Developer Training Conference at Microsoft Headquarters

August 12-16, 2019
Microsoft Headquarters
Redmond, WA

In-depth Technical Content On:
- AI, Data and Machine Learning
- Cloud, Containers and Microservices
- Delivery and Deployment
- Developing New Experiences
- DevOps in the Spotlight
- Full Stack Web Development
- .NET Core and More

LEARN MORE: vslive.com/microsofthq
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REDMOND IS PERHAPS MOST beautiful in August, with blue skies and views of the mountains! And there’s no better place to learn about the latest and greatest Microsoft technologies than on the Microsoft campus itself. In today’s world, this starts with cloud-based deployment where you can move traditional workloads from Windows servers to virtual machines and PaaS solutions. With all the changes for developers using just about any platform including .NET and Java, we see serverless and containers becoming central to many solutions. Not to be left out, the client stack continues to surprise with native frameworks like Windows Forms and WPF getting new life; JavaScript frameworks continuing to impress with their power, and the dynamic, new world that’s being opened up with C#, Blazor, and WebAssembly.

We’re Andrew Brust, Rockford Lhotka, and Brian Randell, and as Conference Co-Chairs for Visual Studio Live! Microsoft HQ, we’d like to personally invite you to join us this August at the Microsoft Conference Center in Redmond, WA. You need to keep up with all the exciting changes in technology. As veterans of the show and longtime speakers, we may be biased, but we firmly believe that an in-person experience, where you get to have two-way conversations about the latest tools and technologies, with some of the finest expert speakers in the business—and with the chance to network with your peers—continues to deliver the highest level of value.

Visual Studio Live! Microsoft HQ gives you more of what you’ve asked for: pre-conference Hands-On Labs, pre-conference workshops, brilliant keynotes, and more than 50 breakout sessions, covering a wide array of development technologies for everyone. From security to databases to the latest Web and mobile technologies, to Docker & Kubernetes, and DevOps, we’ve got you covered. Our speakers include industry luminaries & practitioners, as well as a large group of Microsoft product team members. They will present on machine learning & analytics, bots, and enterprise software solutions in-depth, based on their experience with Windows, macOS, Linux, and mobile platforms.

We have picked every workshop, Hands-On Lab and session with the goal of transferring knowledge to you, so you can be a better developer and help your organization succeed in this ever-changing technology world.

You’ll find coverage on .NET Core, C# 8, mobile development with Xamarin, container technologies, SQL Server, Cosmos DB, and Power BI. If the Web is more your style, you’ll find coverage of TypeScript and Angular on the client as well as ASP.NET Core on the server. Feeling confused about .NET Core? We’ve got sessions to clear it up. Want to improve the quality of your software? We’ve got sessions on unit testing and continuous delivery. Mystified as to how you can bring DevOps to your organization? Our speakers will answer your questions with practical guidance on DevOps for the cloud, the data center and more.

Our Hands-On Labs content provides coverage of Cloud-Native .NET Development using Kubernetes and Cloud Foundry, and Dependency Injection in .NET. If that’s not what you’re after, we’ve got great workshops on Azure DevOps, Web Development in 2019, and SQL Server for Developers. Our sessions, Hands-On Labs, and workshops drill deep into the subjects you need to master and the fundamentals that are always important.

Our industry continues the march toward the future. To keep up, you need to absorb rapidly and adapt. When you compare Internet-based content to a live experience, where you get to ask questions in real-time and engage directly with the experts and your peers, we’re sure you’ll agree with us you can go deeper, more quickly and get to the heart of your questions. Find a way to get to Visual Studio Live! Microsoft HQ and get the tools to help yourself grow.

Come celebrate 26 years of great learning and make your own memories with us! We hope to see you there!

VISUAL STUDIO LIVE! CONFERENCE CO-CHAIRS

Andrew Brust
Founder & CEO, Blue Badge Insights

Rockford Lhotka
CTO, Magenic

Brian A. Randell
Partner, MCW Technologies
REASONS TO JOIN US AT MICROSOFT HEADQUARTERS

10 NEW! ENHANCE YOUR LEARNING WITH HANDS-ON LABS.
We are bringing our famous Hands-On Labs to Microsoft HQ this year, so there’s another full day of learning. Bring your laptop and learn by doing!

9 WE’VE NEVER SKIMPED ON CONTENT.
VSLive! is known for being a technically-focused conference, with up to 5 full days of educational sessions on hot topics like ASP.NET Core, Azure, DevOps, SQL Server, Xamarin, AI, JavaScript and more!

8 EARN FOR TODAY. PREPARE FOR TOMORROW.
Get relevant, immediately usable training on what’s happening on the developer landscape now, and learn what’s coming next to get out ahead of the competition.

7 NETWORKING IS KEY.
From the networking breakfasts, to evening activities, to just sitting next to someone new at lunch, you’ll have the unique chance to learn from and share with your peers, all week long!

6 UNPARALLELED SPEAKER ACCESS.
What has always separated Visual Studio Live! from other conferences (and internet-based training) is the unparalleled access to the speakers. Get your questions answered in-between sessions, during meals and at fun evening events.

5 FEATURED TRACK: MICROSOFT-LED SESSIONS.
Hear from Microsoft insiders who are “in the trenches” working with developers just like you on a daily basis. Learn the newest techniques from those truly in the know, and provide the most-up-to-date analysis and detail on any development announcements made at the Microsoft Build and Ignite conferences.

4 WHAT’S OUR NAME? VISUAL STUDIO LIVE!
Our goal is to help make sense and assist you in harnessing the rapid pace of Microsoft’s updates. Quarterly updates to Visual Studio and Team Foundation Server (TFS) on-premises and Visual Studio Team Services (VSTS) in the cloud continue to deliver value on a regular basis. Visual Studio even provides preview updates monthly.

3 WE SAVED YOUR SPOT AT MICROSOFT HEADQUARTERS!
From the networking breakfasts, to evening activities, to just sitting next to someone new at lunch, you’ll have the unique chance to learn from and share with your peers. Plus, you will rub elbows with blue badges on campus, all week long!

2 THE CHOICE IS YOURS.
With so many sessions and workshops in a variety of tracks, you’re free to choose what sessions you attend and when. You aren’t bound to any one session or track! Sometimes it’s hard to choose, though, so we provide all conference proceedings and any shared code for all the sessions free to attendees!

1 NEW THIS YEAR! ON-DEMAND SESSION RECORDINGS.
Get on-demand access for one full year to all keynotes and sessions from Visual Studio Live! Microsoft HQ, including everything Tuesday-Thursday at the conference.

EXCELLENT SPEAKERS. GOOD TOPICS. GOOD FOOD. GREAT NETWORKING OPPORTUNITIES.
— Terry A. Reagan, TimeValue Software
ACCESS TO THE MICROSOFT COMPANY STORE

You bring the money, we get you special access!*

Monday, August 12 & Thursday, August 15

All Visual Studio Live! Microsoft HQ event attendees will have the opportunity to visit the Microsoft Company Store during their time at the conference and have access to the employee-only discount area. The company store’s discount area is typically only open for Microsoft employees to purchase select Microsoft products at discounted prices, so you won’t want to miss out on this great opportunity!

Popular home-use software titles such as Windows, Office, Office for Mac, and Streets and Trips are available. XBOX accessories and a selection of XBOX games are offered at significant savings. At the Redmond campus location, you will find one of the largest selections of Microsoft-branded PC hardware in any retail store. PC Hardware offered includes Keyboards and desktop sets, Mice, Webcams and more.

VISIT THE MICROSOFT VISITOR CENTER

The Microsoft Visitor Center is open to all employees and visitors to the Microsoft campus. Come share in the excitement of their discoveries, explore some of the latest products, and meet some of the people whose ideas and creativity make Microsoft a world leader in computer and software industry.
ACTIVITIES AND EVENTS, continued

DINE-A-ROUND DINNER
Monday, August 12
Join other conference attendees and speakers for a casual, no-host dinner and make a few new friends while enjoying the fun and delicious restaurants in the Bellevue area. This is your opportunity to meet fellow attendees and start friendships that can last for the week or even longer. Attendees can break into smaller groups based on where everyone wants to dine and head off to dinner. Everyone is responsible for their own drinks and dinner.

LUNCH WITH THE BLUE BADGES
Monday, August 12 & Thursday, August 15
On Monday and Thursday, Visual Studio Live! attendees will have the opportunity to have lunch with the Blue Badges at The Mixer, the Microsoft employee lunch area with over 10 different restaurant options to choose from. These two extended lunch periods are also the perfect time to visit the Microsoft Visitor Center and the Microsoft Company Store. Shuttle service to and from the Commons, as well as Microsoft food coupons will be provided as part of your Visual Studio Live! registration.

MICROSOFT ASK THE EXPERTS & EXHIBITOR RECEPTION
Tuesday, August 13
The Visual Studio Live! Exhibitor Reception @ MicrosoftHQ will be combined with a two-hour Microsoft Ask the Experts session, where you’ll get a chance to talk with Microsoft product team members and speakers. Enjoy drinks and snacks while you explore the Visual Studio Live! exhibits, network with fellow attendees and get answers to your questions for the experts and the exhibitors.

BIRDS OF A FEATHER LUNCH
Wednesday, August 14
Enjoy lively lunchtime discussions by joining one of our table topic conversations. Tables will have a designated topic to help start discussions and interact with your fellow attendees. You may even learn a new trick or two or some great tips to take back to the office.

We will also have designated speaker tables—noted with the speaker’s name. Join your favorite speaker for a lunchtime discussion or just to ask questions or clarify anything from their sessions.

VSLIVE!’S DOWNTOWN SEATTLE ADVENTURE
Wednesday, August 14
Adventure awaits you in downtown Seattle! Join your fellow Visual Studio Live! attendees for a night out. VSLive! will be providing buses from the conference hotel, Hyatt Regency Bellevue, to downtown Seattle on Wednesday evening. Choose your own evening adventure and explore Seattle City Center, take a trip to the top of the Space Needle, overlook the city on the Giant Wheel, take a stroll through Waterfront Park or check out some of the local breweries and watering holes. Whatever you choose, make it a night to remember!
## AGENDA AT-A-GLANCE

### DevOps in the Spotlight
- Cloud, Containers and Microservices
- AI, Data and Machine Learning
- Developing New Experiences
- Delivery and Deployment
- .NET Core and More
- Full Stack Web Development

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<th>Pre-Conference Hands-On Lab Registration - Coffee and Morning Pastries</th>
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### Pre-Conference Full Day Hands-On Labs: Monday, August 12, 2019 *(Separate entry fee required)*

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### Visual Studio Live! Day 1: Tuesday, August 13, 2019

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### Keynote: Moving .NET Beyond Windows
- James Montemagno, Principal Program Manager - Mobile Developer Tools, Microsoft

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<tr>
<th>Moving to ASP.NET Core 2.X - Philip Japikse</th>
<th>Sharing C# Code Across Platforms - Rockford Lhotka</th>
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### Sponsored Break - Visit Exhibitors - Foyer

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### Lunch - McKinley / Visit Exhibitors - Foyer

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### KEYNOTE: Moving .NET Beyond Windows
- James Montemagno, Principal Program Manager - Mobile Developer Tools, Microsoft

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### Microsoft Ask the Experts & Welcome Reception

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<tr>
<th>Versioning ASP.NET Core APIs - Philip Japikse</th>
<th>Visual Studio for Mac: From Check-out to Publish - Dominic Nahous and Cody Bayer</th>
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### Microsoft Ask the Experts & Welcome Reception

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Denotes Microsoft Speaker/Session

Speakers and sessions subject to change
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<tr>
<td>8:00 AM</td>
<td>9:15 AM</td>
<td>W01</td>
<td>Getting Pushy with SignalR and Reactive Extensions</td>
<td>Jim Wooley</td>
<td>W02</td>
<td>AI and Analytics with Apache Spark on Azure Databricks</td>
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<tr>
<td>9:30 AM</td>
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<td>W05</td>
<td>Building Reactive Client Experiences with RxJs and Angular Forms</td>
<td>Jim Wooley</td>
<td>W06</td>
<td>Power BI: What Have You Done for Me Lately</td>
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Logo denotes sessions with a Microsoft speaker. Speakers and sessions subject to change.

**GOOD SESSIONS WITH REAL TIME CODING. GREAT SPEAKERS. FOOD CHOICES FOR GREAT AND GOOD FUN ACTIVITIES.**

— Chris Fredrich, Lundquist College of Business University of Oregon
### AGENDA AT-A-GLANCE (continued)

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### Visual Studio Live! Day 3: Thursday, August 15, 2019

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<tr>
<td><strong>TH01</strong></td>
<td>Angular Application Testing Outside the Church of TDD - Chris Klug</td>
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<tr>
<td><strong>TH02</strong></td>
<td>Add Native to Cross Platform with Xamarin Essentials - Veronika Kolesnikova</td>
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<tr>
<td><strong>TH03</strong></td>
<td>Best Practices for Serverless DevOps: Inner Loop, Outer Loop, Observability - Colby Tresness</td>
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<td><strong>TH04</strong></td>
<td>Visual Studio Productivity Tips and Tricks - Allison Buchholtz-Au</td>
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<tr>
<td><strong>TH05</strong></td>
<td>Any App, Any Language with Visual Studio Code and Azure DevOps - Brian Randell</td>
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<td><strong>TH06</strong></td>
<td>MVVM Made Easy for WPF Applications - Paul Sheriff</td>
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<td><strong>TH07</strong></td>
<td>Cross Platform Automation with PowerShell Core 6.0</td>
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<td><strong>TH08</strong></td>
<td>Exceptional Development: Dealing With Exceptions in .NET - Jason Bock</td>
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<td><strong>TH09</strong></td>
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<td><strong>TH10</strong></td>
<td>Now, The Two Worlds Collided - Veronika Kolesnikova</td>
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<td><strong>TH11</strong></td>
<td>What Every Developer Needs to Know About Deep Learning - Vishwas Lele</td>
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<td><strong>TH12</strong></td>
<td>Use Async Internals in .NET - Adam Furmanek</td>
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<td><strong>TH13</strong></td>
<td>What’s New in Bootstrap 4 - Paul Sheriff</td>
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<td><strong>TH14</strong></td>
<td>How to Interview a Developer - Billy Hollis</td>
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<td><strong>TH15</strong></td>
<td>Building Azure Cosmos DB Applications—Part I - Leonard Lobel</td>
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<td><strong>TH16</strong></td>
<td>Testability in .NET - Jason Bock</td>
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<td><strong>TH18</strong></td>
<td>To Be Announced</td>
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<td><strong>TH19</strong></td>
<td>Building Azure Cosmos DB Applications—Part II - Leonard Lobel</td>
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<td><strong>TH20</strong></td>
<td>Manual Memory Management in .NET Framework - Adam Furmanek</td>
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<tr>
<td><strong>F01</strong></td>
<td>Workshop: ASP.NET Core with Azure DevOps - Brian Randell</td>
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<td><strong>F02</strong></td>
<td>Workshop: Web Development in 2019 - Chris Klug</td>
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<tr>
<td><strong>F03</strong></td>
<td>Workshop: SQL Server for Developers: The Grand Expedition - Andrew Brust and Leonard Lobel</td>
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*Logo denotes sessions with a Microsoft speaker.*

*Speakers and sessions subject to change*
MICROSOFT SESSIONS / KEYNOTE / GENERAL SESSIONS

MICROSOFT SESSIONS
There are many perks to attending training at Microsoft Headquarters and one of the biggest is getting to hear from Microsoft insiders who are “in the trenches” working with developers just like you on a daily basis. These sessions are a chance to hear the newest and latest techniques from those truly in the know, and provide the most-up-to-date analysis and detail on any development announcements made at the Build and Ignite conferences. Look for the logo above which denotes all sessions led by a Microsoft speaker.

GENERAL SESSIONS
Want a front-row seat to the future of technology? Attend the two general sessions for Visual Studio Live! Microsoft HQ to learn what’s hot on today’s tech landscape and what exciting developments lie ahead for this year and beyond.

Tuesday, August 13, 11:15am – 12:15pm

KEYNOTE: Moving .NET Beyond Windows

James Montemagno
Principal Program Manager - Mobile Developer Tools, Microsoft

As the software development industry moves at a blazing fast pace so does .NET. .NET leads the way across a multitude of platforms including web, IoT, desktop, mobile, wearables, and so many more. In this session we will take you through the journey of a .NET developer creating apps for these platforms on Visual Studio 2019 and Visual Studio 2019 for Mac. You will see how the latest advancements in .NET with the Mono Interpreter enable new scenarios for WebAssembly, iOS and Android development, and more. If you are a .NET developer, you do not want to miss this .NET packed session as .NET truly goes everywhere.

Wednesday, August 14, 11:00am – 12:00pm

GENERAL SESSION: .NET Core 3

Scott Hunter
Partner Director Program Management, .NET, Microsoft

Details Coming Soon
HANDS-ON LABS

Visual Studio Live! Microsoft HQ offers instructor-led, pre-conference Hands-On Labs to help you take your dev skills to a new level. Get intensive, in-depth training to complete your conference experience.

Topics covered include:
• Cloud-Native .NET Development
• Dependency Injection in .NET

HOL01 Hands-On Lab: Hands-On With Cloud-Native .NET Development
Intermediate
ROCKFORD LHOTKA AND RICHARD SEROTER
Monday, August 12, 8:30am – 5:30pm

“Cloud native” is rapidly becoming the default approach for building all sorts of apps. This term is often synonymous with microservices, containers, and serverless, but really combines those plus other concepts into a unified approach for building continuously delivered apps. In this hands-on workshop, you’ll learn how to build cloud-native systems in .NET Core. You’ll be running microservices in containers, hosted in orchestration technologies such as Kubernetes and Cloud Foundry. Even better, you’ll learn how to make these containers be the output of your continuous integration builds and see how they deploy to private, public, and hybrid clouds. If that wasn’t enough, you’ll also get hands-on experience with async message-based communications, modern configuration approaches, and many other key techniques that differentiate a cloud native app from more traditional architectures. These include the 12 Factors (12factor.net) and 8 Fallacies of Distributed Computing.

You will learn:
• How to build microservices in .NET Core for containers
• How to set up a DevOps pipeline so your build output is a container
• How to architect modern cloud native apps leveraging the 12 Factors and avoiding the 8 Fallacies

HOL02 Hands-On Lab: Leveling Up—Dependency Injection in .NET
Introductory / Intermediate
JEREMY CLARK
Monday, August 12, 8:30am – 5:30pm

Loosely coupled code is easier to maintain, extend, and test. Dependency Injection (DI) helps us get there. In this workshop, we’ll see how interfaces can add “seams” to our code that makes it more flexible and maintainable. From there, we’ll dig into loose coupling with Dependency Injection. DI doesn’t have to be complicated. With just a few simple changes to our constructors or properties, we can have code that is easy to extend and test.

After laying a good foundation, we’ll take a closer look by diving into various DI patterns (such as constructor injection and property injection) as well as other patterns that help us handle interception and optional dependencies. Along the way, we’ll see how DI helps us adhere to the SOLID principles in our code. We’ll also look at common stumbling blocks like dealing with constructor over-injection, managing static dependencies, and handling disposable dependencies. Throughout the day, we’ll go hands-on with labs to give you a chance to put the concepts into action.

If you’re a C# developer who wants to get better with concepts like abstraction, loose coupling, extensibility, and unit testing, then this is the workshop for you.

You will learn:
• How and why of dependency injection (DI)
• Software patterns (such as the Decorator) that make features easy to compose
• Getting over common stumbling blocks like over injection and handling disposable dependencies

HOL03 Hands-On Lab: Azure and Xamarin: Build the Mobile Apps of Tomorrow with Serverless, AI and Cross-platform Clients
Intermediate
LAURENT BUGNION
Monday, August 12, 8:30am – 5:30pm

This hands-on workshop will take you from 0 to a fully working, cloud connected, AI powered mobile app. We’ll help you get setup with Visual Studio and the Xamarin tools on either Windows or Mac, and connect your iPhone or your Android device ready to run an app. Once you are set-up, we’ll cover some basics of Xamarin and Xamarin. Forms, then it’s heads down setting up cloud services for storage, processing and authentication, and writing a cross-platform client app - using one code base for a fully-native app that runs on both iOS and Android. We’ll also give you small lectures on relevant topics such as Serverless Functions applications for processing, Cognitive Services for Image recognition, Cosmos DB for storage.

The app we build will combine accessing device hardware using Xamarin plugins, online AI services for face and emotion detection, and other services like authentication and blob storage, all built using a serverless architecture. By the end of the workshop, you will have a production ready, AI and cloud powered mobile app.
WORKSHOPS

Choose from a range of content and topics by expert presenters with Visual Studio Live! Microsoft HQ Post-Conference workshops.

Topics covered include:
- Azure DevOps
- Web Development in 2019
- SQL Server for Developers

F01 Workshop: ASP.NET Core with Azure DevOps
Intermediate / Advanced
BRIAN RANDELL
Friday, August 16, 8:00am – 5:00pm
DevOps is an organizational transformation that starts with people, process, and then products. It's a journey of continuous improvement that requires changes just about everywhere. As a developer, how can you embrace DevOps at a more technical level? You've heard you need to change the way you work with version control–trunk-based development? The idea of feature flags sounds intriguing, but how do you do it? Do you still need testers? How do you get to “10 plus deployments a day?”

This all-day workshop is broken into five parts where you’ll start with nothing and end with an ASP.NET Core app with a SQL Server database running in Azure using both Azure App Service with SQL Database as well as an Azure AKS deployment with Kubernetes. In both case it will be done with a full continuous integration/continuous deployment (CI/CD) pipeline managed by Azure DevOps.

First, there will be a quick review on the current state of DevOps in the industry. Next will be the planning and tracking phase with Azure Boards and see the architecture of the app broken out and defined. Then the dev and test phase using Azure Repos and Azure Artifacts. You’ll get feature flags implemented, CI builds in Azure Pipelines working, manual and automated tests using Azure Test Plans, and more. In the release phase, you’ll look at how you create a deployment pipeline with Azure Pipelines to multiple environments in Azure and how you validate a deployment after its release. Finally, the monitor and learn phase will cover analytics using Application Insights as well as how you gather user feedback. Then you’ll see how to start the cycle over again. By the end of the day you’ll have the technical knowledge on how to build a modern ASP.NET Core and SQL Server solution that runs in Azure with and without containers using Azure DevOps to focus on the flow and delivering value to your customers.

You will learn:
- What the current state of DevOps is in the industry
- How good application architecture affects DevOps in the cloud
- How to create and manage a CI/CD pipeline in Azure Pipelines

F02 Workshop: Web Development in 2019
Introductory / Intermediate
CHRIS KLUG
Friday, August 15, 8:00am - 5:00pm
Being a web developer is hard! Very hard! The world around us changes at a pace that would make most people dizzy! And if you are in the Microsoft space, and using Visual Studio for example, the release cadence of the IDE is WAY too slow to keep up. You really have to go outside your comfort zone and locate other tools that can help you. Tools that will do what you want, but will still work together with your existing tools. You will probably also have to leave your Microsoft path and look at non-Microsoft technologies and frameworks. Something that can be a bit scary to be honest... But you might be surprised by what you find!

A few years ago, Chris Klug, returned to web development after a few years doing other things...cough...Silverlight...cough... What he returned to was a lot different to what he had left! The tools were different, the pace ridiculous and the pressure to keep up high. But he also found a new passion for front-end web development! Something he wants to share with you during this workshop! So be
prepared for a day of ASP.NET Core, Azure, node, npm, gulp, webpack, TypeScript and more!

This workshop is intended for developers who find themselves a bit overwhelmed by today’s web and the tools and technologies they see emerging around them. Throughout the day, you will see different tools and frameworks that will your life as a front-end web developer easier, faster or better! Hopefully you will walk out with an urge to explore these new things, or potentially a loathing for web development. Either way, you will probably have a new way of looking at web development!

You will learn:
• Understanding of what web development is like today
• Knowledge of the tools that are used today in web development
• A basic understanding of how to set up your application to enable you to build web apps with modern tools

Our workshop continues with the latest security features, including dynamic data masking (DDM), row level security (RLS), and Always Encrypted. You’ll also get a look at the new “secure enclaves” feature in SQL Server 2019 that enables rich query and range operations on always encrypted data. We’ll conclude by exploring temporal tables (versioned tables that enable instant point-in-time queries over your data) and Stretch DB for online archival of historical data.

Attend this workshop, designed especially for developers, and get up-to-speed on both the latest relevant SQL Server features and the product’s classic critical capabilities!

You will learn:
• How to accelerate your database development process by running cross-platform SQL Server inside Docker containers
• The latest T-SQL language enhancements, plus DDM, RLS, Always Encrypted, Stretch DB, temporal tables, JSON, and Graph DB
• How to use SQL Server for data warehouse, big data and machine learning workloads
• The basics of new SQL Server-integrated open source technologies, including Spark, HDFS, Python, R and Parquet
SESSION DESCRIPTIONS BY TRACK

**DEVOPS IN THE SPOTLIGHT**

DevOps has been called the second decade of Agile. While it’s easy to get obsessed over tools, it’s really about organizational transformation. It starts with people, better process, and then—yes—good products can make all the difference. DevOps is all about continuous value delivery. You have a role to play when it comes to DevOps, and in this track, you’ll learn about the tools, techniques, and concepts that you can immediately apply to your daily work.

You’ll find coverage of:
- Serverless DevOps
- Becoming a better dev with DevOps
- DevOps with ASP.NET Core, EF Core and Azure DevOps
- Visual Studio Code and Azure DevOps
- CI/CD with Azure DevOps
- SCRUM
- Security in your development process
- Database DevOps

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**T08 DevOps Practices Can Make You a Better Developer**  
*Intermediate*  
**ROBERT GREEN**  
**Tuesday, August 13, 9:30 – 10:45am**  
Improved deployment frequency. Faster time to market. Lower failure rates. Faster fixes and recovery time. These are some of the promises of DevOps. Whether you are an individual developer or working in a team, you can take advantage of DevOps practices. In this session, aimed at developers who are new to DevOps, you’ll see how you can leverage the concepts of agile development, continuous integration and continuous delivery to build better software. And you’ll see how Visual Studio and Azure DevOps provide you with the tools you need.

You will learn:
- Explore the value of implementing DevOps practices
- How to create CI/CD pipelines
- Understand how to implement basic DevOps practices in your development routine

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**T16 CI/CD with Azure DevOps**  
*Introductory / Intermediate*  
**TIAGO PASCOAL**  
**Tuesday, August 13, 9:30 – 10:45am**  
Automating the building and deploying of applications should be an easy task, something you can do quickly and effortlessly. Come learn how! In this session, you will learn how Azure DevOps can automate your build pipeline. And not just for compiling code, but for running automated tests and code analysis tools too! Let’s not stop there though. Building code would be useless if we don’t do anything with it. You are also going to learn how to use Azure Pipelines to deploy code to your environment(s), whether you are using on-premises machines or a cloud provider, any cloud provider. Interested? See you at the session!

You will learn:
- How to build Azure DevOps Pipelines to build and deploy code
- Deploy code to both on premise and to the cloud
- Continues Integration and Continuous Delivery

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**W04 DevOps with ASP.NET Core, EF Core, & Azure DevOps**  
*Advanced*  
**BENJAMIN DAY**  
**Wednesday, August 14, 8:00 – 9:15am**  
DevOps is all about software delivery. Create an automated, streamlined path from development to testing to deployment — that’s basically DevOps. Great. So how do you do it with ASP.NET Core and Entity Framework Core? How do you deploy the SQL Server schema? How do you deal with EF Core schema migrations? What about unit testing? How do you handle database connection strings? What about deployments to Azure? Don’t worry. We’ve got ya covered. In this talk, Ben will walk you through creating an automated DevOps flow using Azure DevOps Server (aka. TFS2019) or Azure DevOps that will allow you to build, test, and deploy your ASP.NET Core & EF Core application.

You will learn:
- How do you handle including database changes in your DevOps flow?
- How do you handle multi-environment configurations with EF Core and ASP.NET Core?
- Why do you care about DevOps and an end-to-end release pipeline?
SESSION DESCRIPTIONS BY TRACK (continued)

W08 Real World Scrum with Azure DevOps
Intermediate
BENJAMIN DAY
Wednesday, August 14, 9:30 – 10:45am
You’ve got Team Foundation Server, Azure DevOps Server, or a subscription to Azure DevOps in the cloud and you’re looking to do Scrum. Ok. Great. Now what does that mean? What does TFS actually do to help your Scrum team(s) run more efficiently? If I’m the Scrum Master, what should I be coaching my team to do? What can you do to help get to high-quality, “done”, working software faster? How does TFS make anything in Scrum easier?
In this session, Ben will address these from the perspective of a technically-minded Scrum Master. He’ll show you how to address four of the main pieces of running a Scrum project using TFS: Stakeholder Interaction, Planning & Execution, Testing, and streamlining the Definition of Done (DoD). Along the way there will be plenty of talk about work item management, QA testing, feedback management, and automated builds.
You will learn:
• Streamline your scrum process using TFS & Azure DevOps
• Planning & Executing your sprints
• Using TFS’s Test Hub to track and manage the QA testing effort

W12 Bolting Security Into Your Development Process
Introductory / Intermediate
TIAGO PASCOAL
Wednesday, August 14, 1:30 – 2:45pm
Security is no longer optional; organizations can no longer look the other way. A security breach is something that not only brings reputational costs but can also cost millions of dollars in losses from lost business or lawsuits. Humans are always going to be part of the development process, but automation is the first line of defense. In this session, you will learn what security issues to look for when developing and deploying software, and potential changes you should consider to your development process to handle them. You will also learn how Azure DevOps, and other tools, can be used to provide process control and automation that allows you to ship more secure software.
You will learn:
• How to make your development process more secure
• Common security scanning tools
• DevSecOps

W16 Database DevOps with SQL Server
Intermediate / Advanced
BRIAN RANDELL
Wednesday, August 14, 3:15 – 4:30pm
Delivering value to your customers requires you providing a quality experience. A quality experience where your app is intuitive, available, fast, and connected. And for many apps, the foundation of that whole experience is a SQL Server database.
In this fast-changing world, how do you manage the necessary changes needed to support your applications? How do you track these changes and follow a change from development to test to production? You need an effective DevOps plan for your database.
In this session, you’ll learn where the SQL Server database fits in to DevOps, and how you can use tools to extend your infrastructure to make the database a first-class citizen, just like your source code. You’ll see how to track changes with version control; create update packages; and deploy to multiple environments with complete automation like development, test, user acceptance training (UAT) and production. You’ll see how you can update a live database while it’s being used and learn how to move your apps forward so you can provide a quality experience for your users.
You will learn:
• Why you need DevOps for your database
• How to use Microsoft and Redgate tools to implement a good database DevOps process
• How to make updates to a live system while it’s being used

TH03 Best Practices for Serverless DevOps: Inner Loop, Outer Loop, Observability
COLBY TRESNESS
Thursday, August 15, 8:00 – 9:15am

TH05 Any App, Any Language with Visual Studio Code and Azure DevOps
Intermediate
BRIAN RANDELL
Thursday, August 15, 9:30 – 10:45am
Microsoft has the cross-platform religion. Bring your Linux or macOS computer and build your next big thing with Azure DevOps and Visual Studio Code. In this session, Brian will cover how you build cross-platform solutions using Visual Studio Code on Windows, macOS, and Linux using .NET Core, JavaScript, and SQL Server. Will cover extensions, the command-line, and putting your code Azure Repos or GitHub, manage your work with Azure Boards, and deploying with Azure Pipelines.
You will learn:
• How to configure your inner loop with Visual Studio Code
• How to configure your outer loop with Azure DevOps
• How to build for closed and open source with Azure DevOps or GitHub
Cloud computing is no longer new. For most organizations, it’s not a matter of “if”, but more about how much. Container technologies such as Docker and Kubernetes (aka k8s) are having a large impact on cloud computing, as well as on software architecture. This is perhaps most clear when thinking about service-oriented, or microservice, software architectures and how they can be used to leverage cloud- and container-based environments. It is hard to imagine any enterprise development scenario where one or more of these trends would not be high on the list of critical skills.

This track includes coverage of the following:

• Application modernization with Microsoft Azure
• Business application bots
• Docker for developers
• Microservices with Azure Kubernetes Services
• Consuming cloud services with the Kubernetes Service Catalog
• Azure Functions

T07 Application Modernization with Microsoft Azure
Intermediate
MICHAEL CRUMP
Tuesday, August 13, 9:30 – 10:45am
Join this demo-heavy session to learn how to modernize an existing ASP.NET web app to Azure and add-on extended functionality to your add and existing SQL database with Azure Logic Apps and Azure Functions without changing your production code base.

You will learn:
• Understand how Microsoft Azure makes it easy to modernize your existing application without changing production code or build new cloud-native apps
• Discover how you can use serverless on Azure to easily add advanced functionality to existing applications
• How to incorporate DevOps throughout your application’s lifecycle while thinking of the future by using data-driven intelligence

T15 Why, When, and How to Enhance Your App with Azure Functions
Intermediate
DARIA GRIGORIU & EAMON O’REILLY
Tuesday, August 13, 3:00 – 4:15pm
Communication with customers and employees is improved when you open the channels of text and voice communication using bots. This beginner-level session, will teach you how to leverage Microsoft Cognitive services to design, train, and deploy your custom bots and consume them in your custom applications and others channels such as Skype, Facebook, and Amazon Alexa.

You will learn:
• How to create and design bots using Microsoft Cognitive services
• How to deploy and consume using Skype and Facebook
• How to communicate with users through Cortana

W03 Building Business Application Bots
Introductory / Intermediate
MICHAEL WASHINGTON
Wednesday, August 14, 8:00 – 9:15am

W07 Windows Subsystem for Linux –
RICH TURNER AND CRAIG LOEWEN
Wednesday, August 14, 9:30 – 10:45am

W11 Works On My Machine… Docker for Developers
Introductory / Intermediate
CHRIS KLUG
Wednesday, August 14, 1:30 – 2:45pm
There is a LOT of talk about containerization today, and about Docker in particular. At least in the Microsoft world. The rest of the world, has been using it for quite a while, but seeing that it is mostly Linux based, it has had some
problems getting traction with Microsoft developers. But that is about to change. The technology raises a lot of questions though. What is it? Why is it awesome? How do I get started? How can it help me? Is it just for huge companies like Netflix? Is there any reason to use it if you aren’t running a 100+ node cluster? Will it blend?

All of them valid questions when you are getting started, but once you get over the initial “what is it?”, you quickly get into “that is really cool” and “why hasn’t anyone told me about this before”. And you realize that there are a lot of reasons to go further and learn more.

In this talk you will get an introduction to Docker, what it is and what it does, and then a walkthrough of how to get started with it. You will get to see the tools you need, the initial commands you need to know, as well as some demos showing some of the cool things you can easily do with Docker. Taking you from “what is it?” to “this is how you set up a cluster with several containers in minutes” in an hour-ish.

You will learn:
- Understanding of what Docker is
- Understanding of how to use Docker
- A basic knowledge of how to practically start working with Docker

W14 What’s New with Azure App Service?
CHRISTINA COMPY
Wednesday, August 14, 3:15 – 4:30pm

W15 Microservices with Azure Kubernetes Service (AKS)
VISHWAS LELE
Intermediate
Wednesday, August 14, 3:15 – 4:30pm

Many are increasingly seeing microservices and containers as an architectural style of choice. Kubernetes is also gaining a lot of momentum. This session will look at key tenets of microservices. Then you’ll switch to practically applying these concepts to AKS, formerly known as Azure Container Service.

You will learn:
- About microservices and containers
- Key Kubernetes concepts
- How to set up and deploy applications to AKS

AI, DATA, AND MACHINE LEARNING
Data is one of the hottest topics in our industry. Advances in relational tools like SQL Server are exciting, but then there’s all the cool stuff happening around NoSQL too! And a major driver for all this excitement around data is how it enables BI scenarios and how businesses are rapidly relying on AI and machine learning. There’s no room for anyone to be complacent when it comes to data, and we’re here to keep you up-to-date.

This track includes coverage of the following:
- SQL Server 2019 deep dive
- Azure Cosmos DB
- AI and analytics with Apache Spark and Azure Databricks
- Power BI
- Deep learning for developers
- Data pipelines and analytics on Azure

T03 SQL Server 2019 Deep Dive
Intermediate
SCOTT KLEIN
Tuesday, August 13, 8:00 – 9:15am

SQL Server 2019 brings a ton of innovation and features for supporting advanced analytics and all types of data workloads. With SQL Server 2019, big data is built-in, and this demo-heavy session will showcase the great capabilities of SQL Server 2019 including data integration and insights, performance, and security to allow you
to work with and manage big data environments by integrating deeply with Hadoop HDFS and Spark.

You will learn:
- How SQL Server 2019 makes it easy to work with and manage big data environments, as well as providing transformation insights over both structured and unstructured data
- How SQL Server provides the deep intelligence across all types of data by leveraging the integration of SQL Server and Spark as well as the deep analytics capabilities
- About the new performance and security features, allowing data protection at rest and in use, while taking advantage of improved scalability and performance across all data sources, including data lakes and data warehouses

T11 Data Pipelines with End-2-End Azure Analytics
Intermediate
SCOTT KLEIN
Tuesday, August 13, 1:30 – 2:45pm
Real-time analytics for real-time data insights is every architect’s dream, and this demo-heavy session will show how to gain deep real-time data insights through an end-to-end analytics pipelines. Using key Azure services such as SQL Data Warehouse, Azure Databricks, and Azure Data Factory, this session will illustrate and showcase how to gain deep data insights through simple analytics pipelines.

You will learn:
- How to create simple yet rich analytics pipelines that bring together real-time data with minimal friction to gain deep and meaningful real-time data insights
- How to leverage services such as Azure SQL Data Warehouse, Azure Data Factory, Azure Databricks, and more, to develop and build automated processes to help with critical business decision making

W02 AI and Analytics with Apache Spark on Azure Databricks
Intermediate
ANDREW BRUST
Wednesday, August 14, 8:00 – 9:15am
Open source technology Apache Spark as the analytics and machine learning platform of choice for many companies. While Spark has manifested in numerous parts of the Microsoft stack, including SQL Server 2019, Microsoft’s go-to Spark service is Azure Databricks.

The service, from Microsoft and Databricks (the company founded by Spark’s creators), is a versatile one, geared towards analytics, data engineering and data science. Azure Databricks lets developers work in notebooks, offline, interactively with running clusters, or schedule them as production jobs that provision Spark clusters on-demand.

This session will cover the concepts, service mechanics, and code necessary for you to do analytics and machine learning on Azure Databricks, and integrate it with other Microsoft cloud services and on-premises technologies.

You will learn:
- About the fundamentals of Apache Spark, Spark SQL and Spark MLlib
- How to use Databricks notebooks
- How to manage clusters and jobs
- How to integrate Azure Databricks with blob storage and Azure Data Lake Store (ADLS)
- How to write Python code for both analytics and machine learning

W06 Power BI: What Have You Done For Me Lately
Intermediate
ANDREW BRUST
Wednesday, August 14, 9:30 – 10:45am
Power BI has been a runaway success in adoption and mindshare, rocketing Microsoft past many of its business intelligence competitors. You may already know Power BI creates great looking visualizations, or that it runs on Windows, iOS, Android, and in the cloud. But do you know how to use it? And if you do, is your knowledge current with all the new features of this product that’s updated on a monthly basis?

Come to this session for a combination quick intro to Power BI (including its technology underpinnings, the costs around it and, of course, how to use it) and primer on several newer features, including data flows, AI features, composite models and Python integration. We’ll even cover features released after this abstract is published.

You will learn:
- Power BI Basics: Reports and dashboards on desktop, cloud and mobile
- New and recent features like data flows and AI integration
- Using Power BI for Big Data analytics with aggregation tables and composite models
- Scripts and visualizations with Python and R
TH11  What Every Developer Needs to Know About Deep Learning
Intermediate / Advanced
VISHWAS LELE
Thursday, August 15, 11:00am – 12:15pm
In this session we will look at deep learning to as an increasingly important toolset for developers.
You will learn:
• About Deep Learning
• About Convolutional neural network
• How to use Deep to solve real world examples

TH15  Building Azure Cosmos DB Applications—Part I
Introductory / Intermediate
LEONARD LOBEL
Thursday, August 15, 2:00 – 3:15pm
In this intensive demo-packed session, you’ll learn how to write applications for Cosmos DB. Watch as we globally distribute a Cosmos DB database and configure a failover policy for your application that ensures lightning fast (single-digit millisecond) response times for your users no matter where they are located. You’ll see how to migrate data from SQL Server to Cosmos DB, and how to write queries using Cosmos DB SQL. Then we’ll write real world data access code that creates and queries databases, collections, and documents, and also learn how to apply custom indexing policies. Attend this session and prepare to build Cosmos DB applications today!
You will learn:
• How to globally distribute your data with Cosmos DB
• Explore the Cosmos DB SQL programming language for querying JSON documents
• Write real-world client application code for Cosmos DB

TH15  Building Azure Cosmos DB Applications—Part II
Introductory / Intermediate
LEONARD LOBEL
Thursday, August 15, 3:30 – 4:45pm
Part II of this dynamic session continues in full swing, as we dive into the Cosmos DB SQL API’s unique server-side programming model. Learn how to write and deploy stored procedures, triggers, and user-defined functions that execute directly inside the Cosmos DB service on Azure. Your server-side code is fully transactional, and you get the ACID guarantee on all updates to ensure that they either all succeed, or all rollback in the event of an error.
Then we’ll turn our attention to the other APIs available in Cosmos DB. These APIs support a variety of data models, including the MongoDB APIs (for BSON documents), Table API for (key-value entities), Gremlin API (for graphs) and Cassandra (for columnar).
Regardless what you choose as a data model of choice, you’ll learn how to provision throughput, and how to partition and globally distribute your data to deliver massive scale.
You will learn:
• How to deploy and run stored procedures, triggers, and user-defined functions with the SQL API
• About the various other Cosmos DB APIs at work: Table, Gremlin, and Cassandra
• Build a real graph application using Cosmos DB and the Gremlin API

DEVELOPING NEW EXPERIENCES

The expectations around “user experience” are being upended right before our eyes. In today’s world you need to understand not only graphical interactions with keyboard, mouse, touch, and stylus, but also gesture, 3D, mixed-reality, and more. Fortunately, we’ve got you covered with content from phones to PCs to virtual and augmented reality.
This track includes coverage of the following:
• Xamarin and Xamarin Essentials
• Sharing C# code across platforms
• Virtual and Augmented reality
• MVVM for WPF applications
• Visual Studio for Mac

T02  Stunning Mobile Apps with the Xamarin Visual Design System
JAMES MONTEMAGNO
Tuesday, August 13, 8:00 – 9:15am
Xamarin.Forms excels at quickly producing cross-platform mobile experiences that look and feel at home on the host platforms. But how do you make sure your app experience is also consistent with your brand experience? Now with Xamarin.Forms Visual you can adopt a singular look and feel across your native applications, and even share that experience across multiple applications. Whether you want Material Design everywhere, or you want to craft your own, in this session you’ll learn how to build a Visual implementation, consume it in your app(s), and distribute it. Visual is the next step forward in creating beautiful, native UI with Xamarin. To top it off we will look at the next generation of productivity tools for Xamarin developers to help them create stunning apps.
SESSION DESCRIPTIONS BY TRACK (continued)

T06 Sharing C# Code Across Platforms
Intermediate
ROCKFORD LHOTKA
Tuesday, August 13, 9:30 – 10:45am
At some point you are going to need to get your existing code base running on .NET Core, UWP, Xamarin, or another flavor of .NET. In the past you might have used Portable Class Libraries (PCLs) or Shared Projects to accomplish this goal. The new .NET Standard 2.0 definition is implemented by .NET Core, Xamarin, full .NET, and UWP, and this means we have a much simpler and more direct way to share and reuse code across all platforms.

You will learn:
• How to share code across different UI platforms
• How .NET Standard works across platforms
• How to migrate from .NET Framework to .NET Standard

T14 Visual Studio for Mac: From Check-out to Publish
Introductory
DOMINIC NAHOUS & CODY BEYER
Tuesday, August 13, 3:00 – 4:15pm
Join our Visual Studio for Mac Program Managers as they demonstrate how to use Visual Studio for Mac throughout the development cycle. In this presentation, you’ll be taken through the steps of checking out a project from source control, editing the project using the new editor within Visual Studio for Mac, adding new projects in order to expand your solution, checking your code back in, and finally publishing your project to Azure or an App Store. You’ll see the use of familiar technologies that include GitHub, Azure DevOps, and .NET Core all within Visual Studio for Mac.

TH02 Add Native to Cross Platform with Xamarin.Essentials
Introductory / Intermediate
VERONIKA KOLESNIKOVA
Thursday, August 15, 8:00 – 9:15am
For every mobile cross platform developer, it’s important not only create a look and feel of a native application, but provide access to native functionality. The easiest way to access native APIs when building apps with Xamarin is Xamarin.Essentials.

In this session, you’ll learn more about Xamarin and Xamarin.Forms specifics, ways of accessing native functionality and overview of Xamarin.Essentials. Learn about the newest tools for cross platform developers and ways of making your Xamarin app look, feel and function same way as native

You will learn:
• Xamarin.Forms specifics
• Ways of accessing native functionality in Xamarin
• Application and benefits of Xamarin Essentials

TH06 MVVM Made Easy for WPF Applications
Introductory / Intermediate
PAUL SHERIFF
Thursday, August 15, 9:30 – 10:45am
MVVM and WPF go together like chocolate and peanut butter. This seminar guides you step-by-step on how to take advantage of this powerful design pattern. The main goal of MVVM is to help you develop code that is testable and re-usable, and this can be accomplished by just using MVVM. This session shows you how to create your own view model classes and bind them to your WPF screens. You will also learn to build a base class on which all your view model classes inherit.

You will learn:
• Use the MVVM design pattern effectively
• Utilize a base class for your MVVM design
• Keep MVVM simple

TH10 Now, the Two Worlds Collided
Introductory / Intermediate
VERONIKA KOLESNIKOVA
Thursday, August 15, 11:00am – 12:15pm
Augmented and virtual realities are getting increasingly more popular not only among developers, but also consumers. Now we can add those technologies to web and mobile applications.

Augmented reality mobile applications can be used in a wide variety of projects, no matter if it’s for healthcare, games and entertainment or interior and design companies. This session will provide information about the most popular AR frameworks and software development kits (SDKs) for mobile and web. We’ll learn pros and cons and what can be the best environment for using each of them. You’ll see which ones can be used in Xamarin and Xamarin.Forms apps and some tips and tricks for creating your first AR Xamarin app with C#.

You will learn:
• Understand how AR works on mobile platform
• About the most popular AR frameworks for mobile and web
• How to create an AR app
DELIVERY AND DEPLOYMENT

Every developer knows that there’s more to software development than just code and tooling. The practices and techniques we use to understand and analyze the problem space are keys to success, as is our ability to get outside our apps and administer our systems.

Topics in this track include:
- Dependency Injection
- PowerShell Core 6.0

W10 UX Design Fundamentals: What Do Your Users Really See?
Introductory
BILLY HOLLIS
Wednesday, August 14, 1:30 – 2:45pm

Developers are often unaware of how their users actually see their screens. In this UX design session, we’ll discuss the most important principles concerning how the human brain and visual system determine how users see application interfaces. We’ll look at Gestalt principles for grouping and highlighting, inattentional blindness and change blindness, how users scan through a view, and how to promote clarity in interfaces with levels of emphasis. Tests will help attendees see how they personally experience these principles, and better understand the challenges faced by their users when views and pages are not designed to respect design principles.

You will learn:
- Understand limitations in the human visual system for experiencing computer screens
- Principles to leverage the human visual system for better and faster understanding of interfaces
- Comparisons of real app views done badly and redesigned to be better

TH07 Cross Platform Automation with PowerShell Core 6.0
Introductory / Intermediate
Thursday, August 15, 9:30 – 10:45am

PowerShell, it’s no longer just for Windows. In fact, with the introduction of PowerShell Core 6.0, the new PowerShell experience works identically across Windows, macOS, and Linux. As we enter a new age of cross platform systems and application management, becoming skilled in using PowerShell across multiple computing environments benefits both the PowerShell developer and the organization.

In this talk, we will walk through configuring a PowerShell Core 6.0 development environment on both Windows and non-Windows systems. We will then explore the benefits of PowerShell automating across platforms, including Docker containers. As a result of attending this session, you will be able to quickly transition your existing PowerShell skills from a Windows centric world, to systems and application management across multiple computing platforms.

You will learn:
- Understand PowerShell Core 6 and how it compares / contrasts with Windows PowerShell
- Configure a PowerShell environment on a non-Windows platform
- Use PowerShell in automation tasks across Windows, Linux, and macOS systems

TH14 How to Interview a Developer
Introductory / Intermediate
BILLY HOLLIS
Thursday, August 15, 2:00 – 3:15pm

Most developers end up interviewing candidates for their team at some point, but few receive any instruction in how to do it. In this session, a veteran team leader and developer with over 400 interviews under his belt will cover the basics, including general approach, questions to ask, and other tips for more reliable evaluation before, during, and after interviews. Previous attendees for this session have said it yielded many tangible benefits to their team, including an increase in their retention rate.

You will learn:
- Preparation you need to take to make an interview productive
- Potential questions to ask interviewees, and what each question is designed to discover
- How to avoid tipping off interviewees about the answers you’d like to hear

SPEAKERS WERE FULL OF ENERGY!
FUN! VERY KNOWLEDGEABLE.
— Gabriel D. Florentino, University of Washington
.NET CORE AND MORE

At the heart of the Microsoft development experience is the .NET Framework. But these days there’s so much more than just that original framework. You also need to understand .NET Standard and .NET Core, not to mention the cool features added to C# and Visual Studio. These are the base-level tools you need to know for success in the Microsoft development world.

Topics in this track include:
• .NET Core, .NET Standard
• Understanding delegates in .NET
• Exceptions in .NET
• Async internals in .NET
• Manual memory management in .NET Framework
• Testability in .NET
• Visual Studio productivity tips and tricks

T12 Get Func-y: Understanding Delegates in .NET
Introductory / Intermediate
JEREMY CLARK
Tuesday, August 13, 1:30 – 2:45pm
Delegates are waiting to make our code more flexible and extensible. We’ll take a look at what delegates are and dispel the mystery of the built-in Func and Action delegate types. Jumping into code, we’ll use them to make our classes more flexible and even use multi-casting to kick off a series of operations with a single call. Along the way, we’ll see that lambda expressions can add readability to our code (yes, I actually said that). And this is a great jumping off point for heading into LINQ, parallel programming, and functional programming.

You will learn:
• Understanding what delegates are
• Using delegates for extensibility
• Getting a handle on Func, Action, and lambda expressions

TH08 Exceptional Development: Dealing with Exceptions in .NET
Intermediate
JASON BOCK
Thursday, August 15, 9:30 – 10:45am
Exceptions...they seem like such a simple thing, and yet, even in 2019, they are probably one of the most misunderstood and misused aspects of .NET. In this session, we’ll talk about what exceptions are, how they are used, and principles that you should follow to get the most (or least) out of exceptions and to make your applications resilient against failure.

You will learn:
• See how exceptions can be managed effectively in applications
• Understand how new language features in C# improve exception handling
• Gain insight into best practices for exception handling and error reporting

TH12 Use Async Internals in .NET
Intermediate / Advanced
ADAM FURMANK
Thursday, August 15, 11:00am – 12:15pm
Async and await are now common elements of .NET ecosystem. Do you know how they work? Do you know what is synchronization context, how to wait for async void methods or how to implement custom task scheduler?

In this talk I show internals of async and await. I present state machine created by the compiler, consider allocation issues and show typical deadlock scenarios. We will see how to call async methods from synchronous code, how to wait for async void, how to implement custom synchronization context or task scheduler to handle exceptions, and how to run task without allocation at all.

T04 C# and/or .NET Core 3.0 –
DUSTIN CAMPBELL
Tuesday, August 13, 8:00 – 9:15am
Details Coming Soon
You will learn:
• Understanding state machine generated by the compiler when compiling async/await
• Understanding synchronization context and thread pool, implementing own solution to await async void methods or handle exceptions
• Understanding memory usage and how to minimize it

TH16 Testability in .NET
Intermediate
JASON BOCK
Thursday, August 15, 2:00 – 3:15pm
Unit testing is a mature concept. The software development community as a whole has embraced the idea and encourages other developers to write tests. However, there’s still a substantial amount of code out there that isn’t being tested. Even if tests are being written, developers may not understand how to write them effectively or know how specific test-related frameworks work. In this session, you’ll dive deep into unit testing in .NET. I’ll cover different testing frameworks and their specific capabilities, what mock objects provide, and why you should use assertion frameworks. I’ll also provide guidance for writing effective unit tests.

You will learn:
• See what is available for developers to help them write clear unit tests
• Gain a deep understanding of testing and mocking frameworks
• Obtain guidance on unit testing strategies

TH20 Manual Memory Management in .NET Framework
Advanced
ADAM FURMANEK
Thursday, August 15, 3:30 – 4:45pm
Value types are on a stack and reference types are on a heap - this is a typical answer when one is asked about placement of values in memory. However, is it really defined that way in the .NET Framework specification? Or can we bend the rules and manage memory differently?
During the session I will show how to allocate memory directly by hand using TypedReferences. We will see that it is possible to allocate reference type on a stack, how to implement generic List faster than the default implementation provided by .NET Framework, how to implement custom memory allocator (with any fragmentation strategy we like), and finally, how to hack new keyword provided by the platform to use different allocator. We will examine memory dumps with WinDBG, emit IL code dynamically, and generate machine code for x86 directly in runtime.

You will learn:
• Understanding memory structure of allocated objects in .NET
• Understanding machine code behind .NET Framework allocations
• Implementing custom memory allocator and verifying its performance

FULL STACK WEB DEVELOPMENT
Web development has become the dominant approach for building enterprise software. To provide your best on every project, you need to understand the server and browser client worlds. On the server there’s ASP.NET classic, and ASP.NET Core; meanwhile, the browser client is evolving rapidly, with constant changes and updates to Angular, Bootstrap and related frameworks. But more than this, there’s now WebAssembly and the ability to run other languages natively in the browser, including C/C++, C#, and many more. Your need to keep up-to-date with all these technologies has never been greater, and we’re here to give you the knowledge you need!
Topics in this track include:
• Angular
• ASP.NET Core 2
• Versioning ASP.NET Core APIs
• Signal R and Reactive Extensions
• Reactive client development with RxJs and Angular Forms
• WebAssembly
• Blazor
• Angular application testing
• Bootstrap 4
**T01 Angular 101**  
*Introductory*  
**DEBORAH KURATA**  
*Tuesday, August 13, 8:00 – 9:15am*  
This beginner-level session introduces the .NET developer to Angular, the very popular JavaScript framework for building client-side applications. We cover key building blocks such as modules, components, and templates. Come and get a quick start to building successful Web applications with Angular!  
You will learn:  
• Angular terms and concepts  
• The basics of building an Angular application using the Angular CLI  
• Angular’s data binding features and syntax

**T05 Moving to ASP.NET Core 2.X**  
*Introductory / Intermediate*  
**PHILIP JAPIKSE**  
*Tuesday, August 13, 9:30 – 10:45am*  
In this session, I show you how ASP.NET Core implements the Model View Controller pattern for Web Applications and the Model Controller pattern for Restful services. I cover convention over configuration, implementing Controllers and Action methods, Views (including partial views and layouts), Routing, and much more. This session is designed for developers new to the ASP.NET MVC and WebAPI frameworks.  
You will learn:  
• The ASP.NET Core MVC Implementation  
• Routing, Controllers, Actions, Views  
• Convention over Configuration

**T09 Angular Best Practices**  
*Intermediate*  
**DEBORAH KURATA**  
*Tuesday, August 13, 1:30 – 2:45pm*  
This session covers best practices for building clean and usable Angular applications. We cover setting up your folder structure, organizing your components into modules, registering services, routing best practices, working with asynchronous data, using RxJS effectively, and much more! You’ll also learn about common Angular patterns, such as smart vs presentational components and Redux (NgRx).  
You will learn:  
• Best practices for organizing your Angular application  
• Patterns for state management  
• Better components, templates, and services

**T13 Versioning ASP.NET Core APIs**  
*Intermediate*  
**PHILIP JAPIKSE**  
*Tuesday, August 13, 3:00 – 4:15pm*  
Building an API with ASP.NET MVC in .NET Core is only half the job. If you’re API is going to live more than one release cycle, you’re going to need to version it. During this session, you’ll see how easy it is now to version APIs using functionality built into ASP.NET Core.  
You will learn:  
• Why versioning an API is important  
• How ASP.NET Core supports API Versioning  
• How to decide what schemes for versioning are the best fit for your company/API

**W04 Getting Pushy with SignalR and Reactive Extensions**  
*Introductory*  
**JIM WOOLEY**  
*Wednesday, August 14, 8:00 – 9:15am*  
As our systems increasingly demand more real-time updates, we need better ways of working with these live streams of information. Traditional pull models fail to provide the real-time responsiveness and scale needs that modern systems expect. Moving to a push model allows us to scale easier and react to new data as it becomes available. SignalR facilitates push notifications over HTTP to a variety of clients. The Reactive Extensions were designed to allow for asynchronous LINQ over push based collections. In this talk, you’ll see how the synergy of these two technologies merge to make otherwise difficult tasks, a push over.  
You will learn:  
• How to use SignalR to push streams of data over HTTP  
• How to use Rx to simplify programming over streams of data  
• How to combine SignalR and Rx to create elegant, maintainable coding APIs over otherwise complex real time data streams

**W05 Building Reactive Client Experiences with RxJs and Angular Forms**  
*Intermediate*  
**JIM WOOLEY**  
*Wednesday, August 14, 9:30 – 10:45am*  
We’ve been building event-based asynchronous applications for decades now, but traditional event based models suffer from complex nested callbacks, are difficult to mock and test, and struggle to manage synchronizing
SESSION DESCRIPTIONS BY TRACK (continued)

multiple streams. Reactive programming models can help to solve these challenges. Additionally RxJs considers the impact of time on these observables which facilitate simplifying gesture based recognition. With RxJs bundled into Angular, you’ll see how you can use it to simplify traditional event-based programming models.

You will learn:
• How and why you should replace events with reactive observables
• Typical programming scenarios that Reactive programming makes easier
• How to use RxJs with Angular client applications

W09 C# in the Browser with Blazor and WebAssembly
Intermediate
ROCKFORD LHOTKA
Wednesday, August 14, 1:30 – 2:45pm
WebAssembly (wasm) is an important new browser capability that allows us to write web pages in languages other than JavaScript. For .NET developers it is exciting to know that we can use C# to write browser-based code. The experimental ASP.NET Blazor technology is a UI framework for creating web pages with C# and Razor syntax. If you are a web client developer interested in how wasm expands web development, or a smart-client developer looking for the next UWP/WPF/Windows Forms, but cross-platform and in the browser, then this technology is for you!

You will learn:
• How to build a smart-client browser-based app using Blazor
• How to share .NET Standard code on web server and in the browser
• How Razor syntax in the browser might be the smart client UI framework of the future

W13 Creating Business Applications Using Blazor (Razor Components)
Introductory / Intermediate
MICHAEL WASHINGTON
Wednesday, August 14, 3:15 – 4:30pm
Server-side Blazor (also known as Razor Components) allows you to create high performance, visually rich business applications with minimal JavaScript. This speeds your development lifecycle, allows you to re-use your existing business logic and custom libraries, and provides a superior debugging experience.

To your end-users the applications will look and perform like any modern SPA (Single Page Application), yet you will be able to code it entirely in C#, only implementing custom JavaScript interaction when you desire it.

You will learn:
• Creating and end-to-end Blazor business application
• Deploying a Blazor application to production
• Configuring Azure SignalR Service for high performance

TH01 - Angular Application Testing Outside the Church of TDD
Introductory / Intermediate
CHRIS KLUG
Thursday, August 15, 2:00 – 3:15pm
I hate writing tests! There, I said it! I think TDD gets in my way, and it annoys me! People who preach it annoy me! People who tell me that “I just don’t understand it” annoy me! Not to mention the ones that say, “real professional developers use TDD”. Unfortunately, this “religious” view on testing has also kept me away from writing tests in my Angular applications for years. Until I decided to give it a try on my own terms. And you wouldn’t believe what happened next...

In this talk you will get an introduction to testing Angular applications from a person that dislikes TDD with a passion. It won’t be the usual sermon about how great testing is! It’s all about testing Angular applications in a pragmatic way. It will give you enough to understand how to write the tests, but also information about what benefits different tests can give you, and why you might want to use them. Even if you don’t like writing tests, like me, I have actually come to the conclusion that some of them actually make my development life less annoying.

DISCLAIMER: If you are a TDD person, you are more than welcome, but accept the fact that you will not see tests written up front. You might also want to know that there will likely be personal opinions expressed about testing, that you do not agree with. It is purely about writing tests, and their potential benefits, and not about "religion".

You will learn:
• An understanding of why testing is important even if you are not using TDD
• Knowledge of what different techniques that can be used when unit testing Angular applications
• A basic understanding of how to do end-to-end tests in with Angular and Protractor

TH13 What’s New in Bootstrap 4
Introductory / Intermediate
PAUL SHERIFF
Thursday, August 15, 2:00 – 3:15pm
Bootstrap 4 has been recreated from the ground-up using CSS 3 features such as Flexbox. As such, it only supports the latest, stable releases of all major browsers. On Windows, this means only IE 10, 11 and Edge. Many of the old, familiar CSS classes are still available, but have been modified slightly in some cases. And, there are cases where things should be done a little differently. This course provides you with an overview of how to lay out your web pages using Bootstrap 4, while pointing out the differences from Bootstrap 3.

You will learn:
• Introduction to Bootstrap 4
• What’s different from Bootstrap 3
• New features in Bootstrap 4
CONFERENCE ADVISORY BOARD

Andrew Brust
CEO and Founder, Blue Badge Insights
Visual Studio Live! Conference Co-Chair

Andrew Brust is the founder and CEO of Blue Badge Insights. He advises data and analytics ISVs on winning in the market, solution providers on their service offerings, and customers on their analytics strategy. He writes about Big Data for ZDNet and co-chairs the Visual Studio Live! series of developer conferences. Andrew is an entrepreneur, a consulting veteran, a former analyst and research director, and a current Microsoft Regional Director and MVP. @andrewbrust

Michael Desmond
Editor in Chief, MSDN Magazine

Michael Desmond is editor in chief of MSDN Magazine, Microsoft’s flagship publication for software developers working with Microsoft tools and technologies. A 20-year veteran of IT and technology publishing, Desmond was an editor at PC World magazine for six years before launching an editorial consultancy that worked for leading technology firms like BM, Intel, and Sun Microsystems.

Rockford Lhotka
CTO, Magenic
Visual Studio Live! Conference Co-Chair

Rockford Lhotka is the CTO of Magenic, and the creator of the widely used CSLA .NET development framework. He is the author of numerous books on software development and regularly speaks at major conferences around the world.

Rockford is a Microsoft Regional Director and MVP. His company Magenic (magenic.com) specializes in planning, designing, building, and maintaining an enterprise’s most mission critical systems. For more information, go to lhotka.net. @RockyLhotka

David Ramel
Editor in Chief, Visual Studio Magazine and ADTMag.com

David Ramel is editor in chief of Visual Studio Magazine and Application Development Trends Magazine. He is an editor, writer and Web multimedia producer with 20 years of experience in mainstream journalism and within the information technology trade industry.

Brian Randell
Partner, MCW Technologies
Visual Studio Live! Conference Co-Chair

Brian A. Randell is a partner with MCW Technologies, LLC. For more than 20 years, he has been building software solutions. He educates teams on Microsoft technologies via writing and training—both in-person and on demand. He’s also a consultant for worldwide companies of all sizes including Fortune 100 companies like Microsoft. Brian is a passionate software craftsman who still enjoys coding as he helps teams to improve their processes from idea to shipping to production management and monitoring. He’s currently a Visual Studio MVP and co-author of “Professional Application Lifecycle Management with Visual Studio 2013" from Wrox Publishing. When he’s not working, Brian enjoys spending time with his wife and two children. @brianrandell

LOVE THE VENUE. DEPTH OF CONTENT AND QUALITY OF SPEAKERS WAS VERY GOOD.
— Greg Hardin, CIS
CONFERENCE SPEAKERS

Cody Beyer  
Program Manager - Visual Studio for Mac, Microsoft

Cody Beyer is a Program Manager on the Visual Studio for Mac team at Microsoft. His primary areas of focus cover overall performance and reliability of the IDE. He is also interested in computer ethics and privacy and aims to create software that empowers and respects everyone.

Jason Bock  
Practice Lead, Magenic

Jason Bock is a practice lead for Magenic (http://www.magenic.com) and a Microsoft MVP (C#). He has more than 20 years of experience working on a number of business applications using a diverse set of frameworks and languages such as C#, .NET, and JavaScript. He is the author of “.NET Development Using the Compiler API,” “Metaprogramming in .NET,” and “Applied .NET Attributes.” He has written numerous articles on software development issues and presented at a number of conferences and user groups. He is a leader of the Twin Cities Code Camp (http://www.twincitiescodecamp.com). Jason holds a Master’s degree in Electrical Engineering from Marquette University. Visit his web site at http://www.jasonbock.net. @jasonbock

Andrew Brust  
CEO and Founder, Blue Badge Insights

Andrew Brust is the founder and CEO of Blue Badge Insights. He advises data and analytics ISVs on winning in the market, solution providers on their service offerings, and customers on their analytics strategy. He writes about Big Data for ZDNet and co-chairs the Visual Studio Live! series of developer conferences. Andrew is an entrepreneur, a consulting veteran, a former analyst and research director, and a current Microsoft Regional Director and MVP. @andrewbrust

Allison Buchholtz-Au  
Program Manager, Microsoft

Allison has been a Program Manager at Microsoft since 2015. Her current focus is on Visual Studio IntelliCode, a set of AI-assisted capabilities to improve developer productivity within Visual Studio. She has worked on source control integration, net-new retention and onboarding, and productivity in the Visual Studio Editor. In her free time, she can be found training for a marathon, trying out new recipes in the kitchen, or trying to teach her corgi, Olive, new tricks.

Laurent Bugnion  
Senior Global Azure Advocate, Microsoft

Laurent Bugnion currently works as senior global Azure advocate for Microsoft. He spent almost 10 years with IdentityMine and Valorem, two leading firms in using and deploying Microsoft technologies. He is one of the foremost experts for XAML and C# based development. He codes in Windows, WPF, Xamarin (iOS and Android), Unity, ASP.NET. In his free time, he writes for technical publications such as MSDN Magazine and his blog at blog.galasoft.ch. He is a frequent speaker at conferences such as Microsoft MIX, TechEd, Visual Studio Live!, TechDays and many other international events. Prior to joining Microsoft, he was a Microsoft Most Valuable Professional for Windows development from 2007 to 2017, a Microsoft Regional Director from 2013, and a Xamarin Most Valuable Professional from 2015. He is also the author of the well-known open source framework MVVM Light for Windows, WPF, Xamarin, and of the popular Pluralsight reference course about MVVM Light. @LBugnion

Dustin Campbell  
Principal Software Engineer, .NET Developer Experience Team, Microsoft

Dustin Campbell is a principal software engineer on the .NET Developer Experience team, where he works on the C# and Visual Basic language experiences for Visual Studio. Passionate about coding productivity, Dustin’s primary focus these days is taking the C# editor cross-platform with Visual Studio Code and helping design the next version of C# as part of the language design team. Prior to his current role, he spent several years working as a program manager on Project Roslyn, designing the next-generation of the C# and VB IDE experiences. Before joining Microsoft, he developed much of the low-level plumbing of the award winning CodeRush and Refactor! products at DevExpress. Dustin is a programming nut. His favorite color is blue. @dcampbell

Jeremy Clark  
Developer Educator

Jeremy Clark makes developers better. By drawing on more than 15 years of experience in application development, he helps developers take a step up in their skillset with a focus on making complex topics approachable regardless of skill level. He is a Microsoft MVP for .NET, and has authored seven courses for Pluralsight, including “C# Interfaces,” a course aimed at giving developers a clear understanding of abstraction. He loves speaking and has delivered more than 200 technical presentations in the last eight years throughout the United States and Europe. Jeremy lives in the northwestern United States with his lovely partner, two dogs, two cats, and a banjo. @jeremybytes
CONFERENCE SPEAKERS (continued)

Christina Compy
Principal Program Manager, Azure Websites, Microsoft

I have many years of experience in the software and aerospace industries doing technical management, product requirements definition, software testing, system analysis and operations. My career has included working with online services, enterprise software, user interface development, internet domain registration, web publishing and spacecraft flight software.

I am currently working in a Program Manager role at Microsoft on Azure App Service where I drive the networking and connectivity capabilities available in App Service.

Michael Crump
Azure Product Manager, Microsoft

Michael Crump is a product manager that works at Microsoft on the Azure platform. He is a developer, blogger and speaker of topics relating to cloud development. He’s passionate about helping developers understand the benefits of the cloud in a no-nonsense way. You can reach him on Twitter at mbcrump or by following his blog at michaelcrump.net.

Benjamin Day
Consultant / Trainer

Benjamin Day is a consultant and trainer specializing in software best practices using Scrum with Microsoft’s DevOps tools. Ben’s main areas of emphasis include Team Foundation Server, Scrum, software testing, and software architecture. He is a Microsoft Visual Studio ALM MVP, a certified Scrum trainer via Scrum.org, and a speaker at conferences such as TechEd and Visual Studio Live! When not developing software, Ben’s been known to go running and sea kayaking in order to balance out his love of cheese, cured meats, and champagne. He can be contacted via http://www.benday.com, @benday

Adam Furmanek
Software Developer, Amazon

I am Adam Furmanek and I have been working as a .NET developer for 5 years. Right now I am at Amazon working with Scala, Spark and Machine Learning. I am always interested in digging deeper, exploring machine code and going through implementation details to better understand internals of the technologies I use every day. That’s why I like debugging, decompiling and disassembling the code to understand memory models, concurrency problems and other details hidden deeply inside. In my free time I play ping-pong, watch Woody Allen’s movies and blog stuff at http://blog.adamfurmanek.pl, @furmanekadam

Robert Green
Program Manager, Evangelism, Microsoft

Robert Green is a Program Manager Evangelism in the Developer Experience and Evangelism (DX) group at Microsoft. He focuses on Visual Studio and mobile development. Robert is the host of the Visual Studio Toolbox show on Channel 9. @rogreen_ms

Daria Grigoriu
Principal PM Manager, Microsoft

Daria Grigoriu is a Principal Program Manager working on Azure Functions.

Billy Hollis
XAML slinger

Billy Hollis is a software designer and developer with a contrarian streak that often challenges conventional wisdom in the industry. He has a consulting practice in Nashville, Tennessee. He and his team focus on user experience design (UX), advanced user interface development, rules-based architectures, and healthcare systems. He teaches design classes for UX and technical classes on XAML for the Universal Windows Platform and XAML for WPF. @billyhollis

Scott Hunter
Director of Program Management, Microsoft

Scott joined Microsoft in 2007 working on the ASP.NET team which builds Microsoft’s Web Frameworks and Tooling. His team was part of the push to make .NET open source and cross platform. Today he works on the whole .NET platform including ASP.NET, .NET Core, .NET Framework and Web, and .NET tooling. @coolcsh
CONFEREE SPEAKERS (continued)

Philip Japikse
Developer, Coach, Author, Teacher

An international speaker, Microsoft MVP, ASPInsider, MCSD, CSM, and CSP, and a passionate member of the developer community, Phil Japikse has been working with .NET since the first betas. He has been developing software for more than 30 years and has been heavily involved in the agile community since 2005. Phil is co-author of the best-selling “C# and the .NET 4.6 Framework” (http://bit.ly/pro-csharpp), the lead director for the Cincinnati .NET User’s Group (http://www.cinnug.org) and Cincinnati Software Architect Group, co-hosts the Hallway Conversations podcast (http://www.hallwayconversations.com), and volunteers for the National Ski Patrol. Phil is also a published author with LinkedIn Learning. During the day, Phil works as an enterprise consultant and agile coach for large to medium firms throughout the U.S. Phil enjoys to learn new technology and is always striving to improve his craft. Follow Phil on twitter via http://www.twitter.com/skimedic and read his blog at http://www.skimedic.com/blog @skimedic

Scott Klein
CTO, Cloud and Devices

Scott Klein is CTO of Cloud and Devices with nearly two decades of experience working with Microsoft SQL Server. Prior to becoming CTO, Scott spent 6 years at Microsoft, traveling the globe as a technical evangelist and speaking about SQL Server and Microsoft’s Azure data services. Scott’s recent focus has been on advanced analytics, including big data and IoT, providing real-world training to help bring intelligence to your data. Scott has authored several books, his latest which focuses on using Microsoft’s IoT suite to process and analyze data. Scott is continuously striving and looking for ways to help developers and companies grok the wonderful world of data. @SQLScott

Chris Klug
Senior Software Developer, Tretton37

Chris Klug is an adrenaline loving, problem solver/creator who loves building things. He is currently working as a ninja/developer badass-as-a-service for a Swedish company called tretton37. Except for the days he spends at conferences, talking about doing things he is passionate about, and the days he fills with mountain biking, kiteboarding, or RC helicopter flying. For the last 15 or so years, he has been solving problems for customers. But if he could choose, he’d go to the beach and kiteboard every time. @ZeroKoll

Veronika Kolesnikova
Developer, Rightpoint

Veronika Kolesnikova is passionate about backend web development, mainly with Microsoft technologies like C#, .NET, SQL, and Azure. She loves to learn new development tools and languages and share that knowledge with the community. She recently started working with Xamarin and can’t wait to provide her insights. In 2016, Veronika graduated with a MS degree in Information Technology. In her free time, she likes dancing, traveling, and practicing aerial yoga.

Deborah Kurata
Microsoft MVP and Google Developer Expert

Deborah Kurata is a software developer, speaker and Pluralsight author with a focus on Angular and C#. For her work in support of software development and software developers, she has been recognized with the Microsoft Most Valuable Professional (MVP) award and is a Google Developer Expert (GDE). Follow her on twitter: @deborahkurata

Vishwas Lele
CTO, Applied Information Sciences

Vishwas Lele serves as CTO at Applied Information Sciences, Inc. He is responsible for assisting organizations in envisioning, designing and implementing enterprise solutions related cloud and mobility. Lele brings close to 28 years of experience and thought leadership to his position, and has been with AIS for 23 years. A noted industry speaker and author, he serves as the Microsoft Regional Director for Washington D.C. and is currently an Azure MVP.

Rockford Lhotka
CTO, Magenic

Rockford Lhotka is the CTO of Magenic, and the creator of the widely used CSLA .NET development framework. He is the author of numerous books on software development and regularly speaks at major conferences around the world. Rockford is a Microsoft Regional Director and MVP. His company Magenic (magenic.com) specializes in planning, designing, building, and maintaining an enterprise’s most mission critical systems. For more information, go to lhotka.net. @RockyLhotka

Leonard Lobel
CTO, Sleek Technologies, Inc.

Leonard Lobel is the chief technology officer and co-founder of Sleek Technologies, a New York-based development shop with an early adopter philosophy toward new technologies. He is also a principal consultant at Talan, a Microsoft National Systems Integrator and Gold Competency Partner. He is also a Microsoft MVP, Data Platform. Programming since 1979, Lenni specializes in Microsoft-based solutions, with experience that spans a variety of business domains, including publishing,
financial, wholesale/retail, health care, and e-commerce. Lenni has served as chief architect and lead developer for various organizations, ranging from small shops to high-profile clients. He is also a consultant, trainer, and frequent speaker at local user group meetings, VSLive!, Live! 360, SQL PASS, and other industry conferences. Lenni has also authored several MS Press books and Pluralsight courses on SQL Server programming.

@lennilobel

Craig Loewen
Program Manager, Microsoft

Craig Loewen is a Program Manager working on the Windows Subsystem for Linux. He is originally from Toronto, Canada, and studied Mechatronics Engineering at the University of Waterloo.

James Montemagno
Principal Program Manager – Mobile Developer Tools, Microsoft

James Montemagno is a Principal Program Manager for Mobile Developer Tools at Microsoft. He has been a .NET developer since 2005, working in a wide range of industries including game development, printer software, and web services. Prior to becoming a Principal Program Manager, James was a professional mobile developer and has now been crafting apps since 2011 with Xamarin. In his spare time, he is most likely cycling around Seattle or guzzling gallons of coffee at a local coffee shop. He can be found on Twitter @JamesMontemagno, blogs code regularly on his personal blog http://www.montemagno.com, and co-hosts the weekly development podcast Merge Conflict http://mergeconflict.fm.

Dominic Nahous
Senior Program Manager, Microsoft

Dominic works as a PM manager on Visual Studio for Mac. His team focuses on ensuring a delightful experience for developers using a Mac to build apps.

Eamon O’Reilly
Program Manager, Microsoft

Eamon is a Principal program manager working on Azure Functions focused on automating tasks across cloud and on-premises datacenters. He has previously worked on Azure Automation.

Tiago Pascoal
DevOps Architect, Microsoft

Tiago Pascoal is a DevOps Architect in the Microsoft’s DevOps Customer Advisory team and has been an ALM | DevOps Ranger since 2008. With over 18 years’ experience in the software development field, started his career on an ISV developing a web application server on multi-platform systems, enabling people to write software that worked on both Unix and Windows platforms. Before joining Microsoft, Tiago was awarded the Microsoft MVP Award in Visual Studio and Development Technologies category for ten consecutive years and worked both as a consultant and as managing partner in several companies. Most of his career was spent in the financial, telecommunications industries and public sector.

Brian Randell
Partner, MCW Technologies

Brian A. Randell is a partner with MCW Technologies, LLC. For more than 20 years, he has been building software solutions. He educates teams on Microsoft technologies via writing and training—both in-person and on demand. He’s also a consultant for worldwide companies of all sizes including Fortune 100 companies like Microsoft. Brian is a passionate software craftsman who still enjoys coding as he helps teams to improve their processes from idea to shipping to production management and monitoring. He’s currently a Visual Studio MVP and co-author of “Professional Application Lifecycle Management with Visual Studio 2013” from Wrox Publishing. When he’s not working, Brian enjoys spending time with his wife and two children.

Richard Seroter
VP, Pivotal

Richard Seroter is the VP of Product Marketing at Pivotal, with a master’s degree in Engineering from the University of Colorado. He’s also an 11-time Microsoft MVP for cloud, an instructor for developer-centric training company Pluralsight, the lead InfoQ.com editor for cloud computing, and author of multiple books on application integration strategies. Richard maintains a regularly updated blog on topics of architecture and solution design and can be found on Twitter as @rseroter.
CONFERENCE SPEAKERS (continued)

Paul Sheriff  
Author / Instructor  
Paul has over thirty years of experience architecting information systems and his expertise is in much demand from Fortune 500 companies. Paul is a top-notch instructor, a pluralsight author, has published 200+ articles, and authored over 14 books on topics ranging from C#, SQL Server, and many .NET technologies. Paul speaks at many different conferences and user groups around the world.

Colby Tresness  
Program Manager, Microsoft  
Colby is a Program Manager on the Azure Functions Team.

Rich Turner  
Sr. Program Manager, Microsoft  
Rich works on making the Windows Command-Line AWESOME.

Michael Washington  
Founder, AIHelpWebsite.com  
Michael Washington is the founder of AIHelpWebsite.com. He is a .NET, C#, and Angular programmer. He has extensive knowledge in process improvement, billing systems, and student information systems. He is a Microsoft MVP. He is the author of numerous books including Azure Machine Learning Studio For The Non-Data Scientist and An Introduction to the Microsoft Bot Framework. Michael has a son, Zachary and resides in Los Angeles with his wife Valerie. @ADefWebserver

Jim Wooley  
Solution Architect, Slalom Consulting  
Jim Wooley is a Solution Architect for Slalom Consulting. In his free time, Jim is a frequent speaker, MVP, and author of "LINQ in Action". He is always striving to stay at the forefront of technology and enjoys the thrill of a new challenge. He has been active evangelizing LINQ since its announcement in 2005. In addition, he attempts to pass on the insights he has gained by being active in the community, including organizing and speaking at code camps and regional events, including MIX, Visual Studio Live!, CodeMash, KCDC, That Conference, DevWeek, and CodeStock. @Jimwooley
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Progress (NASDAQ: PRGS) offers the leading platform for developing and deploying mission-critical business applications. The creator of the award-winning Telerik .NET and Kendo UI JavaScript user interface components/controls, reporting solutions and productivity tools, Progress offers all the tools developers needs to build high-performant modern apps with outstanding UI. Learn more about the Progress developer tools at: https://www.progress.com or 1-781-280-4000.

EXHIBITOR

Fast Reports

Founded in 1998, Fast Reports is known for its state-of-art reporting software applications, libraries and add-ons that guarantee fast reporting for developers of the business software. The company has websites in 10 different languages to cater to its global audience. The products are localized to more than 40 languages. Operations are spread across America and Europe. https://www.fast-report.com/en/

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VENUE & TRAVEL

MICROSOFT HEADQUARTERS
Microsoft Conference Center (Building 33)
16070 N.E. 36th Way
Redmond, WA 98052
Business Center Desk: 425.706.0033

HYATT REGENCY BELLEVUE
900 Bellevue Way N.E.
Bellevue, WA 98004
Special Attendee Rate: $240*
Book By: July 20, 2019
*Rooms are subject to availability and applicable state, local and occupancy taxes
Book your room online or call Reservations at 888.421.1442 and ask for the Visual Studio Live! Room Block. The offer is subject to room availability, so make sure to book early.

TRAVEL
CAR RENTAL DISCOUNT
Avis Rent-a-Car is offering a discount on car rental for Visual Studio Live! Microsoft HQ attendees. To receive the discounted rates, call Avis at 800.331.1600 and use the Avis Worldwide Discount (AWD) number D005872, or click here to make your reservation online.

SHUTTLE SERVICE TO AND FROM THE MICROSOFT CAMPUS
Visual Studio Live! will be providing daily complimentary shuttle transportation between the Hyatt Regency Bellevue and the Microsoft Campus. This shuttle service will be available to all attendees with a valid conference badge.

AIRPORT TRANSPORTATION
Area hotels do not provide airport transportation, but there are several options:
Shuttle Express
425.981.7000
Reservations to SeaTac Airport are required. Book online or call 425.981.7000.
Taxi or Town Car
One way fare averages $55-$60.

PARKING AT MICROSOFT CONFERENCE CENTER:
Complimentary parking is available in the parking garages below and adjacent to the Microsoft Conference Center (Building 33).

PARKING AT THE HYATT REGENCY BELLEVUE
Self-parking is $28.00 per day for Sunday night through Thursday night stays (plus applicable taxes) Friday and Saturday night stays are complimentary (8pm Friday until 12am Sunday).
Valet Parking at the Hyatt Regency Bellevue is $38.00 per day (plus applicable taxes).

VISITING REDMOND AND SEATTLE
Can’t wait to take in all the wonderful things Redmond, Bellevue, and the “Emerald City” have to offer? Find out more at www.visits Seattle.org.

GET INSIDE THE TECHNOLOGICAL MECCA: MICROSOFT HEADQUARTERS!
Visual Studio Live! returns to Microsoft Headquarters in Redmond, Washington in 2019 for more in-depth, behind the scenes developer training by technical experts and Microsoft insiders.
Visual Studio Live! offers several conference and hotel packages to best suit your needs and budget. Register now to save your seat and remember to book your hotel early too before it sells out!

**CONFERENCE PACKAGES**

Every Conference Package grants you access to every:

<table>
<thead>
<tr>
<th>Packages</th>
<th>Super Early Bird</th>
<th>Early Bird</th>
<th>Standard</th>
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</thead>
<tbody>
<tr>
<td>Ultimate VS Live! Package</td>
<td>$2,815</td>
<td>$2,915</td>
<td>$3,215</td>
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<tr>
<td>Includes 5 Day Conference + On-Demand Recordings + Polo Shirt &amp; Cap</td>
<td><strong>MONDAY-FRIDAY</strong></td>
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<tr>
<td>5 Day Conference Package</td>
<td>$2,495</td>
<td>$2,595</td>
<td>$2,895</td>
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<tr>
<td>+ Full Day Hands-On Lab and Workshop</td>
<td><strong>MONDAY-FRIDAY</strong></td>
<td></td>
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<tr>
<td>4 Day Conference Package</td>
<td>$1,995</td>
<td>$2,095</td>
<td>$2,395</td>
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<tr>
<td>+ Workshop</td>
<td><strong>TUESDAY - FRIDAY</strong></td>
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<tr>
<td>3 Day Conference Package</td>
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<tr>
<td>TUESDAY - THURSDAY</td>
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**FULL DAY HANDS-ON LAB**

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<td>$595</td>
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<td><strong>MONDAY</strong></td>
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**ADD THE HOTEL PACKAGE**

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<tr>
<td>5 Day Hotel Package</td>
<td>$1,425</td>
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<td>Check In: Sunday, August 11</td>
<td>Check Out: Friday, August 16</td>
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<tr>
<td>4 Day Hotel Package</td>
<td>$1,150</td>
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<td>Check In: Monday, August 12</td>
<td>Check Out: Friday, August 16</td>
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<tr>
<td>3 Day Hotel Package</td>
<td>$875</td>
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<tr>
<td>Check In: Monday, August 12</td>
<td>Check Out: Thursday, August 15</td>
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**DISCOUNTS AND SPECIAL SAVINGS**

**TEAM DISCOUNTS: BRING THE TEAM AND SAVE BIG!**
Visual Studio Live! offers savings to teams of 3 or more from the same company and registering for the same package. Looking to bring 10 or more? Contact our Conference Registrar Claire Segerson at csegerson@converge360.com or at 949.296.9840.

<table>
<thead>
<tr>
<th>TEAM PACKAGES</th>
<th>SUPER EARLY BIRD Until June 14</th>
<th>EARLY BIRD Until July 19</th>
<th>STANDARD Until August 12</th>
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<tbody>
<tr>
<td>ULTIMATE VSLIVE! PACKAGE</td>
<td>$2,515</td>
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<td>Includes 5 Day Conference + On-Demand Recordings + Polo Shirt &amp; Cap <strong>MONDAY-FRIDAY</strong></td>
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<tr>
<td>5 DAY CONFERENCE PACKAGE</td>
<td>$2,195</td>
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<td>$2,595</td>
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<tr>
<td>+ Full Day Hands-On Lab and Workshop <strong>MONDAY-FRIDAY</strong></td>
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<td>4 DAY CONFERENCE PACKAGE</td>
<td>$1,695</td>
<td>$1,795</td>
<td>$2,095</td>
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<td>+ Workshops <strong>TUESDAY-FRIDAY</strong></td>
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**NEW – ADD THE VSLIVE! CONFERENCE ON-DEMAND PACKAGE**

* And extend your learning*

New to Visual Studio Live! in 2019, you can now extend your learning with on-demand access to all of the recorded content from the VSLive! Microsoft HQ sessions (does not include workshops or hands-on labs) taking place Tuesday, August 13 - Thursday, August 15. The VSLive! On-Demand Content Package gives you access to all sessions and keynotes after the conference ends for one full year.

*Workshops and Hands-on Lab Recordings are not included with the On-Demand Package*

<table>
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<tr>
<th>ON-DEMAND PACKAGE WITH REGISTRATION</th>
<th>ON-DEMAND PACKAGE WITHOUT ATTENDING</th>
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</thead>
<tbody>
<tr>
<td>$295</td>
<td>$1,395</td>
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</tbody>
</table>

**MORE DISCOUNTS**

**Alumni**
Welcome back! If you have attended any Visual Studio Live!, TechMentor or Live! 360 event, you qualify for our special alumni discount. You should receive alumni special promotions, but if not, please contact our Conference Registrar Claire Segerson at csegerson@converge360.com or 949.296.9840.

**Education**
We offer full-time college students and faculty from accredited universities a discount. To receive this discount, please contact our Conference Registrar Claire Segerson at csegerson@converge360.com or 949.296.9840. Subject to Visual Studio Live! verification.

**New Developer**
If you are a new Developer (or new to the Microsoft Platform) with less than three years of experience, you are eligible for $600 off of our full price conference registration to help accelerate your career. Use Promo Code NDD. Subject to Visual Studio Live! verification.

**Government/Non-Profit**
Employees of a national, federal, state, provincial, or local government entity are eligible to take advantage of our discount. To receive this discount, please contact our Conference Registrar Claire Segerson at csegerson@converge360.com or 949.296.9840. Subject to Visual Studio Live! verification.