

AU Las Vegas 2017

November 14-16



SHAPE THE FUTURE OF MAKING THINGS



Embrace your inner expert.
Submit by May 17, 2017.



Autodesk University

Autodesk University (AU) is a learning community for today's design and engineering professionals. Whether you're contributing expertise and helping drive change in your industry, learning from your peers and adopting new practices, or connecting with like minds who are solving similar everyday challenges, you're part of something special. You are AU.

From dynamic keynotes and interactive Exhibit Hall experiences, to thousands of conference sessions and online classes, AU showcases how Autodesk users are guiding today's—and tomorrow's—design and engineering industries.

AU is about you and the future of making things.

A community of experts

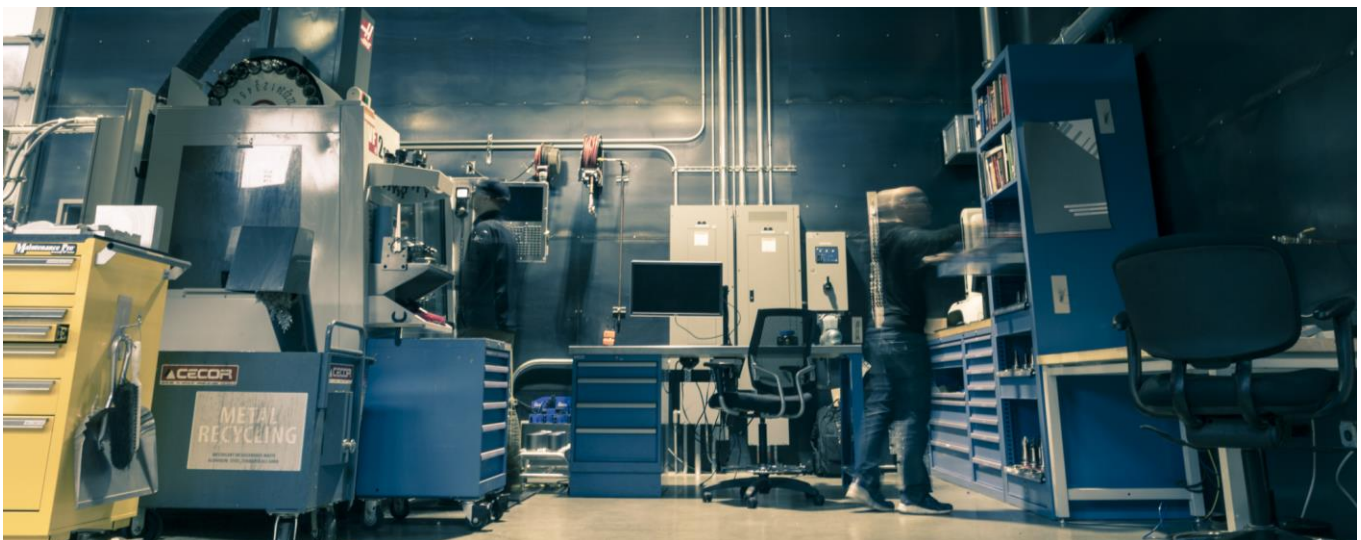
Contribute to AU and join a community of experts who are helping to shape the future of design and engineering practice. As an AU speaker, you'll share case studies and offer insights on the future of your industry. You'll showcase your innovative workflows and industry practice. And you'll help introduce other rich learning opportunities for designers, engineers, and creative professionals from around the world.

As a contributor to AU, your expertise will benefit not only your friends and peers who attend AU Las Vegas, but also designers and engineers around the globe who turn to AU for online learning throughout the year. The contributions of AU's speaker community are accessible online—for free—on the

Autodesk University website. The AU website is an increasingly important resource for those who make anything.

Submit a proposal

The first step to becoming an AU contributor is submitting a proposal for a class you'd like to teach. This is your chance to share with AU how your work is advancing, how new workflows are improving your design and engineering practice, or how you're approaching—and using—technology in new ways. What should others in your industry know and how should their efforts evolve to keep pace with today's changes? Whatever you design, make, or build, we want to hear what you're doing to drive innovation in your field.



CLASS PROPOSALS ACCEPTED APRIL 19, 2017 - MAY 17, 2017
SPEAKERS NOTIFIED LATE JUNE, 2017

Selection criteria and process

AU selects classes based on the following:

- The overall strength of the class proposal and its relevance to today's industry trends and best practices.
- Whether the proposal builds on existing knowledge and practice shared by AU experts or creates pathways for future learning.
- A speaker's communication skills and technical expertise, as well as the depth of their relevant background and experience.
- Speaker survey results from previous AU conferences, if available.

AU also incorporates community feedback into its class selection process. Throughout AU's Call for Proposals (CFP) process, the extended AU community is invited to review the anonymous submissions of the speaker community online. No identifying information will be included. Following the close of the AU CFP process, online community members will be able to highlight proposals that resonate with their interests and professional learning ambitions. This community feedback will be gathered for a limited time and supplement other factors that contribute to class selection.

What you can expect

AU speakers and contributors can expect to partner with AU to create unique learning and training experiences. Whenever possible, AU supports our expert community with editorial feedback on instructional materials, helps promote speakers and their classes prior to the conference and online throughout the year, and works to increase engagement with Autodesk users worldwide.

Speaker compensation

AU speakers receive 1 complimentary pass to the conference; travel and lodging are not included. Only primary speakers or lead authors receive the free conference pass; co-speakers do not receive the benefit. The primary speaker is also responsible for meeting AU event requirements, including submitting all class materials and completing all class tasks on time.

AU speakers with more than 1 accepted proposal receive a complimentary AU event pass for their first class and an honorarium for each additional class they lead (see below for details). Honorariums are not available to panel members or contributing speakers.

In addition:

- Autodesk will not divide an honorarium among multiple speakers of a single class.
- Compensation may be forfeit if AU requirements are not met, including the timely submission of class materials and resources.
- Compensation does not include lodging or travel.
- Honorarium payments are distributed on-site from the Speaker Ready Room. Payments are made in the form of a Managed Spend Visa Card.

Autodesk University 2017 speaker compensation schedule

CLASS FORMAT	ROLE	FIRST CLASS	ADDITIONAL CLASSES
Industry Talk, Hands-on Lab, Panel, Roundtable, Instructional Demo	Primary speaker	AU 2017 Pass* (\$2,175 value)	\$400/class

**The AU 2017 Pass (travel and hotel not included) is not transferable.*

Note to U.S. and non-U.S. government officials and employees: Autodesk is prohibited from providing honorariums to U.S. and non-U.S. government officials and employees (in any branch of government and irrespective of title or office held), including, without limitation, individuals employed by or affiliated with state-owned enterprises and individuals who represent or act on behalf of a governmental entity.

Note to Autodesk employees: Autodesk employees do not receive cash honorariums regardless of how many classes they teach.

What we expect

AU maintains the highest possible standards among our expert community. Your colleagues who attend AU events—or those who learn from AU online—expect a dynamic, polished, and professional learning experience.

Subject mastery is essential. Experience with teaching or public speaking can be helpful. AU experts are among the top in their fields, presenting personal and professional innovations.

Before submitting a proposal, get acquainted with AU. If you've attended an AU event or spent time at AU online, you should be familiar with our approach to learning. If you're new to AU, take time to learn, connect, and explore before you submit your proposal.

If your proposal is accepted, you'll be expected to meet the program requirements outlined below. This includes the timely submission of class materials such as handouts, presentation decks, sample data files, and other important resources to aid learning and professional development. Class requirements may differ depending on the class format.

AU class formats

AU speakers share their expertise through a range of conference formats that support different learning styles. The learning resources that supplement these formats are later adapted for online learning on the AU website, accessible year-round.

CLASS FORMAT	DESCRIPTION AND CLASS LENGTH
Industry Talks	Much like a lecture, AU industry talks enable speakers to share thought leadership or present industry insights, case studies, and other innovative experiences in engineering, design, manufacturing, business management, and more. <i>Speakers are not expected to provide in-depth product demonstrations or walk-throughs.</i> Industry talks are 60 minutes.
Instructional Demos	Instructional demos offer detailed presentations and instruction relying on in-product workflows. AU speakers share processes, tips and tricks, and other ways they're maximizing their Autodesk product knowledge. Instructional demos are 60 or 90 minutes.
Panels	AU speakers who lead panels are expected to facilitate a conversation among experts that showcases different viewpoints and insights on an industry topic. Panels are 60 minutes.
Roundtables	AU roundtables are intended to help solve a challenge or answer a question shared by industry peers. AU roundtable speakers should

foster a collaborative experience based on 1 or more prompts for examination and shared discovery. **Roundtables are 90 minutes, and class size is limited.**

Hands-on Labs Hands-on labs provide direct software instruction with individuals gaining firsthand experience with the material or application. **Labs are 90 minutes.** Up to 3 lab assistants can support the AU speaker.

Proposal elements

Before submitting a proposal, get acquainted with AU. It can be helpful to explore the learning content at AU online.

Whether you seek to build on existing knowledge and practice or highlight an approach that is entirely innovative, your proposal should demonstrate how your work is important for peers in your industry. AU is a learning community for people exploring comprehensive solutions to the challenges they face day-to-day.

When submitting your proposal, you will be asked to include the following information.

Class title

Your class title doesn't need to be catchy. It needs to be descriptive. Attendees should understand what your class covers based on the title alone. If the class focuses on Autodesk products, include the product name(s) in the title.

Class description

Describe the material you'll cover and the benefits to attendees. Class descriptions should reference the individual products being taught, if any. Class descriptions should also note any knowledge and skills—or even the AU classes available online—that serve as prerequisites. If helpful, use your class description to provide context for your proposed class format, such as the challenge you're hoping to address in an AU roundtable.

Relevant topics

What topic(s) best align to your class?

Learning objectives

A learning objective is an outcome statement that captures the knowledge or skills at

the heart of your instruction—knowledge or skills that learners will gain from your AU class. Well-defined learning objectives help prospective attendees understand the content of your class. And they help you develop useful training materials and deliver your expertise in a way that ensures real benefit to AU and your audience of learners.

Learning objectives should:

- Complete the phrase, "At the conclusion of this class, attendees will be able to..."
- Relate to specific tasks, skills, and knowledge that attendees will engage, gain, or strengthen.
- Be action-oriented and brief (no more than 125 characters each, including spaces).

Roundtable prompt

If you're proposing a roundtable session, what is the question or prompt you'll use to encourage collaboration and shared discussion? For example: How can collaboration be improved in additive manufacturing environments? How might BIM impact transportation infrastructure projects?

Class focus

Will your class help learners get started with new software or go beyond the basics? Will your class explore industry practices and project workflows? Will it present an industry case study or demonstrate your innovation and thought leadership?

Class application

How is your expertise applied? Will attendees apply the learning objectives in the context of business management, project execution, project management, or technology management?

Class summary

Your class summary should be succinct and precise. It will display in search results on the AU website and on search engines like Google. For example: "Learn how Fusion 360 can help you test fit and motion, perform simulations, and make photorealistic renderings and animations."

Additional proposal elements

Other proposal elements include: class format, class length, audience occupation, audience description, level of expertise, prerequisite knowledge or skills, and relevant industries.

Speaker bio

Include a bio that helps showcase your expertise. And remember that your bio will be public in Autodesk communities like the Autodesk Knowledge Network, AU, and other Autodesk forums. Your bio is also linked to your Autodesk Account. So tell community members who you are and how your experience has shaped your perspective or your industry. Include things like your current position and work history, along with any professional awards, publications, and academic qualifications.

AU 2017 classes

Most AU classes are designed and led by industry professionals for industry professionals. As a learning community, AU is organized around the idea that getting better at our jobs demands support, collaboration, and knowledge sharing at every turn.

Process and workflow

Collaboration across design and engineering domains is increasingly important. We're especially interested in classes that demonstrate how diverse professionals use a range of skills and tools to foster efficiency, innovation, and more—whether that's digital design to construction, end-to-end manufacturing, simulation and design analysis, animation and visualization across industries, and so much more.

Business management solutions

AU's community of experts share more than innovative design and engineering solutions. Many have management and leadership perspectives that can inform and improve business practices. Popular topics explore the adoption and implementation of new technologies, concept-to-completion cycles, and information management in today's cloud computing and additive manufacturing environments.

In-depth courses for beginners to advanced users

Many members of the AU community have extensive experience with Autodesk products and are looking for in-depth classes that teach new and efficient ways to use those products. Others are just starting out or adopting new Autodesk products into their design and engineering workflows. AU supports people at every level of expertise.

Speaker requirements

If your proposal is accepted, Autodesk University speakers are expected to:

- Accept the AU speaker agreement.
- Meet relevant deadlines, including the timely submission of class materials.
 - Material requirements differ based on class formats, and might include:
 - A class handout (PDF) describing the topic covered and/or the specific workflows and practices examined. AU templates are provided.
 - Sample data files (if any).
 - Presentation files.
- Supply your own laptop for your presentation (unless teaching a lab) and specify any special audiovisual or software requirements.
- Attend Speaker Orientation conference calls or webinars.
- Ensure that your teaching material aligns with your accepted class proposal.
- Communicate all relevant AU information to your co-speakers and panelists.
- Answer questions about the class from registered attendees prior to AU.
- Hands-on lab leaders: assign up to 3 lab assistants. Connect with your lab assistants at least 2 weeks prior to AU to ensure they are prepared to assist with your lab. Work with the AU tech team to ensure your lab is configured to your needs.
- Submit a final presentation deck (PDF), if available, following the conference.

Marketing at AU

Please adhere to our philosophy that all classes must be noncommercial. The goal of the AU program is support professional learning and the sharing of knowledge that advances industry practice.

A sample of AU 2017 topics

AU welcomes submissions that showcase industry practice, innovations, and other developments across a variety of topic areas, include **smart manufacturing, augmented reality, business management, infrastructure design and engineering, virtual reality**, and more. Other topics of interest include:

Animation and entertainment
Architecture

MEP and Structural Fabrication
PLM and data management

AutoCAD and general design
Automotive and industrial design
Building construction
Building owners and operators
CAD management and IT
Design visualization
Internet of Things (IoT)
Land development and urban planning

Product design
Reality capture
Simulation
Software development
Structural engineering
Transportation
Utilities, energy and natural resources

Animation and entertainment

Inspire others with case studies, brilliant techniques, creative hacks – whatever it takes to get the job done, and create amazing work in the world of film, TV, and games. Share your problem-solving insights, how you devise creative new approaches, and big ideas for better visual storytelling. Behind the scenes, is your studio developing new asset workflows or pipelines to help distributed teams collaborate? We're seeking classes with practical applications in media and entertainment, and welcome sessions that also can offer a fresh perspective to fields such as architecture, manufacturing, and automotive design.

Architecture

From residential to commercial architecture, examine the wide range of 2D and 3D software and service solutions that optimize and connect teams in the building industry. We welcome class proposals for all skill levels, from beginners who want to learn the basics of design to intermediate and advanced users who want to understand more about Building Information Modeling (BIM).

AU is interested in classes that highlight how the products and cloud-based services offered within our AEC portfolio of solutions, such as Autodesk Revit, A360 Collaboration for Revit, A360 Team, FormIt, and Dynamo, will enable people to better conceive, design, visualize, and construct building projects.

AutoCAD and general design

AutoCAD and general design covers a wide range of topics and products and provides the latest tips and tutorials for getting the most out of AutoCAD and AutoCAD-based products. Classes should focus on the newest and most efficient techniques for design documentation, interoperability, collaboration, and connectivity.

Automotive and industrial design

Style and design are at the forefront of providing competitive differentiation. Market leaders recognize the important role design and styling play in ensuring the success of a product in today's marketplace. From the design of automotive vehicles to high-end consumer goods, style plays a critical role in defining a company's brand. We invite proposals for beginner to advanced classes focused on the use and application of Autodesk Alias products. Classes should focus on technical workflows and best practices for advanced design and visualization concepts for automotive and product design.

Building construction

AU classes in building construction should focus on the software, services, and strategies that enable and support the construction phases for building (vertical) and infrastructure (horizontal/heavy) projects, with an emphasis on the use of BIM. Topics should include processes and/or workflows using the Autodesk portfolio of construction offerings. All phases of the construction process are considered, including but not limited to:

- Construction document management
- Design to construction handoff
- Preconstruction and virtual design and construction
- LEAN construction practices
- Field layout
- Field execution/field management
- Commissioning and handover

Building owners and operators

This topic focuses on the needs of building owners and operators across the building lifecycle and the role that BIM plays in helping them design, construct, and operate their facilities more effectively. We're seeking proposals that show how design teams can design with the operations phase in mind, how contractors can better support the handover process, and how facilities teams can use rich BIM asset data to better operate and maintain their building assets and portfolios. Specific topics may include: designing for operations and maintenance, construction for handover, planning for renovation and retrofits, developing a preventive maintenance program, achieving energy management objectives, and using IoT for predictive maintenance and improving building asset performance.

We love classes that include Autodesk Building Ops, Autodesk Revit, Autodesk BIM 360 Field, Autodesk BIM 360 Glue, and other technologies that support the specific topics noted above.

CAD management and IT

This topic covers software, hardware, information technology (IT), management, economics, intellectual property, and user training. The topic's focus is on examining all the steps that are required to plan, implement, and maintain CAD and IT ecosystems for optimal user and company productivity. We seek proposals that can help working CAD managers develop their skills, get more done with less effort, and make their firms more efficient by using smart deployment and management of CAD and IT tools. Classes in this topic will use examples from all types of disciplines, company sizes, and work topologies.

Design visualization

The role of visualization in architecture has never been more important, or more in demand. Share your case studies, techniques, and practical solutions to enduring problems like visualizing a project before anything ever exists, and communicating abstract architectural visions. We're seeking storytellers to translate their real-world expertise into the classroom for attendees of all skill levels. If you're pushing the boundaries in virtual or augmented reality in architecture, we want to hear from you. We're also interested in exploring interactive visualization techniques, innovative workflows that combine 3D and game-engine tools, and high-end rendering and compositing techniques that showcase your studio's artistry.

Internet of Things (IoT)

The Internet of Things (IoT) is a growing network of physical devices embedded with electronics, software, and sensors that are connected to the Internet and to each other. And Autodesk software like Fusion Connect (formerly SeeControl), in combination with other products in Autodesk's design and manufacturing portfolio, are helping shape a new era for products and technology. We're interested in classes that showcase a future of making things where any built object or product can be embedded with sensors that can feed information back into the design process. Classes might also demonstrate how the IoT combined with the cloud is enabling manufacturers to capture, analyze, control, and manage data from remote products and assets. Specifically, AU classes on this topic might:

- Demonstrate how Autodesk’s IoT technology is leading the way for connected products.
- Illustrate the lifecycle or journey of connect products.
- Teach methods for building a business case for connected offerings.
- Demonstrate how leading companies are creating connected offerings.

Land development and urban planning

In the topic of land development and urban planning, we’re interested in classes that highlight workflows for landscape architects, surveyors, and industry leaders in commercial site design and the design of residential subdivisions. We also invite classes that focus on site selection practices, including workflows involving InfraWorks 360. Other classes might focus on workflows for landscape architecture, such as those between InfraWorks 360 and Autodesk Vehicle Tracking, as well as how—and why—software workflows can improve surveyor practices.

MEP and structural fabrication

This topic focuses on fabrication and prefabrication software, services, workflows, and strategies important to mechanical, electrical, and plumbing (MEP) contractors, structural engineers, and steel and concrete rebar detailers/fabricators. For MEP contractors, we’re looking for proposals on topics that illustrate the use of Autodesk Revit, and Autodesk Fabrication CADmep, ESTmep, and CAMduct software products. We’re interested in proposals showing best practices for real-world Revit Design to Fabrication workflows, MEP estimation, and detail MEP systems for fabrication to MEP contractors. For structural firms, we welcome proposals that illustrate steel, concrete rebar, and precast workflows using Autodesk software such as Advance Steel and/or Autodesk Revit. We also welcome highlights of technology partner solutions that are integrated on top of both Autodesk Revit and Advance Steel. Classes should focus on best practices, implementation strategies, and workflows using Autodesk structural fabrication products.

PLM and data management

PLM and data management classes showcase the tools to manage the lifecycle of products our customers make. Topics include bill of materials (BOM), change management, file management, and more. Show attendees how to manage processes and files, and how to extend and connect to other enterprise solutions within a company. In addition, we’re interested in: BOM and CAD file management; workflow and

lifecycle management; quality, supply chain, and cost management; integrations to enterprise business systems made easy; and the future of CAD and workflow management.

Product design

Product design classes should provide expert instruction to help product designers sharpen their tools. We're looking for Inventor classes covering tips and tricks, best practices for managing large assembly performance, automation and API, and specific areas like sheet metal, T&P, and frame design. We're also interested in classes showing ways to effectively work with design data across multiple platforms and how to use the right tool at the right time for maximum productivity, Inventor interoperability, delivery of product design data inside Revit models, and introducing Inventor users to additional products and services to be included within the Autodesk Product Design Suite. Show product designers how desktop, mobile, and cloud platform design tools are evolving by demonstrating useful cloud services for Inventor and Product Design users, plus new ways to document designs and communicate design intent.

Reality capture

This topic focuses on the use of reality capture technologies (such as laser scanning, drones, and handheld devices) and Autodesk software including ReCap Pro on construction sites for building renovation and factory retrofit, or for infrastructure design, construction, and inspection. We're looking for classes that examine the impact of reality capture technologies on overall project performance including cost, timing, and safety measures, and classes exploring new trends in reality capture technologies. This includes:

- Reality capture workflows (device to deliverable)
 - Scan to BIM to create floorplans, 3D models, BIM models, measurements, annotations, differential analyses, elevations, movies, VR, 3D prints
 - Democratization of SCAN to BIM
- ROI of reality capture
 - How does reality capture help your company profit?
 - What kinds of ROI have you seen from scanning projects?
- Reality capture on the job site
 - What do you use reality capture for? Use cases?
- UAV capture versus Lidar scanning: which is better for your project? When should you use both?

Simulation

This topic focuses on using simulation technology as an integral part of the design process to ensure that a design is not only desirable but can be manufactured and will perform as expected, minimizing surprises and reducing the time to market. We're looking for structural engineers, CFD specialists, Autodesk Simulation Moldflow experts and designers who are using simulation products. If you have expertise in these areas and want to demonstrate what you can do with Autodesk simulation tools, or if you have a success story to share, submit a class proposal for the simulation topic.

Software development

Software development covers a broad range of development topics about Autodesk products, including those that focus on using the extensive APIs available in our products through programming languages, such as Visual LISP, VB.NET, C#, and C++, as well as more general programming concepts. We're also interested in topics that cover the use of Autodesk technology on desktop, cloud, and mobile platforms. Classes may be targeted to any proficiency level—from the entry-level customizer to advanced programmer. Software development classes with broad appeal usually attract more attendees than classes that focus on a single, esoteric feature.

Proposals for classes related to Autodesk Forge or Autodesk SaaS product APIs will also be considered for inclusion in the Forge Developer Conference (Forge DevCon). Forge DevCon is a conference that brings together over 1,500 software developers, engineers, business owners, and information officers interested in creating web and mobile applications that use the Autodesk Forge or Fusion 360 APIs. Forge DevCon is an AU preconference event that will be held over 2 days, Monday, November 13 and Tuesday, November 14.

Have you found creative ways to integrate and use Autodesk Forge in your real-life projects and products? Have you developed processes that improve company workflows and efficiency? Do you have ideas about where your industry is headed? Are you an expert in a web technology that complements Forge? If so, then you're a candidate to be a speaker at Forge DevCon. We're interested in classes that impact diverse industries, from AEC through manufacturing, and include how-tos, sessions for those just getting started, case studies, and perspectives on future applications.

Structural engineering

Structural engineering focuses on topics that are important to structural engineers and designers as well as BIM and CAD managers who want to learn more about Autodesk software for BIM. We welcome proposals that focus on:

- How to get started with BIM, including examples of implementation strategies.
- How to solve structural workflow challenges using Autodesk Revit, Autodesk Robot Structural Analysis Professional, and Autodesk Structural Bridge Design software, as well as Structural Analysis for Revit, cloud service, and complementary third-party software solutions.
- How to use best practices for coordination with BIM between architectural firms, structural engineering firms, MEP engineering firms, and contractors using Autodesk Collaboration for Revit and Autodesk BIM 360.
- How to use Dynamo to generate complex structural models in Revit and introduce structural optimization techniques in the analysis process.

We seek topics that are suitable for both intermediate and advanced users. This audience highly values classes with live product demonstrations that focus on advanced modeling and design.

Transportation

Transportation classes at AU focus on a broad set of needs within civil infrastructure, including roads and highways, airports, railways, ports, and bridges. We also invite classes that are specific to surveyors and their industry practice. We're particularly interested in classes that highlight product workflows, for instance:

- How InfraWorks 360, AutoCAD Civil 3D, and Vehicle Tracking software workflows can improve road and highway design.
- How airport and rail design can be aided by workflows involving InfraWorks 360, Revit, AutoCAD Civil 3D, Navisworks, and Vehicle Tracking.
- How to transition infrastructure projects designed using InRoads software to AutoCAD Civil 3D, including interoperability and .DGN to .DWG conversion using Autodesk's Civil Engineering Data Translator.

Utilities, energy, and natural resources

This topic focuses on the use of BIM in the design, construction, operations, and maintenance of utility, mining, and natural resource extraction and processing plants. We welcome proposals that showcase workflows, best practices, and success stories

about using Autodesk design suites or products, including AutoCAD, Revit, InfraWorks 360, AutoCAD P&ID, AutoCAD Plant 3D, AutoCAD Utility Design and the BIM 360 portfolio, among others. Additionally, we're interested in topics that cover the use of reality capture (such as using point clouds for brownfield projects), and using collaboration tools such as Vault and A360 for multi-office projects. We also welcome proposals that showcase use cases of Advanced Steel in the design and fabrication of process and power plants.

Sample proposals

Title: Rebar Detailing and Revit Structure

Format: Instructional demo

Skill Level: Beginner

Description: This class covers the use of Autodesk Revit Structure software as a reinforcement detailing platform. We will examine the various reinforcement tools available in Revit, including rebar extensions, area reinforcement, path reinforcement, 3D rebar, and assemblies. We will also touch on some best practices, work-arounds, shortcuts, limitations, and advantages. We will show you several examples of actual projects where Revit reinforcement has been used, and share the models themselves, methods employed for presenting quantities, and placement drawings.

Target Audience: Designers and BIM managers who are interested in using the reinforcement tools for construction documents or for creating shop drawings, and contractors who are interested in the advantages of rebar detailing in Revit

Learning Objectives: After completing this class, attendees will be able to:

- Describe best practices for getting started with rebar detailing in Revit.
- Use the base Revit reinforcement tools.
- Prepare shortcuts and work-arounds working with the Revit reinforcement tools.
- Recognize the various limitations of Revit reinforcement tools.

Title: Faster Families for Revit MEP

Format: Hands-on lab

Skill Level: Intermediate

Description: New and improved for Autodesk Revit MEP 2013! It is time to learn how to get your content modeled quickly—and save money on your projects. This hands-on lab

starts with creating your own family templates; we will provide great examples that you can take home with you. We will cover how to use the Shared Parameter Exporter and present guidelines for defining your own shared parameters. We will examine in detail how to edit object styles to use the improved materials, and we will wrap up by modifying fittings for duct and pipe to improve your designs. This extremely popular lab, which filled up quickly last year, can really help you get the most out of your Revit for MEP engineers.

Target Audience: BIM managers, MEP engineers and designers, content developers, and IT managers

Learning Objectives: After completing this class, attendees will be able to:

- Maximize materials for families and object styles.
- Customize pipe and duct fittings.
- Set up a family template and work with manufacturer content.
- Import multiple parameters at once with Shared Parameter Exporter.

Title: Animation of Inventor Assemblies Using 3ds Max Design

Format: Hands-on lab

Skill Level: Intermediate

Description: Autodesk Inventor software is a great tool for building complex mechanical assemblies and Autodesk 3ds Max Design software is a great tool for generating visually-stunning rendered animations. This class fuses the 2 programs and covers topics that are related to using 3ds Max 2012 to animate Inventor assemblies. Learn how to import an Inventor assembly that is going to be used for animation in 3ds Max. Learn strategies for building a hierarchy based on the animation requirements for the imported models. This class will step through the process of creating key-frame animation of specific moveable parts. Finally, you will learn about the tools that are available for editing key frames and tweaking the overall look and timing of the animation. To complete the process, you will learn how to configure and render an image sequence for final output using mental ray.

Target Audience: Autodesk Inventor and 3ds Max users who are interested in learning how to create animations of their Inventor designs

Learning Objectives: After completing this class, attendees will be able to:

- Animate using key-frame animation and edit keys to control the animation timing.
- Render an animated sequence using the mental ray renderer.
- Import an Inventor model from within 3ds Max Design.

- Create a hierarchical structure with integrated inverse kinematics that are suitable for animating.

Title: Annotation Scaling in AutoCAD: Bringing the Technology Home

Format: Instructional demo

Skill Level: Advanced

Description: Learn how to implement annotation scaling in your organization. Whether you would like to start with baby steps or go full bore, you will learn all levels of migrating these tools into your daily workflow. Learn about annotation scaling and how it works with hatching, text, linetype scale, dimensions, and all of the other options. See how you can “bring this technology home,” improve your productivity, and reducing unnecessary hours spent on annotations. This class is designed to assist you in building a new workflow for annotation in your organization.

Target Audience: Users of AutoCAD software or vertical products based on AutoCAD, such as AutoCAD Civil 3D, AutoCAD Architecture, and AutoCAD Mechanical software, who are advanced-level end users and CAD managers.

Learning Objectives: After completing this class, attendees will be able to:

- Explain annotation scaling.
- Integrate annotation scaling into their current workflow.
- Use annotation commands, tools, and styles.
- Reduce the time spent annotating drawings.

Sample speaker bios

Desirée Mackey, Martin/Martin

Desirée (Dezi) Mackey has been in the architecture, engineering, and construction industry for more than 15 years. After obtaining her bachelor’s and master’s degrees from the University of California, Davis, and the Massachusetts Institute of Technology, she perpetuated her nerdy tendencies with Revit. She started her career in California with a construction company, she continued with a structural engineering firm, and now she is a practicing structural engineer and Building Information Modeling (BIM) manager at Martin/Martin in Denver, Colorado. Dezi is a regular speaker at many conferences. She is the co-founder of the Rocky Mountain Building Information Society, the chair of the Structural Engineers Association of Colorado’s BIM Committee, a

member of the RTC North America Committee, and she has served as an Autodesk User Group International (AUGI) board member, treasurer, and vice president. Finally, as if that's not enough Revit in her life, she's married to "The Revit Geek" and acts as a partner in his BIM consulting firm, BD Mackey Consulting.

Steven Schain, Spectralight Images LLC

Steven graduated from the R.I.T. film/animation program in 1989 and from A-B Tech's Entrepreneurship program in 2011. He started Spectralight Images in 1989 to deliver 3D training and animation. In 1995, as vice president of Computer Animators Plus, he began teaching 3D animation at Seminole Community College. With his love of art, he open Gallery 611 in 1997, and formed the Orlando Visual Artists League (OVAL) in 2000, serving as president until 2004. In 1998 he became a Kinetix/Discreet/Autodesk training specialist, and has contributed to Autodesk certified training material for 9 releases of Autodesk 3ds Max. He was a co-developer of the Autodesk Certified Instructor Program, and Autodesk 3ds Max fundamental standards (MEIS). Steven currently develops 3ds Max and Autodesk Maya training courseware for CAD Learning's online learning programs for 4D Technologies. Today Spectralight Images LLC provides 3ds Max and Maya training, and unique, glasses-free 3D advertising services.

David Butts, Gannett Fleming

David is a BIM specialist for Gannett Fleming, a multidiscipline engineering firm based in Camp Hill, Pennsylvania. He provides BIM implementation and training for the firm's engineering design software, including Autodesk Revit, Autodesk Navisworks, AutoCAD MEP, AutoCAD P&ID and more. He has 27 years of experience in both the design and Autodesk VAR channel, spending 13 years working as an instructor and consultant for the Autodesk building design product line. David also worked as a training manager while in the channel, and was a member of the Autodesk ATC Advisory Board for 2009–2010. He is a Revit Architecture Certified Professional, and also earned the MEP Implementation Certified Expert title. David has spoken at AU for several years, and was named a Top Speaker at AU 2011. As an author, he also contributes to the 4D Technology CADLearning training programs and has written several training manuals on Autodesk Revit MEP.