plus Gift Card $$$ Giveaway at 7:45			
8:00 - 8:50	**Audit Survival Part 1** Beach	**Shot Peen Process Control** Jibran	**Advanced / Other Topics** *Scheduled Twice* Balan / Barkley	
8:55 - 9:45	**Audit Survival Part 2** Beach	**Peen Forming & Super Finishing** Siler	**Residual Stress Measurement** *Scheduled Twice* Harrison	**Rotary Flap Peening PRACTICAL Testing**** Barkley / Gonzalez *Scheduled Twice* *Certification Candidates Only*
30 minutes	**Morning Trade Show Break**			
10:15 - 11:05	**Safety, Operation and Process Control in Automated Shot Peening** *Scheduled Twice* Niu	**Ceramic Beads for Shot Peening** Girman	**Operating Costs, Cleaning & Peening** Balan	**Rotary Flap Peening PRACTICAL Testing**** Barkley / Gonzalez *Scheduled Twice* *Certification Candidates Only*
11:10 - 12:00	**Fine Particle and Unconventional Peening** Bandini	**Evaluating Effectiveness of Localized Masking** Harrison	**Saturation Curve 4-7 Review / Tutorial** EI SPT Instructor	**Rotary Flap Peening WRITTEN EXAM**** Barkley / Gonzalez *Certification Candidates Only*
12:00 - 1:00	**Pequot Bistro Lunch Buffet**			
1:00 - 1:15	Level 3 & Early Exams *(NO Reviews)*	Level 1 Exam Prep	**Individual Class Evaluations Link**	
1:15 - 2:00		Level 1 Exam		
2:00 - 2:15		Level 1 Exam Review	**Overall Evaluation for Workshop Link**	
2:15 - 2:30		Level 2 Exam Prep		
2:30 - 3:30		Level 2 Exam	** Written and practical testing is required for Rotary Flap Peening Certification.	
3:30 - 4:30		*Optional* Level 2 Personal Exam Review		

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FAA LEVEL 1 PEENING COURSE

Class Name Instructor	Class Description
Shot Peening Introduction EI SPT Instructor	This entry level class discusses the history and fundamentals of the peening process that we know today as terms used in the industry are introduced and explained. This session also defines when the peening process should be performed. This class is recommended for preparation for the **Level 1** and **Rotary Flap** certification exams.
Peening Media EI SPT Instructor	The media is the real tool of the peening process. This session gives an overview of the four types of media commonly used in peening and their attributes. This class also briefly discusses what to look for when selecting the right media for your application. This class is recommended for preparation for the **Level 1** certification exam..
Peening Intensity EI SPT Instructor	This class will introduce the concept of peening intensity and how it is measured using Almen strips, holders and gages. The saturation curve and the 10% rule are explained and guidelines for new set-ups and verification trials for peening intensity are discussed. This class is recommended for preparation for the **Level 1** and **Rotary Flap** certification exams.
Saturation Curve Generation EI SPT Instructor	This session explores simplified saturation curves as workshop attendees are asked to plot arc height data in order to determine intensity. This class is recommended for preparation for the **Level 1** and **Rotary Flap** certification exams.
Peening Coverage & Masking EI SPT Instructor	This session outlines Coverage requirements for the peening process. We discuss why Coverage is important, how to inspect for proper Coverage, and how to prevent peening with various masking options This class is recommended for preparation for the **Level 1** and **Rotary Flap** certification exams.

FAA LEVEL 2 PEENING COURSE

Class Name Instructor	Class Description
Peening Media Inspection & Maintenance EI SPT Instructor	Using the correct media and maintaining its quality is a must for a consistent process. This session discusses different media specifications and their requirements. Examples of both shape and size inspection are reviewed and on-machine devices that help meet specifications and maintain media quality are also examined. This class is recommended for preparation for the **Level 2** certification exam.
Advanced Intensity & Parameter Adjustments EI SPT Instructor	This session looks at how other peening parameters can effect the intensity results in your process. Changes in the media and machine condition can cause undesired results. This class is recommended for preparation for the **Level 2** certification exam.
Saturation Curve Analysis EI SPT Instructor	This hands on practical asks students to produce slightly more challenging saturation curves. It shows that saturation curves can tell us more about the process than just the peening intensity, and warns about having blind-faith in curve solvers. This class is recommended for preparation for the **Level 2** certification exam.
Advanced Coverage & Surface Texture EI SPT Instructor	For the process engineer, this session discusses how to determine part processing time to insure proper coverage and how avoid peening parts for too long. We examine coverage problems and offer solutions for hard to peen locations. Surface texture options are also discussed This class is recommended for preparation for the **Level 2** certification exam.

Classes marked ***L1*** & ***L2*** are recommended as preparation for Level 1 and 2 exams respectively. Classes marked **FL** are recommended for flapper peening exam however "Flapper Peening Practice / Practical" is required for any persons sitting for the flapper peening exam. All break out classes should be considered preparation for Level 3 exam as its questions concentrate on real world applications and on the job experience.

Questions on the Level 3 exam are based primarily on real-world experiences. A student wanting to sit for the Level 3 exam should have complete understanding of all material presented in the Level 1 and Level 2 classes. Level 3 exam questions may also come from any class regularly scheduled at the US workshop that concentrate on the shot peening industry. This includes process applications, peening parameters, various equipment, media characteristics, inspection procedures and problem resolution.

Specialty and Advanced Topics

Class Name Instructor	Class Description
Advanced / Other Topics *Scheduled Twice* Balan / Barkley	For process engineers and managers, this session contains more topics that time allows so selection is determined by the class collective. Topics can include: Example of finding a target intensity, Caution with single point intensity verification, Efficiently verifying intensities of multiple Almen test strip locations with a single time, Explaining residual stress profile generation and why we do it, optional secondary processes that further improve fatigue life, Estimating coverage time, Extreme lean-peening example, Two vs. three exponent selection for saturation curve generation, and Vibratory Peening.
Air Peening Machine Design and Setup Coralic	Learn an overview of the shot delivery, media reclaim and control devices common on air blast and peening machines. Learn about different nozzle types and how they can be used. Some basic troubleshooting techniques are also discussed.
Almen Gage Calibration with R&R Feltner ***Hands-On***	Gage Repeatability and Reproducibility evaluates the consistency of a measurement system against established tolerances. In this session, you will learn how to apply statistical methods to accurately evaluate the performance of Almen gages against specification limits. Designed for practical application, the session features a concise lecture followed by a hands-on demonstration where participants will perform their own Gage R&R study using EI gages. All attendees will receive ready-to-use, templated spreadsheets to streamline future Gage R&R studies at their own facilities. **Limited number of participants**
AMS-2431 Media Specifications Balan	This course goes through the AMS 2431 spec "slash-by-slash". Each media type will be discussed along with its properties and procedures of size & shape control, inspection and specifications. This presentation also includes a brief history of how MIL-13165 was replaced with AMS 2431.
Audit Survival Part 1 & 2 Beach	This two-part presentation will help you prepare your team for an audit such as those conducted by PRI/Nadcap. Part 1 is an introduction to audits, checklists, timing and scope. Part 2 discusses job audits, common findings and audit preparation.
Case Studies, Applying Peening Theory: Automotive and other industries Balan	Bring all your theoretical knowledge and practical experiences to this highly interactive interchange based on at least two real-life case studies. The two cases will be presented to the audience, followed by a discussion of available data and development of a solution. The suitable machine type will then evolve from the discussions. These case studies will also help you understand how a process specification is developed and the manner in which it differs from a general peening specification.
Cast Steel Shot Stone	Produced from select steel scrap, controlled Atomization process and a quench & temper thermal treatment, Cast Steel Shot is the most widely used media in the Shot Peening Industry for it's durability, true-sphere shape and economic cost. Come learn more about how it's made and controlled.
Ceramic Beads for Shot Peening Girman	Learn about shot peening applications for ceramic media, including the new High Density Ceramic (HDC). Topics will cover rudiment aspects of ceramic beads and their chemical properties, and various surface applications, all with emphasis on shot peening.
Cut Wire Media Swenson	This presentation discusses in detail what cut-wire media is and how it may be incorporated into your peening process.

Specialty and Advanced Topics

Class Name Instructor	Class Description
Differences Between Blast Cleaning and Shot Peening Balan	Often, we encounter an intentional 'peening' operation that is in fact just 'cleaning' the component. Therefore, primarily it is important to understand the differences between these two operations from the basics and the distinct features. Progressing along this path, it isn't uncommon to inherit a cleaning machine and tasked to use it to peen a new component. Let us understand what this conversion entails, its limitations and possible issues that might be encountered.
Dry Airblast & Wetblast Techniques Wright	Learn more about the specific architecture of these equipment for ensuring an accurate surface preparation or peening process with sample of applications in Aerospace.
Dynamic Image Analysis of Shot Media Feltner	Shot peening media characterization has traditionally relied on sieve analysis (size) and manual inspection (shape). Modern dynamic image analysis (DIA) systems streamline this process and are now routine in many applications, providing detailed descriptions of distributional characteristics. In this talk, we will introduce DIA, define key descriptors of media size and shape, and discuss how the technology can be integrated into existing SAE specifications. We will conclude with a forward-looking perspective on the role of DIA in advanced process modeling and manufacturing digitization.
Equipment Design for Peen Forming Wright	Peen Forming Equipment design and Pre-Stressing techniques.
Essentials of Blast Cleaning Balan/Stone	This session will help you learn and understand all the necessary knowledge for how select the proper abrasive, the methods for lowering blast cleaning time, reducing machine maintenance and safety in the blasting environment. We discuss cleaning methods to prevent blasting damage, improving abrasive life and understanding specifications of surface cleanliness. Both centrifugal wheel and compressed air blasting methods are covered.
Evaluating Effectiveness of Localized Masking Harrison	The full title of this presentation was: *"Evaluating the Effectiveness of Localized Masking to Prevent Changes in Residual Stress when Shot Peening"* when it was originally given at the last International Conference on Shot Peening (ICSP). It discussed how residual stress measurement can be used to determine the effect of masking. So, was your masking just preventing dents, or did it prevent a change in surface residual stress?
Fine Particle and Unconventional Peening Bandini	Starting from the basic concepts on shot peening, the presentation shows what happens if peening is applied using fine shots or unconventional parameters in a different way to interact with crystalline structure of metals and how those modifications can be used to improve fatigue performance. This presentation gives a glance on the state of the art of new peening applications.
Laser Peening Breuer	Laser peening (LP) utilizes energy from a pulsed laser to drive compressive stress into a metal's surface. Laser peening is applied on an individual spot basis and is 5-10x deeper than shot peening making it more effective than shot peening for certain types of fatigue failure.
MagnaValve Systems for Air and Wheel Blast Machines Ingram	MagnaValves offer many advantages over mechanical valves in air blast applications, such as low maintenance and compatibility with computer control. Learn how to specify, install and maintain this new type of valve.

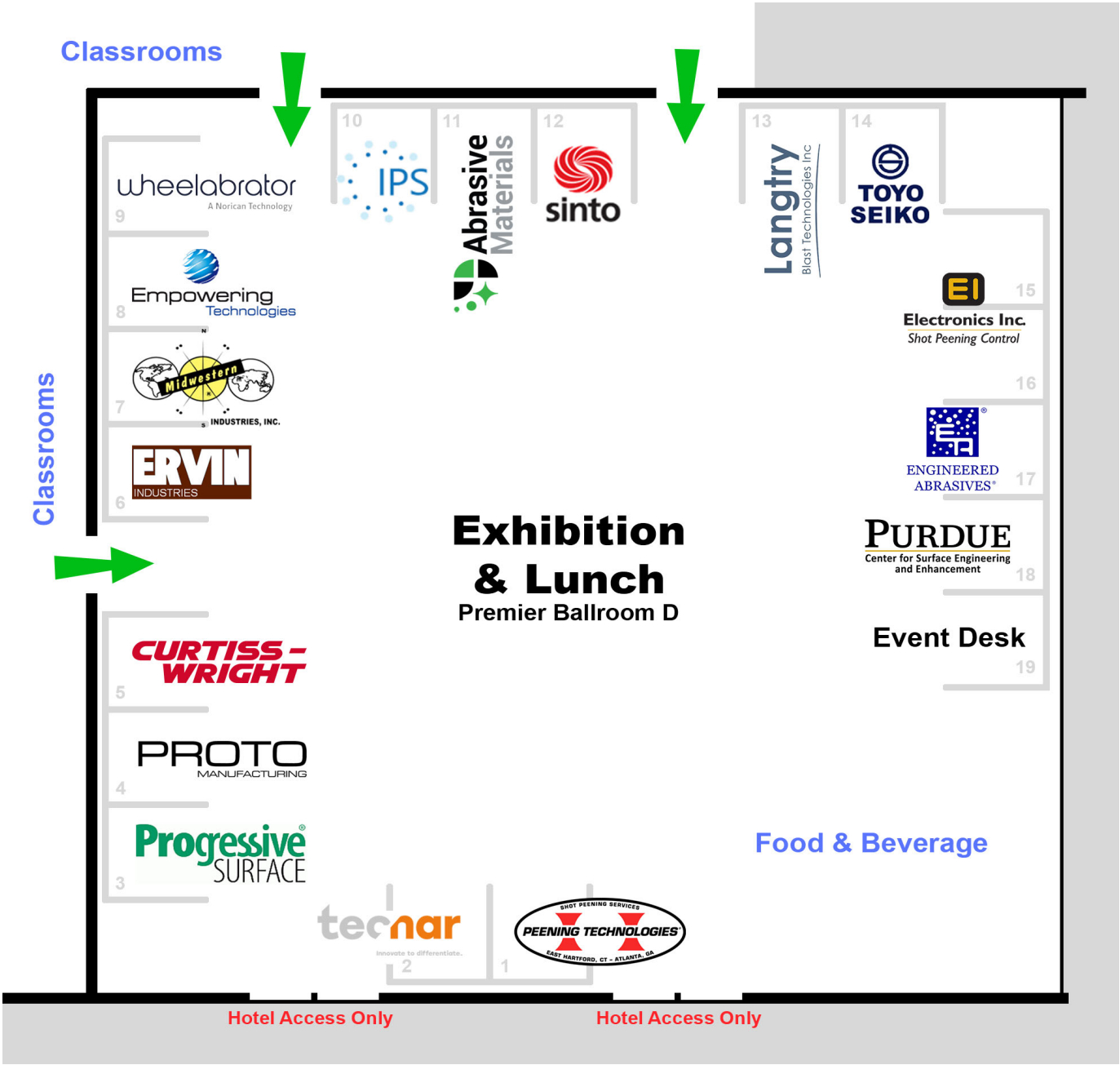
Specialty and Advanced Topics

Class Name Instructor	Class Description
Media Quality Inspection *Scheduled Twice* Chevrie ***Hands-On***	This session is a Hands-On version of the Level 2 Lecture on Media Inspection and Maintenance. The lecture will be quickly reviewed and followed by demonstrations of a "RoTap" machine for media size inspection. Make sure to bring your magnifier for media shape inspection. A microscope will be available for greater magnification. Representatives from classifier manufacturers will be on hand for questions/demonstrations.
Operating Costs, Cleaning & Peening Balan	Whether your process involves cleaning or peening components, you will be faced with a steady challenge to minimizing operating costs. We will discuss different cost elements involved in running your air or wheelblast process and the influence each has in controlling the overall cost. This is not an accounting exercise. Our discussions will revolve around the technical aspects of each cost element with practical hints to keep them in control.
Peen Forming & Super Finishing Siler	Shot peening's compressive stress is used for applications beyond fatigue life enhancement. Peen forming is a technique that forces a predictable distortion on parts that have large surface area relative to cross sectional thickness. The most common application of peen forming is aluminum wing skins for aircraft. It can also be used to correct parts that are out of contour. Super finishing is a technique primarily used for gears and blades. Both applications require compressive stress and excellent surface finishes.
Peening Applications *Scheduled Twice* Breuer	This session covers shot peening theory at a technical level and explains the benefit of peening a variety of different components in different industries. Attendees are encouraged to 'Stump the Presenter' with their peening related questions.
Peening Techniques for Challenging Applications Hoffman	Learn about tools and techniques to solve difficult peening configurations with emphasis on robotic parts handling.
Residual Stress Measurement Harrison	X-ray diffraction (XRD) is the standard tool for measuring residual stress in shot peened components. This session will explain how XRD is used to quantitatively measure residual stress, the types of equipment that are available, the basic techniques and the type of information that can be obtained to optimize the shot peening process and ensure that peening has been correctly applied.
Rotary Flap Peening (Lecture) Barkley	Rotary Flap Peening has become a popular industry process. With a relatively small investment in the proper tools it can satisfy many requirements for small area peening without the need for a blast cabinet and without the mess of open-area peening. This session discusses the origins of Rotary Flap peening and outlines how it uses a slightly different set of rules from conventional peening. Various equipment requirements and recommendations are also discussed. A supplemental Practical Preparation class is also offered (see schedule) for those seeking certifications. *This session is required for all those seeking Rotary Flap Peening certification, but is also open to those wanting to learn more about the process.*
Rotary Flap Peening Written & Practical Testing *Scheduled Twice* Barkley / Gonzalez *Certification Candidates Only*	This session is for those seeking Rotary Flap Peening Certification. Each candidate must complete practical testing as required by SAE's AMS2590. Each candidate will also take a written exam as required by the FAA. Due to time restrictions, the number of candidates for Rotary Flap Peening Certification is limited. Please schedule testing with instructor during lecture

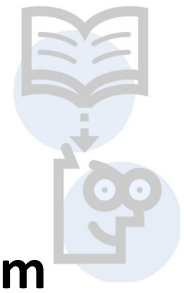
Specialty and Advanced Topics

Class Name Instructor	Class Description
Safety, Operation and Process Control in Automated Shot Peening Niu	Practical guidance for safely and efficiently operating automated shot peening machines, including equipment inspection and maintenance, media handling and reclaim, process controls, automation and robotics, path programming, and pre-peening part inspection.
Saturation Curve 4-7 Review / Tutorial EI SPT Instructor	If you are taking the Level 2 Certification Exam and still not comfortable with your ability to hand generate and manually solve a saturation curve, one of the EI SPT intructors will review examples 4-7 from the morning FAA course session.
Shot Peening Process Control Jibran	Explore the evolution of shot peening process control, from traditional verification methods to modern sensor measurements. This session explains the physics of shot velocity, its relationship with Almen intensity, and what published research reveals about process variability. Practical examples show how these measurements can support process development, troubleshooting, and routine verification.
Shot Peen Process Development Beach	This class delves into the requirements of a shot peening process from purchase order review to end product certification. Covering not only what is required, but offers some best practice tips along the way.
Shot Peening Masking Solutions Shah	This session covers effective masking techniques used to protect critical areas during shot peening. Topics will include selecting the right masking materials, developing masking designs for complex parts, improving fit and coverage, and choosing between reusable and disposable solutions. The presentation will also address common masking challenges, ways to improve setup efficiency, and methods to reduce the risk of peening on protected surfaces. Practical examples from actual production applications will be used to highlight different approaches and lessons learned.
Study of Fatigue / Best Peening Parameters Loberti	Peening process is characterized by three major parameters – shot, intensity and coverage. Through knowledge of fatigue damage mechanism, this presentation shows how peening parameters can be optimized for best fatigue performance. Though these parameters are dictated by OEM specifications, non-conformance can happen, and will lead to detrimental results. Let's discuss the effects, and avoidance techniques through some practical case studies and examples.
Ultrasonic Peening Processes Jeanneau	Ultrasonic peening uses a vibrating surface to provide kinetic energy to spherical medias (Ultrasonic Shot Peening) or cylindrical pins (Ultrasonic Needle Peening and Ultrasonic Needle Forming). This class will cover theoretical aspects, key parameters and examples related to this unique peening technique.
Wheel Machine Design and Setup Wright	Wheel type machines can propel large volumes of shot for applications in both the blast cleaning and shot peening industries. This session goes over the features, design, function, and setup of a wheel blast machine.

2026 Workshop Exhibitors



THINGS TO KNOW



Workshop **Opening Presentation** begins at **8am**
on Monday inside the Exhibition Hall (see map)

Wear name badge at all Workshop Events

How your **name** looks on the sign-in sheet
is how we plan to print it on your **certificate**

Confirm what **exams** you are signed up for on sign-in sheet

Wear your **workshop tee** on **Monday** for group picture

Breakfast & Lunch are provided for everyone
Monday – Wednesday in the **Exhibition Hall**

Welcome Reception Monday night at 5:45pm
Plenty of Food and Drink

Late Exam Registration available until **Tuesday 2pm**

Exhibitor "Bingo" Card drawing for a **$250 Gift Card**
will be during **breakfast** on **Wednesday**
Must be present to win

DO NOT **CLICK HERE**