Frank Angstead: Manufacturing the Intermountain Way.
This clinic will consist of three parts: 1) An overview of the manufacturing process at InterMountain Railway Company including the history of tooling done for other companies by Intermountain. The current status of offshore manufacturing in China with information about former and current companies. Also some discussion of other countries/areas for future consideration. 2) What can we do to bring model railroad manufacturing back to the U. S.? and 3) Discussion of the place of model railroading in the hobby industry in general and what the future looks like for the hobby.

Rick Bell & George Bogatiuk: Programming Tsunami 2 DCC Sound Decoders.
Rick Bell of DCC Installs and Sales, and George Bogatiuk of Soundtraxx will discuss the capabilities of the highly-anticipated Tsunami 2 sound decoder. These decoders are highly configurable; Rick and George will help you understand how to optimize them for the best, most prototypical sound. They will also show how the Tsunami 2 can be used to enhance the sound and mechanics of prototypical operations.

Craig Bisgeier: Modeling an Industry from a Single Photo.
In this clinic, Craig Bisgeier explains how he took a single turn-of-the-century photo of a DL&W commercial coal dealer structure in Oswego, NY and modeled it, creating plans by extracting dimensions from the photo and researching how other similar structures were constructed. He then took those plans and shows how the structure was scratch-built using a variety of modeling materials to execute the model, ending in a model with high fidelity to the subject.

Laramie, Wyoming was the home to some of the Union Pacific’s largest steam locomotives. Join Mike Brock as he reviews the facilities that were used to efficiently service these giant engines. There’s more than just a roundhouse and a coaling tower!

Al Brown will show how he scratchbuilt two cars: a Seaboard Air Line class AF, and an Atlantic Coast Line class O-16-B. Like so many other prototypes, plans aren't available, so Al will teach you how he scaled dimensions from photographs and from kits of related cars.
Jack Burgess: Using SketchUp and 3D Printing.  
This clinic will demonstrate how to use the free 3D drawing program SketchUp to make drawings and then get parts reproduced using 3D printing technology. The clinic will show parts which have been “printed” and samples will be passed around. Bring a flash drive to take home the netfabb program to optimize the .stl files (Windows only, 9 megs). A five-page handout is available at http://www.yosemitevalleyrr.com/clinics.

Jeff Cauthen: Modeling Ideas for Southern Pacific Class 77-C-1, 2, & 3 Chair Cars.  
Jeff will review the Athearn Genesis model and the Coach Yard models of these important, widely-traveled cars. He will present ideas for improving the models and will also discuss the multitude of paint schemes that may be applied.

Scott Dam: Developing an Operating Museum Layout.  
Scott’s clinic will cover the development of an operating layout for a railroad museum. He will show the steps (and missteps!) from concept through initial construction to operations. The principles used would apply to any prototypical layout. The specific project is located at the Nevada Southern Railway Museum in Boulder City, NV and is based on the UP branch line from Las Vegas to Boulder City.

The Northern Pacific Railway Historical Association was bequeathed with several thousand photos by the late Wade Stevenson of Othello, WA. Wade shot these on a 2.5 x 3.25 baby Speedgraphic so the quality of these photos is quite high. We had these scanned at a very high resolution so the images project wonderfully. The era shot was early to late 1950's. If you saw the beautiful photos shared at Prototype Rails 2015, you’ll certainly want to return to see these!

Paul Dolkos: Tracks in the street: challenges of modeling the urban jungle.  
Eight years ago Paul decided to switch from modeling a railroad in a rural New England setting to urban Baltimore. He will present how he selected the prototype and some of the techniques of depicting a big city setting in a small layout space.

In this clinic you’ll be treated to an in-depth look at the way the railroads served the automobile industry. Ike will show how and why equipment pools were set up and how the traffic flowed. You will learn the answer to questions like, “Why were my RR’s cars used in a pool that did not operate over my RR?”
Paul Ellis: Creating Road Number Specific Models.
Finding documentation is one of the most challenging aspects of bringing railroad and road number specific locomotives and rolling stock to market. Paul from ScaleTrains.com discusses what research materials were required for projects like the Rivet Counter™ SD40-2 project including builder's drawings, high resolution walk-around images, paint and lettering drawing, and more. He'll also share how we keep track of the countless variations. With this knowledge, you can help manufacturers bring future models to life.

This clinic tells the story of the top-secret incendiary bomb plant that was built for the U.S. Army Chemical Warfare Service at Ono, just outside of San Bernardino, at the beginning of WW II; how its products were shipped by rail (some to a custom-built top-secret ammunition storage depot at the North end of Santa Fe's Rialto Foothill Spur, but most to the Los Angeles Port of Embarkation for shipment to the Pacific), and the vital role they played in not only the very first attack on Japan, but more importantly, in bringing World War II itself to an end. We've all been told it was the atomic bomb, but …

Stephen Funaro: The Pennsylvania X37 Boxcar and X37A Automobile Boxcar.
Join resin-kit manufacturer Steve Funaro as he discusses the PRR X37 and X37A. These are cars that are relevant to most steam-era layouts. You will learn the history of the prototype cars, and see how Funaro & Camerlengo took the prototype information and developed a new HO scale resin kit!

Blaine Hadfield: ExactRail – Past, Present, and Future.
ExactRail is one of the hobby's most interesting model train manufacturers. From releasing 18 models in its first year of business, owning and operating its own in-house tooling facilities, to the biggest distribution change on the industry, Blaine Hadfield will part the curtain to give a corporate level glimpse into ExactRail's history. He will give a behind the scenes look where's, the why's and what to expect from ExactRail looking forward.

The X-3 was actually an entire family of tank cars whose design details evolved over a twenty year time period and included cars with capacities between 2,300 and 12,000 gallons, single and multiple compartments. Steve will review the design changes and other details with an eye to creating credible models.

The presentation will look at cars GA acquired and how they were assimilated into the fleet. Former Swift Refrigerator Line and Union Refrigerator Cars will make up a large portion of the clinic.
Gail Komar, MMR: How to operate the West Virginia Northern.
This clinic shows how the West Virginia Northern implements prototypical operations, and what you might do on your own layout. It gives an overview of the track plan, information located on valance, layout controls located on fascia, signaling system, timetable, train orders, and DCC operation using modified NCE handheld controllers.

Randy Laframboise: Prototype modelling of the Rutland RR Mainline Division.
This clinic will be an overview of the design, construction, and operation of a completed double deck basement sized prototype rendition of the Rutland RR Mainline between Rutland and Burlington VT with an emphasis on accurate scratchbuilt structures and scenes. The time frame is September, 1952.

This clinic will cover the prototype operation of the Montrealer / Washingtonian from 1964 (when discontinued pre-Amtrak) and from 1972 to 1981, including Pre-Amtrak CN and New Haven models and operation. It will also include some personal “tall tales” of actual trips on the Montrealer/Washingtonian. Langston will also share his experiences in modeling the 1970’s Montrealer and other Amtrak trains in HO including special car conversions, and custom car sides. He will also show the trains’ conversion from steam to HEP in 1978. Finally, you’ll learn how to model select HEP conversions for the Montrealer and other Amtrak trains using passenger cars from Walthers and various brass imports.

David Leider: Rebuilding a Layout as Modules.
David Leider will show how he rebuilt his layout into modules to make it easier to move. The layout represents Waupaca, Wisconsin, in the spring of 1947. Attendees will learn how the modules are constructed, and what opportunities he has found for improving the layout. This is an opportunity to learn from the experiences of a fellow prototype-layout builder.

Ron Lutton: Modeling a Prototype Coal Branch in 1972 – the Penn Central Alliance Branch.
Covers PC train operation on the branch and its application to Operating Sessions on my layout through the use of prototype and layout photos. Discussion will range from yard operation to switching the coal tipples. This is the branch I had hired on with the PC and worked extensively. I will be presenting from a working position so actual experiences and train movements will be covered. Suitable for those starting out or experienced operators.

Carl Marchand: Latest Trends in DCC Decoders.
The clinic will cover the latest features offered in DCC decoders by the various manufacturers, with a live demo and how advanced consisting will take advantage of these features.
Greg Martin: **Shake-N-Take, a recap.**
Greg will provide a recap of the Shake-N-Take projects that have been done by Prototype Rails attendees over the past 11 years. The presentation will focus on the tools and materials that were introduced over the years. He will also show other projects that have yet to be presented and will appear in the forthcoming book. He may even announce what next year’s Shake-N-Take project will be!

Dan Munson: **Yardmaster Roles and Responsibilities.**
Many operating layouts have “yardmasters”, but what do they REALLY do? Over the past 20 years, Dan Munson has worked for BNSF as a conductor, Yardmaster, Trainmaster, Manager of Trackage Rights, Terminal Manager, and Superintendent of Operations. Join this BNSF Kansas City Yardmaster as he shares his experiences and describes the realities of this very important job.

Jim Murrie & Naomi Petersen: **Prison Cars and Trains – the Other Con-Rail.**
A brief look at some individual and group transfers of prisoners and a few of the special purpose cars and trains employed in the Steam Era to handle them.

Bill Neale: **Modeling and Operating a Large Steam Roster.**
How to develop and maintain a large fleet of model steam locomotives. This includes the selection, modification, and servicing uniquely required by model steam engines when used in regular operation.

Joe Oates: **Jacksonville Terminal: Gateway to the South.**
Passenger Train expert Joe Oates will highlight the importance of the Jacksonville Terminal and the many railroads that served it.

David Orr: **Modeling L&N Cabooses-Wood and Steel.**
The clinic will trace the history and usage of L&N wood cabooses used from the early 1900's up until the 1970's. The clinic will also include the development and use of steel cabooses beginning in the early 1960's. The discussion will include tips on modeling both styles using kits currently available from the L&N Historical Society.

Steve Orth: **Designing and Building a Large Roundhouse to Scale.**
Steve describes how he scratchbuilt a massive 29-stall UP roundhouse in full HO scale. A structure of this magnitude requires careful planning and meticulous execution. Steve shows techniques that you can use to ensure success on your own project.

Frank Peacock: **Steam Locomotive Parts, Appliances and Fittings.**
This clinic will concentrate on some of the major “parts” of steam locomotives of the 1930's and 1940’s. Included will be the following: Feed Water Heaters, Stokers, Oil Firing Equipment, Air Compressors, Disc Driver Types, and Crosshead Types.
Joel Priest: Railfanning Your Layout.

   The clinic will feature tips and techniques to help anyone who is building a model railroad build a better railroad. These practices will be illustrated from concept to completion showing the clinic attendee the entire process.

   A tour of the scenic, and back-then, still a bit rural Mundelein Branch and a look at the North Chicago Junction freight yard and Highwood Shops. Good wine and chocolates also featured.

Alex Schneider: Researching A Passenger Car: Pullman Plan 3988 “VALLEY” Cars.
   This clinic will discuss the roles these late heavyweight cars played in providing observation and lounge service to Pullman passengers through dramatically changing times. Built in the Roaring Twenties for service on the premier 20th Century Limited, some were rebuilt for mid-train service during the Depression while others were relegated to troop train and hospital car service during World War II. A handful ran on seasonal trains to vacation spots in the 1950s, and a few saw circus train and instruction car service. Historical sources will be identified and models illustrated. The program will end with a tribute to the outstanding restoration being done on TONOWANDA VALLEY at the Danbury Railroad Museum in Connecticut. It is hoped that the sources and methods will inform your quest to add a signature passenger car to your railroad.

   No, it’s not a bad “four guys walked into a bar” joke. This year’s dive into the annals of passenger train oddities will cover notes from C&NW Chicago Passenger Interchanges and Consists from the Late 50’s and early 60’s. Many Chicago area railroads are included in the presentation. More of the good stuff modelers think never happens – updated for Prototype Rails!

Bruce Smith: 24 hours at COLA Tower (March 8, 1945 on the PRR).
   Columbia Pennsylvania (COLA Tower) was the junction of the PRR's major east-west freight route with several branches. On March 8, 1945, the PRR recorded all movements in the area as part of a traffic study. This study recorded 205 "movements" constituting of 150 different locomotives and 164 different "trains". Some of the remarkable insights into wartime traffic on the Pennsy generated by this study will be shared, along with modeling suggestions.

Al Sohl, MMR: Building a Snow Shed - in O scale.
   How and why I scratch built a (four actual foot) snow shed for the O narrow gauge Western Bay Railroad. How I followed prototype but built to our needs including signals to protect the snow shed entrance and exit. As published in the 2013 On30 Annual.
Mont Switzer: Monon 40 Foot Box Cars.
Monton expert Mont Switzer returns with an in-depth look at the 40’ box cars that made up the majority of the Monon’s fleet. The Monon rostered only 3 types of forty-foot boxcars, each of which will be examined in detail. In addition to prototype information, Mont will show how each of these cars can be modeled.

Chip Syme: Conrail Through the Eyes of an Employee.
Conrail evolved significantly during its lifetime. Come to this clinic and hear firsthand stories about the major changes a Conrail employee saw and experienced between 1976 and 1999.

Gil Thomas, Jr.: Tropicana Revisited.
Tropicana is the #1 Orange Juice Brand in the USA. It is the only Orange Juice company to ship its product by rail in its own private fleet of rail cars for over 45 years, six days per week. This clinic walks you through the history of Tropicana Juice from the period of shipping by boat and rail. The service routes of the "Juice Train" and consists will be discussed. Over 15 different paint schemes have dressed the rail cars during the 45 years of shipping by rail. This clinic will also review the different model railroad manufactures products that have been manufactured, so you the modeler can run your very own "Juice Train".

Tony Thompson: Wine Tank Cars.
This clinic represents completion of a joint project of Richard Hendrickson and myself. It concentrates on prototype wine tank cars, drawing on more than 100 photos of these cars from Richard’s and my collection, and also includes operating patterns and comments on modeling. A preliminary version was presented by Richard in 2010; more prototype and model photos have been added to complete the presentation.

Bob Webber: Three of the Railroads’ More Obscure Contributions to WW II.
Insights into often overlooked contributions related to Railroads of the United States before and during World War II. This clinic is meant to provide information that can be used to spark more research and/or to demonstrate some unusual and varied loads and trains for modeling. The clinic will show things that are unusual, but by no means rare.

Bill Welch: The Forty-Foot High-Side Gondola in the South.
Sixteen Railroads in the South—large, medium, and small—owned high-side nominal 40-foot gondolas that were ideal for serving the extraction industries they were home to. This clinic will provide a visual survey of these utilitarian freight cars.
Bill Welch: **Dr. Mary Engle Pennington and the 'Modern' Refrigerator Car.**
While working for the USDA in 1917 Dr. Pennington was assigned the task of sorting out why so many perishables arrived at their destination spoiled and therefore unusable. As we were then at war, this was an especially critical problem. We will learn how it was that Dr. Pennington was qualified to do this investigation and how she fixed the situation.

Fenton Wells: **Southern Smooth Side Coaches.**
In this clinic, you will learn how the Southern converted old coaches into state-of-the-art cars in the post war era. After reviewing the prototypes, ideas for modeling these cars in HO scale will be presented.

John Wilkes: **Moving Coal on the Virginia South Western.**
Clinician John Wilkes will describe how coal is moved on the prototype and how he translated that into operating sessions on his model railroad.

Tom Wilson: **Detailing Buildings – an Inspector’s Perspective.**
Modelers build their structures and include the details they notice. Join Tom Wilson as he shows what details a building inspector looks for, sees, and models!

Craig Zeni: **Building a Resin Freight Car Model for Beginners.**
Craig will walk you through the construction of a Westerfield 1916 NYC steel boxcar flat kit. Attend this clinic to take some of the intimidation out of building a resin freight car kit. You will learn Tips and Tricks to get good looking results the first time!