

Build Stuff 2017

F Free time
 P Party
S Session
W Workshop

NOVEMBER 15 • WEDNESDAY

8:30am – 9:15am	F Registration	1. Alfa
9:00am – 6:00pm	F Open Space	6. Lobby
9:15am – 9:30am	S Welcome talk	1. Alfa
9:30am – 10:30am	S [SLIDES]Keynote: Simon Wardley @swardley - Crossing the river by feeling the stones <i>Speakers: Simon Wardley</i> We live in a competitive world. That competition forces change. It has always forced change. Change is normal. The question is not whether our organisations will change - that's a given - but can we see this change before it hits us, do we know where we're heading or are we simply floating aimlessly being carried by a river? It certainly feels that way sometimes. To answer the question we need to understand our landscape, the economic forces at play, the context we operate within and our situational awareness of this. Can we navigate the waters, can we see a storm coming, or are we being battered by rocks because we refuse to look? During this keynote Simon Wardley (Leading Edge Forum) will examine situational awareness within business, why it matters, and whether we can anticipate and exploit change before it hits us. He will explore how we can manage our economic environment: "cross the river by feeling the stones", as Chinese revolutionary Deng Xiaoping said.	1. Alfa
10:30am – 10:50am	F Coffee/tea break	1. Alfa
10:50am – 11:40am	S Ariel Ben Horesh @ArielBH - Can We Build Whatsapp with Xamarin and Azure in 60 Minutes? Yes we can! <i>Speakers: Ariel Ben Horesh</i> .NET developers today enjoy a bountiful source of platforms, tools at their disposal. With Xamarin they can target all the major mobile platforms and Azure providing cross cutting features for mobile developers and the necessary scale to support any degree of mobile clients. In this session we will take Xamarin Forms, Azure App Services and SignalR to create a full blown Messenger app in just 60 minutes.	3. Lambda
10:50am – 11:40am	S [SLIDES]Aarjan Meirink @Aarjanmeirink - Process IoT information using Akka.NET <i>Speakers: Aarjan Meirink</i> Based on a customer case where geographical information from IoT devices, salt spreaders in the case, must be processed and combined to rides and compared with predefined routes. By taking advantage of the properties of an actor framework like Akka.NET, this can be implemented in a very elegant way.	2. Beta
10:50am – 11:40am	S [SLIDES]Alexander Laptev @Aspiroid - How to control your code <i>Speakers: Alexander Laptev</i> Every serious product has tests. They check some facts about functionality, take some time and infrastructure. We spend this time because know: it's much cheaper to reveal a problem before production. In a talk I'll describe instruments which allow to reveal (and care about) problems before tests: R#, PVS-Studio, Roslyn Analyzers, Git Analyzers, Code Contracts. When they can be used, when should not, how much time they take for learning and integration, current direction in their development - everything will be covered.	4. Zeta

- 10:50am – 11:40am S **[SLIDES]Ali Kheyrollahi @aliostad - What you need to know about the comeback of RPC** 1. Alfa
Speakers: Ali Kheyrollahi
 While REST has enjoyed a decade of popularity and proliferation, we see a recent resurgence of RPC - mainly advocated and evangelised by large software companies such as Google and Uber.

 Our industry has a tendency of going full circle on pretty much anything and everything so this is not exactly a surprise. But before adopting RPC - or any other hype for that matter - it is important to understand why it is making a comeback and what problems it is trying to address. And this is the exact topic we will address in this talk: we will review the RPC and REST, look at key arguments for using them and in the end we discussion gRPC, one of the main proponents of RPC comeback.
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- 10:50am – 11:40am S **[SLIDES]Igor Kochetov @k04a - The quest of automating crash handling at Unity** 5. Theta
Speakers: Ihor Kochetov
 Imaging trying to manually process around 6000 of user submitted bug reports per month! Your first reaction is to put more resources onto it, then you realize it stops scaling well and you start looking for other solutions. In this talk we will discuss challenges we faced and solutions we made in order to build internal tools to help automate handling of crash reports (collecting callstacks for both native (C++) and managed (C#) code, infrastructure for submitting and storing reports, matching and grouping crash reports, providing users with quick feedback and solutions to their problems).
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- 12:00pm – 12:55pm S **Ian Cooper @ICooper - 12 Factor Apps in .NET** 2. Beta
Speakers: Ian Cooper
 The buzz is all around Cloud Native: continuous deployment and easy scaling of your server side code. You have heard about Docker and Microservices, but what are 12-factor apps? The Twelve-Factor App methodology (<https://12factor.net/>), was created by engineers with experience of delivering apps on Heroku, and is a "recipe for success" when authoring code for cloud native senarios.

 In this presentation we will look at what a Twelve-Factor App is, and demonstrate how to meet the requirements when creating .NET applications. We will show examples using ASP.NET Core, Brighter and Darker of authoring code to meet these requirements, and show its deployment to containers using Docker.

 By the end of this talk you will know enough to be able to approach another pillar of Cloud Native.
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- 12:00pm – 12:55pm S **Vitaly Friedman @smashingmag - Big Bang Redesign: Smashing Magazine's 2017 Relaunch, a Case Study** 1. Alfa
Speakers: Vitaly Friedman
 You've been there: big bang redesigns are usually a very, very bad idea. Redesigning and rebuilding an existing website from scratch is risky and unpredictable, and in many cases the level of complexity is highly underrated and underestimated. In mid-2016, Smashing Magazine decided to make a big switch from the existing WordPress setup to an entirely new design, entirely new architecture (JAM Stack) and an entirely new, GitHub-based, editorial workflow.

 In this talk, Vitaly Friedman, editor-in-chief and co-founder of Smashing Magazine, will share some of the insights into Smashing Magazine's Relaunch in 2017 — with decisions made, failures, successes, lessons learned and shady'n'dirty techniques used along the way. Among other things, you'll learn how Smashing Magazine uses HTTP/2, service workers and server-less architecture with static site generators to boost performance, with a dash of React, Flexbox, CSS and the peek into the new GitHub-based editorial workflow here and there. Beware: the session will contain at least 27 illustrations of cats!
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- 12:00pm – 12:55pm S **[SLIDES]Einar Host @einarwh - Functional geometry: picture combinators and recursive fish** 5. Theta
Speakers: Einar Host
 This is a live coding session based on a classic 1982 paper by Peter Henderson. We'll see that framing a problem in the right way enables us to solve it in interesting and elegant ways. The problem in this case is the transformation and combination of pictures to form new and more complex pictures. If we think of an picture not as a collection of colored pixels but rather as a function from a bounding rectangle to a rendering, we can define simple yet powerful picture combinators that allow us accomplish our task with ease and elegance. As a demonstration, we'll use our combinators to make a replica of Henderson's replica of Escher's Square Limit woodcutting.

12:00pm – 12:55pm	S	[SLIDES]Lauri Apple @lauritaapplez - How to Avoid Creating a GitHub Junkyard <i>Speakers: Lauri Apple</i>	4. Zeta
		As a former journalist, I tend to think in terms of storytelling. As an open source evangelist, I invite you to do the same. What you share on GitHub tells a story about you, your development practices, and your openness to others in the open source community. If you're motivated to gain users, contributors, and positive feedback about your projects, then building a compelling, coherent narrative is essential. In this talk, I'll share insights gained from "editing" Zalando's GitHub repository so we can tell a better story. From 400+ projects of widely differing quality, reliability and maintenance levels, we've winnowed our offerings to make our highest-quality work more discoverable. I'll share how we used GitHub and other tools to create guidelines, categories, and processes that bring sanity to our storytelling. If your organization is facing similar GitHub-bloat challenges, or looking for ways to manage your repos more effectively, you might find some help here.	
12:00pm – 12:55pm	S	[SLIDES]Tomer Gabel @tomerg - Slaying Sacred Cows: Deconstructing Dependency Injection <i>Speakers: Tomer Gabel</i>	3. Lambda
		This talk revisits dependency injection, and attempts to answer a single question honestly, or at least while pointing out and acknowledging the biases at play: "is dependency injection a good thing?"	
		Dependency injection has fast established itself as a major design pattern in modern software. No longer the province of server-side and enterprise software, it is now a fundamental component of frameworks from Spring to Angular.js.	
		With such widespread success, the time is ripe to take a fresh look at dependency injection if we are to understand it better. After all, DI is instrumental in building large systems that are loosely coupled, and it cleanly separates your tests from implementation... or does it?	
12:55pm – 1:55pm	F	Lunch	1. Alfa
1:55pm – 2:50pm	S	[SLIDES]Anna Filina @afilina - Rewriting 15-Year-Old Code <i>Speakers: Anna Filina</i>	4. Zeta
		Did you ever have to maintain a 15-year-old application? Dead code everywhere, database queries in between HTML tags and some pages still in PHP 3. This strategy-level presentation will lead you through a progressive rewrite from very old legacy to the latest shiny version of PHP. Learn how to automate legacy testing, how to seamlessly jump between the old and new parts, and how to overcome other challenges that arise from dealing with legacy.	
1:55pm – 2:50pm	S	[SLIDES]Martin Hinshelwood @MrHinsh - Sprint Zero: DevOps & Working Software too <i>Speakers: Martin Hinshelwood</i>	2. Beta
		Too many teams waste company money on a Sprint Zero that robs the business of valuable feedback from the very first sprint. Forget wasting time building servers and messing around tools and get right to the end result in the simplest and quickest way possible.	
		Come and see Martin show you at least one way to go from nothing to a DevOps utopia in under an hour.	
1:55pm – 2:50pm	S	[SLIDES]Oren Eini @RavenDB - Modeling in a Non-Relational World <i>Speakers: Oren Eini</i>	1. Alfa
		NoSQL databases are becoming increasingly more important. However, the vast majority of developers have learned to model and work with data only in relational context.	
		Relational modeling inside NoSQL database is not only sub-optimal, it is frequently actively harmful.	
		In this session, Oren Eini will discuss modeling techniques in a non relational system, how to take advantage of the database's capabilities and get the most out of it for your system.	

1:55pm –
2:50pm

- S **[SLIDES]Oystein Kolsrud @oystein_kolsrud - Turing's Toy - The story of a mathematical idea that changed the world** 3. Lambda

Speakers: Oystein Kolsrud

Alan Turing's paper from 1936, where he describes what came to be known as the Turing machine, is one of the truly pivotal papers in the history of computer science. Turing's description of what he called the "universal machine" is frequently referred to as the starting point of the technological revolution we today call the computer. He wrote his paper during a time when the world was going through a dramatic set of upheavals both scientifically, technologically and politically, and his work is a prime example of how basic research of a seemingly esoteric problem can have far reaching consequences.

Are you interested in learning more about Turing's ground breaking accomplishment? Then join me and hear the fascinating story of the Turing machine! I will describe both its historical context and its implications, but first and foremost I will explain the details of Turing's fictional machine and what he was trying to accomplish with it. This is the story of how a mathematician thought outside the box and accidentally changed the course of history!

1:55pm –
2:50pm

- S **[SLIDES]Rafal Legiedz @rafek - Developing for Mixed Reality with HoloLens** 5. Theta

Speakers: Rafal Legiedz

Mixed Reality is not only thrilling for end users but also uncovers all new world of challenges and excitement for developers. Tools and libraries for holographic programming provided by Microsoft are intended to accelerate the process, especially for developers that haven't been involved in 3D programming before. Visual Studio and Unity3D Editor enhanced with HoloLens emulator, and HoloToolkit form a powerful yet friendly environment for holographic development. Let's explore them on stage and learn how basic development workflow looks like. Also, we'll make use of HoloToolkit's scripts and components to put together a simple app that will bring some holograms around us to life!

3:10pm –
4:05pm

- S **[SLIDES]Dylan Beattie @dylanbeattie - The Web That Never Was** 1. Alfa

Speakers: Dylan Beattie

The story of the web is a story about freedom. It's a story about information, about breaking down barriers, about creating new ways for people to communicate, to collaborate, and to share their ideas. It's also a story that has as much do with marketing, money and meetings as it does with research and innovation. It's a story of mediocre ideas that succeeded where brilliant ideas failed, a story of compromises, rushed deadlines and last-minute decisions. And it could so easily have been very, very different.

What if IBM had hired Digital Research instead of Microsoft to develop the operating system for their first PC, way back in 1980? What if Marc Andreessen and Jim Clark had gone to work for Nintendo in 1993 and never founded Netscape? What if one of the gang at CERN had said "Tim, won't it sound a bit silly if everyone spends the next fifty years saying double-you-double-you-double-you all the time"?

In this talk, Dylan Beattie will explore alternative history of the world wide web - a web with no Microsoft, no Windows; no Firefox, no Google and no JavaScript. A software industry from another timeline, a world of platforms, protocols and programming languages that are unmistakably alien - and yet strangely familiar.

So strap in, hold tight, and join us as take you on a journey through... the web that never was.

3:10pm –
4:05pm

- S **[SLIDES]Marcos Placona @marcos_placona - I just hacked your app!** 2. Beta

Speakers: Marcos Placona

Android security is nowhere near where it should be. I have been able to hack and get sensitive information from a few different apps and I'm just an amateur hacker at best.

Whether it's because we are exposing information when making HTTP requests to our backend servers or because we're simply storing things we shouldn't in our apps, it's easy to forget mobile devices aren't as safe as we think they are.

In this session we will explore a number of ways an Android app can be exploited and most importantly methods that we can use to avoid these attacks.

We will finish by looking at common techniques that will help you protect sensitive information within your application by adding tampering detection and making sure every external communication request is made securely.

3:10pm – 4:05pm	S [SLIDES]Marta Piekarska - Real life usecases of Blockchain and open source	3. Lambda
	<i>Speakers: Marta Piekarska</i>	
	This talk will provide a look into enterprise grade blockchain applications and discuss various concepts in the space. A deep dive into Hyperledger frameworks and tools will be provided, followed by some interesting study of real world applications. We will finish with a demo of how blockchain can help improve the world we live in today. The class will be fully interactive and audience is encouraged to ask questions throughout the talk.	
3:10pm – 4:05pm	S [SLIDES]Sam Elamin @samelamin - Web Development To Big Data. A Journey	5. Theta
	<i>Speakers: Sam Elamin</i>	
	Big Data is the new cool kid on the block, however the big powerhouses have been doing it for decades. Google, Amazon, Facebook have all utilised their wealth of knowledge to develop data driven products that are have become part of our every day lives.	
	In this talk Sam Elamin will relate his real life experience transitioning from a traditional web development role to working with the open source tools including Apache Spark, Kinesis and Big Query which are dealing with £100,000 worth of transactions every hour, and more importantly will also highlight the pitfalls to avoid while providing scalable and reliable big data solutions	
	Come along, and go from Big Data to Fast Data.	
3:10pm – 4:05pm	S [SLIDES]Vytautas Petrauskas - Slicing 'Big Elephant' systems into micro-services and having fun, - a case study from SEB	4. Zeta
	<i>Speakers: Vytautas Petrauskas</i>	
	I would like to share some experiences of how using an internal cloud infrastructure has helped my organization to start slicing 'big elephant' systems into smaller micro-services. How it allows developers to safely experiment building and running projects. How it enables faster processes and continuous delivery. How it introduced easy prototyping and experimentation into our everyday work.	
	I believe it helped to find the missing link between the 'dev' and 'ops' in the corporate organization. An effort to have a "state of the art" development life cycle with the latest technologies in a corporate environment can be a challenge. An internal cloud platform with Openshift enables SEB to achieve that.	
4:05pm – 4:25pm	F Coffee/tea break	1. Alfa
4:25pm – 5:25pm	S [SLIDES]Keynote: Linda Rising @RisingLinda - Moral Foundations Theory: help in overcoming resistance	1. Alfa
	<i>Speakers: Linda Rising</i>	
	It seems like the world is becoming more divided. People around the world are taking sides. This is nowhere more evident than in the United States where the last presidential election left the citizens asking serious questions about those on the "other side." You hear, for example, "What's wrong with those people? They don't seem to think logically. How can we have a conversation when they are so resistant to hearing other points of view. The truth is, we are all biased. The truth is, we filter all information. The truth is, we reach conclusions using our own version of logic and once we get there, we're really reluctant to change. This is a big problem and I don't even have the slightest hope of solving it, but I have discovered some interesting research that has helped me develop better ways of listening and communicating and I would like to share that in this workshop. The research is based on Moral Foundations Theory. I hope to provide enough of an overview so that participants can begin to practice it and leave with a new set of tools for overcoming conflict.	
5:25pm – 7:00pm	P After conference discussions and beer time	1. Alfa
5:45pm – 6:45pm	S Panel discussion with Marco Heimeshoff @Heimeshoff - My Biggest programming regrets – and what you can learn from them	1. Alfa
	<i>Moderators: Marco Heimeshoff</i>	
	What regrets do you have about your programming decisions? Writing a code means making 100 MILLION decisions every day. A mistake can easily be made, but you admit it, weigh your options, choose one and move on. We want to go over a few mistakes some of our panel participants experienced, so you can learn from the mistakes and potentially prevent them from happening to you. You are also welcome to join conversation and share your stories!	

F Free time **P** Party **S** Session **W** Workshop

NOVEMBER 16 • THURSDAY

9:00am – 6:00pm	F	Open Space	6. Lobby
9:15am – 10:00am	S	[SLIDES]Keynote: Ivan Liljeqvist @IvanOnTech - Hacked Blockchain Projects - What we've learned <i>Speakers: Ivan Liljeqvist</i> TBA	1. Alfa
10:00am – 10:20am	F	Coffee/tea break	1. Alfa
10:20am – 11:15am	S	Audrone Nakrosiene - How work environment effects employees' creativity? Empirical data will be presented on how work environment (supervisor support, co-worker support, physical work conditions) and individual characteristics influence employees' creativity.	4. Zeta
10:20am – 11:15am	S	[SLIDES]Aaron Stannard @Aaronontheweb - Creating Highly Available Distributed Systems with Akka.NET and Akka.Cluster <i>Speakers: Aaron Stannard</i> Developers are living in exciting, but more demanding times - we're expected to create applications and services that can deliver better value faster, at higher volumes, with less downtime. And in order to meet these demands we must learn new technologies and programming styles. Enter the actor model and Akka.NET. In this talk you'll learn the fundamentals of Akka.NET and discover how you can use the power of the actor model, location transparency, clustering, and other Akka.NET concepts to build powerful, highly available systems without having to write awful boilerplate code. You'll never look at .NET the same way again afterwards.	2. Beta
10:20am – 11:15am	S	[SLIDES]James Turnbull @kartar - How I learned to stop being afraid and love the JVM <i>Speakers: James Turnbull</i> The JVM. It inspires either respect or fear and hatred. Gather a group of sysadmins together and ask them about the JVM, and you'll hear a tirade of stories about memory leaks, tuning nightmares, stability, complex toolchains, and incomprehensible output. Talk to developers and long-time users of the JVM, and you'll see a quiet reverence for a powerful, performant, and scalable platform that just works. So why the dichotomy? James Turnbull explores why the JVM inspires such disdain and hatred, taking a potted look at the good, bad, and ugly of the JVM's history and development, even taking a detour into Java itself. Along the way, James debunks the myths around the JVM (and Java itself) as he walks you through modern Java and the modern JVM—covering tuning, logging, metrics, and deployment—and introduces you to available tools that make managing and running the JVM easy and simple. You'll leave with a healthy respect for the JVM—or at least a more nuanced understanding of it.	1. Alfa
10:20am – 11:15am	S	[SLIDES]Omer Kilic @OmerK - The Process of Shipping Hardware Products: Hardware Tales for Software Engineers <i>Speakers: Omer Kilic</i> Tinkering with hardware has never been easier and anyone can build the next big gizmo in the comfort of their home with a very basic understanding of electronics and a couple of inexpensive modules. The proliferation of hobbyist prototyping platforms such as the Arduino and Raspberry Pi and the ecosystems built around these projects enable tinkerers and hackers alike turn their ideas into reality with relative ease. Meanwhile, turning a one-off prototype into a product that can be shipped is a very different proposal which can take a very long time and be rather costly, unlike the quick and painless iteration cycles in prototyping. From the factory processes to regulatory approvals, shipping hardware products require multi disciplinary thinking and experience. This talk will give the audience an overview of the long and arduous process of getting a hardware product into the market, focusing on areas that differ greatly between the hardware and the software worlds.	5. Theta

10:20am – 11:15am	S [SLIDES]Yan Cui @theburningmonk - Serverless in production, an experience report	3. Lambda
	<p><i>Speakers: Yan Cui</i></p> <p>AWS Lambda has changed the way we deploy and run software, but this new serverless paradigm has created new challenges to old problems - how do you test a cloud-hosted function locally? How do you monitor them? What about logging and config management? And how do we start migrating from existing architectures?</p> <p>In this talk Yan will discuss solutions to these challenges by drawing from real-world experience running Lambda in production and migrating from an existing monolithic architecture.</p>	
11:35am – 12:30pm	S [SLIDES]Kamil Szymanski @kszdev - Reactive web services	3. Lambda
	<p><i>Speakers: Kamil Szymanski</i></p> <p>Ahh, reactive, probably the buzzword of 2017, newer and shinier than good ol' microservices, all asynchronous, non-blocking and I've even heard some event-driven buzz around it.</p> <p>During this live-coding session we won't focus on the shiny nor on saving the world with dataflows using composable operators.</p> <p>Instead we'll focus on how the execution of this reactive approach differs from 'classic imperative approaches' and check how it impacts resource consumption and tps.</p> <p>We'll also see backpressure in action, cover the topic of reactive converters (e.g. JSON encoders and decoders) and check a couple of libraries, both new and old ones, that help build reactive web services.</p>	
11:35am – 12:30pm	S [SLIDES]Kevlin Henney @KevlinHenney - Procedural Programming: It's Back? It Never Went Away	1. Alfa
	<p><i>Speakers: Kevlin Henney</i></p> <p>When programmers describe code as 'procedural', it's generally not meant as a compliment. There is the belief that we have collectively moved pass such thinking and onto better paradigms. But a paradigm is no more than a pattern language, a family of solutions fit for a context. Change the kind of problem you are solving and you may find a different solution makes sense — even, in these days where pure functions battle it out with classy objects, procedural programming.</p> <p>This talk takes a look at some of the past, present and future of procedural programming, looking at how there's more to it than many first assume, how it still informs language design and how it relates to other paradigms, such as functional and OO.</p>	
11:35am – 12:30pm	S [SLIDES]Nikolai Andersen @nikolaiii - Using F# on Azure Functions in Production	4. Zeta
	<p><i>Speakers: Nikolai Andersen</i></p> <p>In this talk I'll show a real world example of running F# on Azure Functions. By consuming several APIs in a deployment pipeline we have created a service that generates informative changelogs between environments. I want to show you how easily you can do the same. Using the power of F# Type Providers we'll create a new project, integrate with three external systems and deploy to Azure Functions in under an hour. We'll go all the way from the drawing board to running in production. The presentation does not assume any prior familiarity with F#, Type Providers or Azure Functions.</p>	
11:35am – 12:30pm	S [SLIDES]Ronald van Es @ronaldvanes- How to end your challenging workday with more energy than you started with	2. Beta
	<p><i>Speakers: Ronald van Es</i></p> <p>Why do we still choose workplaces that drain us from all our energy between 9-to-5 leaving us with a paycheck, but zero energy left for the things that matter most, our health and our private life? In today's increasingly demanding IT workplaces the balance seems to have shifted to far to the work part of the work-life balance. At Macaw, we realize that the only thing that makes us successful are the hearts and minds (the Passion) of our employees. We also have to face the fact that can not lighten the challenges and demands that are put on our employees by our customers, by their own private challenges, their social environment or themselves (being the ambitious high achievers that they are). But we sure can help them learn how to cope with all the challenges they face and be the best version they can be in a work environment that adds energy instead of draining it. I'd like to share how we created a workplace that you can leave after your workday with more energy than you came in with.</p>	

11:35am – 12:30pm	S	[SLIDES]Vytas Taujanskas - Math and other good things useful for building a new engineering office <i>Speakers: Vytas Taujanskas</i>	5. Theta
		<ul style="list-style-type: none"> • The culture of communities • Key elements of the culture • The tasks needed to solve by building new branch (hiring, building, establishing relationships) • What is the mindset behind the math lover (the status of being stuck) • What are key elements used in building new branch (p.m. how to solve it) • The process of solving puzzles • The most important steps 	
12:30pm – 1:30pm	F	Lunch	1. Alfa
1:30pm – 2:25pm	S	[SLIDES]Amye Scavarda @amyec - Open Source Contribution - How does it even work? <i>Speakers: Amye Scavarda</i>	4. Zeta
		<p>An open source community lead walks through contribution to open source projects from a number of angles:</p> <ul style="list-style-type: none"> * the community side and why they want contributions * the corporate side and they want contributions * who contributes and why * numbered lists about why contribution matters to projects * a real life example of contribution with a side of open source licensing and how that effects contributions * how projects change to affect and improve contribution * inviting diverse contribution as part of contributor growth * where the state of project contribution can go from here <p>This is by no means an exhaustive list and may include more memes and gifs as time allows. Audience participation welcomed.</p> <p>Audience members will get a wider understanding of how and why corporations contribute to open source projects, how communities can improve their contributor growth and new pathways to increase contribution.</p>	
1:30pm – 2:25pm	S	[SLIDES]Chander Dhall @csdhall - JavaScript, API and Server Side - Know the Secrets of Success <i>Speakers: Chander Dhall</i>	3. Lambda
		<p>Microsoft MVP and ASP.NET Insider Chander Dhall reveals the secrets of what makes his web projects successful. He shares insights from JavaScript, Web API, MVC, and patterns and principles that are usually great in theory but could be misunderstood and may lead to failures. Code examples will include AngularJS, JavaScript, C#, Web API, MVC, and more.</p>	
1:30pm – 2:25pm	S	[SLIDES]Mark Seemann @ploeh - From dependency injection to dependency rejection <i>Speakers: Mark Seemann</i>	1. Alfa
		<p>In object-oriented design, dependency injection is a well-known design pattern, although it's a complicated solution to the problem of decoupling. Functional programming offers a simpler way. This talk examines dependency injection in object-oriented design, and explains how it's not required (nor desired) in functional programming. You'll also learn how a proper functional design eliminates the need for mocks and stubs in unit testing, enabling you to entirely reject the notion of dependencies.</p> <p>You don't need to know Haskell or F# to attend this session; relevant syntax will be explained just-in-time. Object-oriented examples will be in C#.</p>	
1:30pm – 2:25pm	S	[SLIDES]Mažvydas Skuodas @wanis_here - How to feel good about the code you contribute <i>Speakers: Mažvydas Skuodas</i>	5. Theta
		<p>We will discover why "green field" projects feels so good, but supporting legacy project does not; how to discover "the flow" and why sometimes it is bad; how to motivate yourself and the team on constant velocity, and how TDD helps to achieve that; and after all: what drives your development.</p>	

1:30pm –
2:25pm

S **[SLIDES]Tomer Gabel @tomerg - An Abridged Guide to Event Sourcing**

2. Beta

Speakers: Tomer Gabel

Although event sourcing (and its sister pattern CQRS) has been gaining traction in recent years, it's still baffling for many engineers attempting to implement it for the first time. While there's plenty of material on the subject, most of it is too basic or theoretical for practical applications, and engineers often end up having to reinvent (or rediscover) suitable approaches and techniques.

This talk focuses on practical aspects of building event-sourced systems, lessons learned from our experience building such systems at Wix. We'll walk through the design and implementation of a relatively simple event-sourced system, covering the event model, underlying persistence model, code layering/factoring and operational considerations.

2:45pm –
3:40pm

S **James Nugent @jen20 - Cloud Networking: What's underneath?**

3. Lambda

Speakers: James Nugent

Cloud networking runs at seemingly improbable scale - millions of networks from different tenants flow, sometimes with tens of thousands of instances per network - all on the same physical substrate. Often the performance requirements are huge - expensive GPU-intensive compute jobs must be fed with data in order to keep them efficient. It is plainly clear that traditional networking technology is not behind this - so what is? In this talk we'll look at the building blocks of cloud networking - from hypervisors to switches - from first principles, show how the building blocks fit together, and how this maps onto various cloud network offerings.

2:45pm –
3:40pm

S **Sander Hoogendoorn @aahoogendoorn - Do or don't. There's no try. Or is there? (The power of monads explained. Sort of)**

1. Alfa

Speakers: Sander Hoogendoorn

One of the great things about being a programmer is that you never stop learning. Even after having programmed for almost 35 years, I still improve on the way I write code. Recently the way I write code changed once again when I started to apply monads and especially the Try class.

During a recent project, my team created a small library that ports the behavior of the Scala Try monad. Although at first this new monad didn't appeal to me, I soon really started to appreciate this style of programming, where we concatenate series of Map() and FlatMap() methods, using lambda's, and avoiding abundant try-catch blocks, and many if statements and null checks.

In the meantime, I have contaminated many programmers with this style. Developers make it a sport to always start every method with a return statement. During this talk I'll demonstrate the power of this simple monad, using many code examples (in Java, C# and TypeScript). Don't hesitate to join in.

2:45pm –
3:40pm

S **[SLIDES]Aaron Greenwald @aaronjgreenwald - Why RTL Support Is So Hard: Detours in Abstraction**

5. Theta

Speakers: Aaron Greenwald

Not all languages are written with your standard, old-fashioned alphabets. Some modern languages, like English, are even written backwards: from left to right! Because Western hegemony has shaped the way the modern world has developed, many of the 500 million people that are native speakers of right to left languages deal with switching between writing systems constantly every day. Unfortunately, much of the software we all use makes this experience difficult and confusing.

This talk is an advanced, abstract talk on what exactly makes supporting RTL text, and particularly bi-directional text, so complicated and just why these problems are still largely unsolved in so much of today's software.

As a bilingual developer, Aaron has been dealing with both LTR and RTL text since childhood.

2:45pm – 3:40pm	S [SLIDES]Mindaugas Mozūras @mmoza - The Three Last Conversations <i>Speakers: Mindaugas Mozūras</i>	4. Zeta
<p>Our company started last year in dire straits. Our strategy was not working. All the key metrics were slowly drifting downwards. That continued for most of the year. Many people left. We even did a re-org. I've had multiple last conversations. Sometimes, trying to stop people from leaving. Other times, telling them that they'll have to leave. This story will be centered on three such conversations.</p> <p>The first one with my lead, who decided to leave the company. The second one with a developer, who was offered a, what he perceived to be, better opportunity. The third one with a developer, who we had to let go during the re-org.</p> <p>This story has a happy ending. I'm still with the company. We managed to turn it around and have never been in a better position.</p> <p>I've learned a lot through last year. I'll talk about mistakes, diving saves, honesty and delivering bad news. But most importantly, I'll focus on effort and result. I'll answer which of them is more valuable and why.</p>		
2:45pm – 3:40pm	S [SLIDES]Sean Farmar @farmar - SOA lessons learnt (OR Microservices done better) <i>Speakers: Sean Farmar</i>	2. Beta
<p>Service Oriented Architecture has been around for a while, now Microservices is the new black, that's cool, but can we learn from when we failed and succeeded implementing SOA? There are some really useful lessons we can take and avoid the pitfalls.</p>		
3:40pm – 4:00pm	F Coffee/tea break	1. Alfa
4:00pm – 4:55pm	S [SLIDES]Avi Itzkovitch @xgmedia - How Smart are Smart Things? <i>Speakers: Avi Itzkovitch</i>	4. Zeta
<p>A look to the era of 'smart' things and how design can save the world. In recent years we are hearing more and more about the advent of smart objects, from the smart alarm to the smart fridge, connected light bulbs to connecting our wallet to the Internet. It is clear that something exciting but very strange is happening in the world of connected technology. Simply put, when it comes to connected devices, we design a lot of 'useless things'. Is 'smart' dumb? In this presentation, I will look critically at this era of 'smart' devices, examine what went wrong and how designers can utilise this era to create meaningful interactions with technology and save the world.</p>		
4:00pm – 4:55pm	S [SLIDES]Dino Esposito @despos - I had microservices and I didn't know <i>Speakers: Dino Esposito</i>	1. Alfa
<p>Microservices are vertical slices of functionality independent from one another in terms of technologies, paradigms and to some extent also data. As it is an isolated module, a microservice can be easily replaced or entirely rewritten or just scaled horizontally without the risk of regression in case of need. Multiple microservices interact in a loosely coupled manner participating to a distributed architecture but being fully usable on their own. Honestly, this design has very few cons and quite a few pros. And more importantly, it is much more common than expected. It's simply the name given to all running solutions that for some reasons are not falling in the realm of well-architected, comprehensive systems. Nearly any system is a collection of microservices. In this talk, I'll share some painful personal experience that resulted from the building of the infrastructure for a company in multiple steps, with limited resources, adding—like a family would do—one piece after the next trying not to lose track of the existing. Come and hear how to rename and leverage the mess you have around to take some concrete functional benefits.</p>		
4:00pm – 4:55pm	S [SLIDES]Dmytro Mindra @dmytromindra - Teaching Kids Robotics <i>Speakers: Dmytro Mindra</i>	5. Theta
<p>Almost two years ago Dmytro and his wife Maria have started a robotics school for kids in Odessa, Ukraine. They have been running the school for all that time, teaching kids programming, robotics and electronics. Now they have some experience in this area and would be glad to share it. This session is for those who are interested in starting a robotics school for kids or who would like to teach their own kids robotics, electronics and programming. You can see some photos at https://www.facebook.com/Funtronica/</p>		

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- 4:00pm –
4:55pm
- S **[SLIDES]Juergen Hoeller @springjuergen - 15 Years of Spring: Evolving a Java Application Framework** 3. Lambda
Speakers: Juergen Hoeller
The Spring Framework originated from a book in 2002, becoming the most widely used web application framework in the Java ecosystem within five years... and holding that position to this day. The talk illustrates Spring's evolution over 15 years, adapting not only to five new JDK generations but also to ever-changing requirements in modern enterprise architectures.
-
- 4:00pm –
4:55pm
- S **[SLIDES]Kim van Wilgen @kimvanwilgen - The continuous culture** 2. Beta
Speakers: Kim van Wilgen
Are you looking for ways to speed up? More rapidly than ever, companies are adopting technologies, tooling and practices that allow them to be so agile that it changes their culture overnight. Disruptors being disrupted within the year. Fast movers are faced with instant response of competitors. Longterm strategies, roadmaps and plans appear useless and are slowing you down. Kim van Wilgen, head of software development at the Dutch insurance software company ANVA, shows you how moving to continuous delivery will change the DNA of your company. Learn how continuous delivery will speed up your company and lead to new patterns in inventing, creating and delivering your products and propositions. How your thinking will change through the presence of fast feedback, short cycles and data-driven decision making. And how your organization will move to become high performing, creating a learning mindset from exploratory behavior at all levels and activities. It's time to move to the continuous culture.
-
- 5:15pm –
6:15pm
- S **[SLIDES]Keynote: Russ Miles @russmiles - Harnessing Chaos; the hidden ingredient behind building better systems through learning and continuous improvement** 1. Alfa
Speakers: Russ Miles
Production hates you. The machines, the networks, the very users you hope to provide a service hate you. This is reality, and it makes production a hostile battleground. In this talk Russ Miles will talk about how to turn this pain to your advantage. Following on from his popular "Why don't we learn?" (<https://www.infoq.com/presentations/Why-Dont-We-Learn>) talk, it is now the time for the sequel. Through a sequence of case studies, personal stories and code examples Russ will talk about how sociotechnical systems, like your very own software development teams, development team, improve through chaos and the stress that results. Through each case study Russ will show how you can turn pain to your advantage through experiments and learning loops so that it is no longer about "how do we avoid the pain" but rather "how do I embrace and thrive on more".
-
- 8:00pm –
9:00pm
- P **Party Keynote: Mark Rendle @markrendle - The Worst Programming Language Ever 2.0** 1. Alfa
Speakers: Mark Rendle
THE PARTY KEYNOTE WILL TAKE PLACE AT ANOTHER VENUE. Let's meet at Pramogu bankas, A. Stulginskio g. 8, Vilnius 01115. The first edition of The worst programming language was presented at BUILD STUFF 2014. It's now time for an update. Mark Rendle will present 2.0 version of "The worst programming language"
-
- 9:00pm –
10:00pm
- P **90s Rock Music Party with Bekk Band and Wolfsome band** 1. Alfa
Speakers: Mark Rendle
THE PARTY WILL TAKE PLACE AT ANOTHER VENUE. Let's meet at Pramogu bankas, A. Stulginskio g. 8, Vilnius 01115. Beers & snacks are on us!
-

F Free time **P** Party **S** Session **W** Workshop

NOVEMBER 17 • FRIDAY

10:00am – 11:00am	S	Keynote: Amanda Laucher @pandamomial - Defying Bloomberg & Increasing Tech Diversity: Coal to Code <i>Speakers: Amanda Laucher</i> What makes a good software developer, and how do we bring new people with the talents that we need into our industry? In 2014 Michael Bloomberg said that coal miners can't just go learn to code, a statement that was rejected by Mark Zuckerberg, Mined Minds, and coal miners alike. In this presentation, Amanda Laucher will share insights from the free programming training that Mined Minds have been providing in rural areas of southwest Pennsylvania & West Virginia, where traditional industries (coal mining) are in decline. She will be joined by Marvin Laucher, her brother, and a previous coal miner who has made the transition from coal to code and who was the inspiration to kick off this adventure in economic development. They will discuss the approaches taken to develop a diverse group of programmers from local residents with no previous coding experience, and the steps they are taking to seed a new tech industry in the area. If you think it's important to give something back to the community, see the value of inspiring people from diverse backgrounds to code, and are interested in techniques for teaching the fundamentals of software development and changing local economies, then this talk will be of interest to you.	1. Alfa
10:00am – 6:10pm	F	Open Space	6. Lobby
11:00am – 11:20am	F	Coffee/tea break	1. Alfa
11:20am – 12:15pm	S	Romeu MOURA @malk_zameth - Reading code under the influence of one's emotions <i>Speakers: Romeu MOURA</i> We talk a lot about writing "beautiful" code but never about reading the "ugly" one! Yet we read more than we write and "ugly" is more frequent than "beautiful"! Suffer less! Arm yourself to improve your skill at reading code, to fight the tendency to needless despise your fellow Devs to make sense out of the ball of mud while under the influence of your emotions.	4. Zeta
11:20am – 12:15pm	S	[SLIDES]Elton Stoneman @EltonStoneman - Modernizing Legacy .NET Apps with Docker <i>Speakers: Elton Stoneman</i> Docker has the potential to revolutionize how we build, deliver, support and even design software. But it doesn't have to be a violent revolution. The end goal might be breaking your existing ASP.NET monolith into microservices which run cross-platform on .NET Core, but the first step can be as simple as packaging your whole .Net Framework application as-is into a Docker image and running it as a container. In this session I'll take an existing ASP.NET WebForms application and package it as a Docker image, which can run in a container on Windows Server 2016 and Windows 10. I'll show you how to run the app and a SQL Server database in Docker containers on Windows, and how to use Docker Compose to define the structure of a distributed application. Then I'll iteratively add functionality to the app, making use of the Docker platform to modernize the monolith without a full rebuild. I'll take a feature-driven approach and show you how Docker makes it easy to address performance, usability and design issues.	2. Beta
11:20am – 12:15pm	S	[SLIDES]Justina Juknevičiūtė - Never-Neverland of pursuing Quality <i>Speakers: Justina Juknevičiūtė</i> Building Quality into your work, product and team is usually a multi-layered challenge. However, when you find ways of doing so, quality brings benefits of happy customers without putting your efficiency on the line. This talk will focus on a day to day practices which help to improve on how we communicate, deliver and have fun along the way.	5. Theta

11:20am – 12:15pm	S [SLIDES]Oren Eini @RavenDB - Extreme Performance Architecture <i>Speakers: Oren Eini</i>	1. Alfa
<p>High performance can be achieved by micro optimizations and a lot of minutia, but to get to the extreme you need to architect your solution properly. In this talk we'll discuss how the architecture of the solution impacts its performance, how to architect for extreme performance and the impact it has on day to day coding.</p>		
<p>We are going to execute complex distributed map-reduce queries on a sharded cluster, giving you lightning-fast responses over very large data volumes.</p>		
11:20am – 12:15pm	S [SLIDES]Vaidas Jusevičius & Donatas Kimutis - Solving technical debt of a microservices architecture in an innovative multinational environment <i>Speakers: Vaidas Jusevičius, Donatas Kimutis</i>	3. Lambda
<p>This is a story of two developers coming from two different backgrounds with a single goal to improve both technical and managerial quality of a maturing start-up like project. We will share struggles we had to overcome being first developers on different physical site than rest of a team. We'll tell what does it feel like to be a part of innovation hub inside a large corporate organization. And most importantly we will try to explain how in such an environment we solved technical debt caused by the mentality of a startup applied to the practices of software architecture.</p>		
12:15pm – 1:15pm	F Lunch	1. Alfa
1:15pm – 2:10pm	S Jimmy Bogard @jbogard - The DDD Do-Over <i>Speakers: Jimmy Bogard</i>	1. Alfa
<p>It was our first multi-year project as a young consulting company, and while we all had experience building projects using DDD, it was our first major effort as a team. It was also our client's first DDD project, as well as their first Agile project. With all of these firsts, we were determined to do things by the book. We debated endlessly the different ways of implementing the DDD patterns, consulted the experts, and even became experts in our own right.</p>		
<p>We shipped, and our clients were happy, but we were not entirely pleased with the results. It wasn't until years later we understood what we had created - a Monolith!</p>		
<p>A few years later, we got the opportunity to embark on a new multi-year effort in a nearly identical domain with nearly identical constraints. In this talk, we'll explore where we went wrong in the first project and how we righted our wrongs in the second, using concepts and techniques from both DDD and microservices, to a solution that we could finally say we were completely happy with.</p>		
1:15pm – 2:10pm	S [SLIDES]Aurelijus Stanislovaitis - Man vs Machine: manual and automated security testing <i>Speakers: Aurelijus Stanislovaitis</i>	5. Theta
<p>The talk explores strong and weak aspects of manual and automated security testing of web applications. Illustrated with real life technical examples the presentation will share experiences from combining manual and automated security testing techniques in agile development process.</p>		

1:15pm –
2:10pm

- S **[SLIDES]Elton Stoneman @EltonStoneman - Run Linux and Windows Containers on a Hybrid Docker Swarm** 3. Lambda

Speakers: Elton Stoneman

"Linux containers run on Linux. Windows containers run on Windows. You can't mix them on a single host, but you can build a cluster of hosts into a single Docker swarm, using a mixture of Windows and Linux servers. That swarm can run both Windows and Linux containers, you deploy and manage them in the same way, and the containers can talk to each other with overlay networking.

This session will show you how to make that happen, but more importantly you'll see why it's such an important capability - one that will change the way you design, build and deliver software. With a hybrid Docker Swarm you can build a distributed solution where you pick the right technology stack for each component, and leverage high-quality open-source applications to minimize the amount of custom software you need to write and maintain.

I'll take an existing ASP.NET application, built to run on Windows and IIS, and split out a couple of components into separate services. Then I'll containerize the whole solution into a suite of Docker images that each use the right OS for the job - Windows Server Core, Windows Nano Server or Linux. I'll deploy the whole stack in a hybrid Docker Swarm in Azure, and explore the benefits of running a distributed cross-platform application within a single cluster boundary."

1:15pm –
2:10pm

- S **[SLIDES]Heather Downing @quorralyne - Smaller not taller: defeating the mobile app architecture giant** 4. Zeta

Speakers: Heather Downing

Making the right decisions for a mobile project can be a very involved process of trial and error before you find a good fit. Wouldn't it be nice if you had a map? In this session we will compare frameworks and approaches based on the kind of mobile project you are doing, and walk through what the actual code looks like to accomplish basic tasks for each one. We will cover native, hybrid and mobile web approaches for enterprise-level solutions.

1:15pm –
2:10pm

- S **[SLIDES]Peter Milne @helipilot50 - Achieving High Load in Advertising Technology** 2. Beta

Speakers: Peter Milne

High Load consists of three factors: * Latency - The Speed of an individual request, business transaction or event * Throughput - The Scale required to process a number business transactions per time period a.k.a TPS * Availability - The system 99.XXX% availability 24/7/365 AdTech is the technology that supports Digital Marketing. The "free" internet services such as, Email, Facebook, Skype, etc. are funded by Digital marketing. In this talk you will learn the technologies used and how they are implemented to see the High Load demanded by Digital marketing. You will also hear some of the War stories and how problems were solved.

2:30pm –
3:25pm

- S **Chris Condron @CLCondron - Event Sourced Transformation in Financial Systems** 2. Beta

Speakers: Chris Condron

Financial systems for Institutional Investors and Wealth Management are among some of the most demanding software systems produced today, requiring great throughput, scale, and accuracy, along with stringent availability, audit, and recovery requirements.

We will discuss our ongoing transformation of a large Asset Management product line from multiple legacy N-Tier applications into a single flexible Vectored Event Driven Application Architecture that brings together CQRS/ES, DDD, Micro Services, SEDA, and Vector Clocks in a coherent and structured manner.

Using this architecture, we have been able to create a deterministic and provably correct distributed system that can be reasoned about easily, provides good NFRs, and in the event of partitions will provide stale rather than inconsistent data.

The talk will focus on the Architectural transformation and cover the reasons for adopting each of the core components. This will include details on the benefits, roles, and constraints for each component, along with the critical role each plays in the overall architecture, as well as the overall definition and structure.

2:30pm –
3:25pm

S **[SLIDES]Aurelijus Banelis @aurebane - Real-time-first metrics**

4. Zeta

Speakers: Aurelijus Banelis

Designing software for easier debugging and faster actions based on monitoring.

Why it is important?

"I can write code very fast, unless I am debugging", "Systems do not break on weekends, because there are no changes being deployed", "Is it broken – no it is just out-of-date", – seems to be *painful problems and still there is lack of attention towards them*. I am hitting these problems every day, therefore I am trying to change my perspective, maybe I should design my software differently.

After this presentation, you should:

- Have a basic understanding, what are metrics and how those can help you in answering: "so what actually software is doing now, especially when you see a spinning loader animation"
- Be able to compare advantages and disadvantages in moving between real-time and delayed metrics, so you could feel more confident in making software/infrastructure decisions
- Broaden your perspective about different ways of monitoring and using collected data for efficiency or added value

Presentation will include:

- Introduction, what are metrics and short demo of a small real world system
- Walk-through of principles and implementation limitations for real-time and delayed metrics
- Examples of classical tools for real time and delayed metrics
- Examples of not standard tooling for real-time metrics

Video recording:

2:30pm –
3:25pm

S **[SLIDES]Avishai Ish-Shalom @nukemberg - Resilient Design 101: Queue Theory**

3. Lambda

Speakers: Avishai Ish-Shalom

Queueing Theory is perhaps one of the most important mathematical theories in systems design and analysis, yet only few engineers learn it. This talk teaches the basics of queueing theory and explores the ramifications of queue behavior on system performance and resiliency. This talk aims to give practical skills that can be applied better build and tune your systems. The talk covers:

- Queueing delays
- Queueing capacity
- Little's Law and how to apply it
- Proper sizing of thread and connection pools

2:30pm –
3:25pm

S **[SLIDES]Roy Osherove @RoyOsherove - Patterns & Anti Patterns for Scaling & Enabling DevOps Adoption**

1. Alfa

Speakers: Roy Osherove

DevOps is the implementation of continuous delivery and agile concepts across the organization, focusing on pipelines as the main building blocks for delivery value internally and to the customer. But getting to that state is complicated because it requires several facets of work: People, process and tools. In large organizations, we have the added complexity of: • Multiple dependencies and sub systems • Multiple teams, groups, business units with competing interests • Varying degrees of agility, culture, tools, technologies and processes • Security, compliance and policy gates In this talk, we will discuss main patterns and anti-patterns for adopting and implementing DevOps pipelines throughout the organization, that scale.

2:30pm –
3:25pm

S **[SLIDES]Valerie Andrianova @youtrack - Baking Boards: Tweak the Recipe for Agile Development**

5. Theta

Speakers: Valerie Andrianova

This is a story about how we at JetBrains "bake" agile boards for different teams: product development, marketing, design, and technical writing. I will show live examples and explain various options that support different preferences and processes for each team.

This presentation will be interesting for everyone who has the drive to develop. These recipes are especially useful to anyone who thinks they don't have or don't need a process, or for those who do follow a process, but don't get results.

Surprisingly, this is a true sign that you understand the concept of agilezen. Any cook can follow a standard recipe. A real chef knows how to make small adjustments that make a big impact. To build an agile practice that works for you and your team, all you're missing is the secret ingredient.

3:25pm – 3:45pm	F	Coffee/tea break	1. Alfa
3:45pm – 4:40pm	S	Niall Merrigan @nmerrigan - A security tester's toolkit <i>Speakers: Niall Merrigan</i> Kali, Backbox, Metasploit, BeEF. All tools in an arsenal that exist to break through security barriers. This talk introduces the tools available and shows how they are used to get through your defences. It is more a massive demo than a talk and is an exploration of the tools and what they do. At end of this talk, you will have better understanding how to defend against them and spot the problems. We will go through recon, exploitation and maintenance of exploits. This is geared at developers, it pros and those with an interest in learning more about security tools and practices	1. Alfa
3:45pm – 4:40pm	S	[SLIDES]Ariel Ben Horesh @arielbh - Xamarin: It's time for Apple Watch <i>Speakers: Ariel Ben Horesh</i> Apple Watch is an intriguing platform, extending the iPhone by providing the user with unique experience and features. With Xamarin, .NET developers are able to develop and deploy Apple Watch applications today. With mix and matching outstanding .NET libraries such as Reactive Extensions we can do remarkable apps that will amaze even the most avid iOS fans.	3. Lambda
3:45pm – 4:40pm	S	[SLIDES]David Ostrovsky @DavidOstrovsky - Who's Afraid of Graphs? <i>Speakers: David Ostrovsky</i> Graphs are everywhere. Friendied someone on Facebook? Graphs. Checked the best route to avoid traffic on Google Maps? Graphs. Those recruiters that keep spamming you with job offers on LinkedIn? They find you through graphs. We're surrounded by problems that can be best represented and solved through graphs, and yet graph databases and processing frameworks remain an obscure niche accessible mainly to data scientists and academics. It's time to right the injustice and bring graphs to the masses! In this session you will learn about the various graph databases and data processing tools. You will hear about the types of problems that can be solved through graphs, what works best with graph databases, and what should be done with big data processing offline. You will see different ways of representing common use-cases in graph databases, various graph query languages, and learn about the advantages of migrating from relational databases with complex joins to graph databases. The talk includes demos of the various technologies, such as Neo4j, OrientDB, GraphX, Giraph, and others.	2. Beta
3:45pm – 4:40pm	S	[SLIDES]Jonathan Graham @graham_jp - Controlling Quality in Software Development <i>Speakers: Jonathan Graham</i> We all know that we need to develop and deliver quality software, but what do we actually mean when we say quality, and how can we control it? In this presentation we'll move our thoughts about quality from an abstract concept into concrete terms that we can easily rationalize about. With this understanding we can then confidently apply appropriate controls at the right right time for any given project, whether we are controlling a mission to Mars or writing a toy app for friends.	4. Zeta
3:45pm – 4:40pm	S	[SLIDES]Stein Inge Morisbak @steinim - Continuous Security in the Cloud <i>Speakers: Stein Inge Morisbak</i> The revolution of cloud computing has bootstrapped a transformation of harnessing IT as we know it. The power and potential of cloud computing has never been clearer. If you're resisting it because of security concerns, you risk being left behind, missing out on the most disruptive and innovative periods in technology so far. Emerging with cloud computing is a second revolutionizing philosophy. The one of DevOps and Continuous Delivery. In contrast to the old ways of ensuring that our software is available, stable and secure, we no longer have the time to let it block progress and speed. Security is not only failing to protect, it's also hindering the organization's productivity. Because if security blocks progress and speed, it will be ignored and marginalized. The last year we have migrated all customer facing applications from internal hosting to the cloud at Norwegian Railways (NSB). We have also created a handful of new services and split up many of the legacy ones. Our main focus has been to enable fast flow of features into production while preserving world-class availability, stability, and last but not least security. In this talk I will share with you our experiences and choices made along the way. Furthermore I will show you our tooling, technology choices and explain our process adaptations. Participants should have some experience with software development and/or administration of public cloud computing. There will be code. The audience should agree that security is important.	5. Theta

5:00pm –
6:00pm

S **[SLIDES]Keynote: J. B. Rainsberger @jbrains - The Well-Balanced Programmer**

1. Alfa

Speakers: J.B. Rainsberger

A well-balanced programmer feels comfortable dealing with designing software, managing projects, and working with people. Companies seem to want to hire "the best", but well-balanced programmers relatively rare. Although many programmers feel confident arguing about algorithms, modularity, and scalability in design sessions, they would stand out from their peers if they also had incredible habits for managing their work, knew how to negotiate features with product owners, had intelligent conversations with project managers about the risks in their project, and understood what lies behind the irrationality of the people and systems around them. Sadly, most programmers don't appreciate the value of these skills. Others don't know how to get started learning them. I started programming computers because people are messy!

I'd like to share a curated collection of concepts for you explore that will help you become irresistibly valuable to your employer or clients. I plan to share the design principles and programming techniques that amplified my skills the most over the last 20 years. In addition, I'll describe how I learned the key non-programming concepts, techniques, and approaches that have endeared me to fellow programmers, managers, and clients. I offer you a very practical approach to issues like influencing peers, negotiating with stakeholders, and adopting new ways of working safely. I'll help you start to build a personal work system that will free your mind to do your best work. I know how this might sound. I promise to share concrete techniques that you can begin applying right away. Of course, these techniques aren't magic, so you'll have to read some more and practise on your own, but you will know how to get started right away on becoming the well-balanced programmer that every manager and co-worker will love to have on their team.

NOVEMBER 18 • SATURDAY

9:00am –
5:00pm

W **J. B. Rainsberger @jbrains - Surviving Legacy Code**

2. Beta

Speakers: J.B. Rainsberger

Friends don't let friends remain afraid to change code—and legacy code is code that we're afraid to change. Join J. B. Rainsberger to explore every aspect of surviving legacy code, including techniques for managing the design, project risks, and the people involved. When you leave this workshop, you'll have a bag of tricks that you can use to make progress without introducing too much chaos into your project. You might not be able to turn your legacy code base into paradise, but you can survive it. If nothing else, you'll know what not to do the next time you have a chance to start a new code base.

9:00am –
5:00pm

W **Jimmy Bogard @jbogard & Adam Ralph @adamralph - (Part1) SOA Done Right (with examples in ASP MVC, Angular, and NServiceBus)** 1. Alfa

Speakers: Jimmy Bogard, Adam Ralph

Go beyond the hype and build a solid foundation of theory and practice with this workshop on SOA development.

Join Jimmy and Adam for a two-day deep dive covering architectural topics like:

- UI decomposition- Data ownership across the enterprise- How to choose NOSQL databases for your services.

You'll also learn the nitty-gritty details of building production-ready systems including:

- Fault tolerance – HTTP and queues- Reliable integration with 3rd party systems- Scalability, high availability & monitoring

Finally, get some hands-on experience in SOA development by building:

- Scalable command-processing endpoints- Publish/subscribe event-processing interactions- Long-running multi-stage business processes and policies

Table of contents

- Introduction to boundaries and data ownership
- Microservices and vertical slices
- Services UI composition
- Introduction to pub/sub as a communication pattern
- Reliable messaging concepts
- How to reduce coupling across microservices
- Introduction to commands as a communication pattern
- Anti-corruption components & reliable integration with 3rd party systems
- IT/ops and server side data-composition when integrating with 3rd parties
- Long running business transactions
- Saga patterns overview

Objectives

We'll understand service oriented architecture concepts, and DDD concepts such as bounded contexts and data ownership.

We'll apply those concepts to build a simple, yet fully functional, order management system sample with a microservices architecture, using patterns such as command processing, pub/sub and long-running sagas.

Skill Level

Senior developers, tech leads, and architects will benefit most from this workshop.

Computer setup

Participants are requested to bring a Windows laptop with Visual Studio 2017 or Visual Studio 2015 Update 3 and to follow the full set up instructions at least one week before the workshop, available at <https://github.com/Particular/Workshop.Microservices/blob/master/README.md>

9:00am –
5:00pm

W **Kevlin Henney @kevinHenney- Postmodern C++** 3. Lambda

Speakers: Kevlin Henney

Postmodern C++

Interest in native programming languages has been on the rise, and with it an interest in what the new C++ can offer. Much C++ code has its origins in pre-standard systems and styles. The modern C++ era arrived with the STL, the C++98 standard and a host of techniques and guidelines. Unfortunately, it also came with a lot of complexity of techniques, syntactic noise and unfulfilled potential. C++11 represented a fundamental shift in both language features and supported programming styles, a postmodern tradition continued in the C++14 and C++17 standards. This one-day tutorial explores language and library features and the implications for programming style, everything from code that is easier on the eye to code that is easier on the processor, from cleaner object-oriented programming to a functional-programming style, from event-driven to concurrent code. Some familiarity with C++ is assumed, but deep, metal-hugging knowledge is not required.

9:00am –
5:00pm

W **Linda Rising @LindaRising - Influence Strategies for Practitioners**

4. Zeta

Speakers: Linda Rising

You've tried and tried to convince people of your position. You've laid out your logical arguments on impressive PowerPoint slides—but you are still not able to sway them. Cognitive scientists understand that the approach you are taking is rarely successful. Often you must speak to others' subconscious motivators rather than their rational, analytic side. Linda Rising shares influence strategies that you can use to more effectively convince others to see things your way. These strategies take advantage of a number of hardwired traits: "liking"—we like people who are like us; "reciprocity"—we repay in kind; "social proof"—we follow the lead of others similar to us; "consistency"—we align ourselves with our previous commitments; "authority"—we defer to authority figures; and "scarcity"—we want more of something when there is less to be had. Learn how to build on these traits as a way of bringing others to your side. Use this valuable toolkit in addition to the logical left-brain techniques on which we depend.

9:00am –
5:00pm

W **Oren Eini @RavenDB - RavenDB Workshop**

5. Theta

Speakers: Oren Eini

Workshop covers RavenDB's core concepts, getting comfortable with its API, learning how to build and customize indexes and how to correctly model data for use in a document database. After familiarity with basics we will expand and tackle grok MapReduce, Multi-maps and other advanced usages of indexes, learn how to extend RavenDB and the various options of scaling out. RavenDB in production and what options there are for monitoring what it's doing.

NOVEMBER 19 • SUNDAY

9:00am –
5:00pm

W **Jimmy Bogard @jbogard & Adam Ralph @adamralph - (Part2) SOA Done Right (with examples in ASP MVC, Angular, and NServiceBus)** 1. Alfa

Speakers: Jimmy Bogard, Adam Ralph

Go beyond the hype and build a solid foundation of theory and practice with this workshop on SOA development.

Join Jimmy and Adam for a two-day deep dive covering architectural topics like:

- UI decomposition- Data ownership across the enterprise- How to choose NOSQL databases for your services.

You'll also learn the nitty-gritty details of building production-ready systems including:

- Fault tolerance – HTTP and queues- Reliable integration with 3rd party systems- Scalability, high availability & monitoring

Finally, get some hands-on experience in SOA development by building:

- Scalable command-processing endpoints- Publish/subscribe event-processing interactions- Long-running multi-stage business processes and policies

Table of contents

- Introduction to boundaries and data ownership
- Microservices and vertical slices
- Services UI composition
- Introduction to pub/sub as a communication pattern
- Reliable messaging concepts
- How to reduce coupling across microservices
- Introduction to commands as a communication pattern
- Anti-corruption components & reliable integration with 3rd party systems
- IT/ops and server side data-composition when integrating with 3rd parties
- Long running business transactions
- Saga patterns overview

Objectives

We'll understand service oriented architecture concepts, and DDD concepts such as bounded contexts and data ownership.

We'll apply those concepts to build a simple, yet fully functional, order management system sample with a microservices architecture, using patterns such as command processing, pub/sub and long-running sagas.

Skill Level

Senior developers, tech leads, and architects will benefit most from this workshop.

Computer setup

Participants are requested to bring a Windows laptop with Visual Studio 2017 or Visual Studio 2015 Update 3 and to follow the full set up instructions at least one week before the workshop, available at <https://github.com/Particular/Workshop.Microservices/blob/master/README.md>

9:00am –
5:00pm

W **Mark Rendle @markrendle - .NET Core in Docker** 3. Lambda

Speakers: Mark Rendle

In this one-day workshop, we'll take a demo micro-service application running on ASP.NET Core and get it working in Docker containers, from our local machines to a full Swarm running in the Cloud.

We'll cover:

- using Docker as a development tool for running services and testing our own containers
- engineering ASP.NET Core applications for distributed, replicated environments
- the pros and cons of different inter-service communication options (e.g. HTTP, GRPC, etc)
- different Docker Orchestration platforms, including Docker Swarm Mode and Kubernetes
- continuous integration and deployment
- deploying and maintaining complete multi-service application stacks with simple commands
- common problems and pitfalls and how to avoid them

No previous knowledge of Docker is required, although any experience with ASP.NET will be helpful.

9:00am – 5:00pm	W	<p>Mark Seemann @ploeh - From design patterns to category theory 2. Beta</p> <p><i>Speakers: Mark Seemann</i></p> <p>Would you like to write readable code? Code that you can understand a year later? Code that your co-workers can understand?</p> <p>If so, you need to use good abstractions in your source code. What makes an abstraction good? How do you arrive at good abstractions?</p> <p>Most programmers try to 'invent' abstractions from scratch. This is an elusive goal. It requires a level of foresight rarely available. What if, instead, you could use existing, universal abstractions?</p> <p>For decades, programmers have dreamt of being able to assemble software from building blocks, like Lego bricks. In order to do this, such building blocks must be composable, like Lego bricks. What makes an abstraction composable? It turns out that category theory can teach us about composability. Furthermore, it turns out that some of the most important structural design patterns in the Gang of Four book are special cases of categories.</p> <p>Category theory is a branch of mathematics, and so includes objective laws. You can use those laws to determine whether an abstraction is composable – even in object-oriented programming!</p> <p>Target audience and goal of the workshop</p> <p>In this workshop, you'll learn some objective criteria to determine whether a design is composable. No special background in mathematics is required.</p> <p>The workshop will include a combination of lecture and exercises, including hands-on programming exercises. You'll need to bring your own programming environment capable of compiling and running C# code. The fanciest C# features you'll use is generics, so programmers with only passing familiarity with C# may be able to participate as well.</p> <p>This workshop is for object-oriented programmers curious about category theory and functional programming. You'll see F# and Haskell code examples during the workshop, but you don't have to know these language; you'll learn what you need along the way.</p> <p>Successful participation in the workshop should enable you to use universal abstractions in your source code. As always, no silver bullet is implied. You will learn about universal abstractions, but it will not magically make all your code instantly perfect.</p>
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9:00am – 5:00pm	W	<p>Markus Leutwyler @Twtomcat - JavaScript Robotics Masterclass 5. Theta</p> <p><i>Speakers: Markus Leutwyler</i></p> <p>Additionally Robot Kit Hardware Cost is 60 EUR.</p> <p>Do tyou want to create, design and program your own awesome robots with JavaScript and open source hardware? Developers, this is your chance to dive into the World of Hardware! JavaScript is already the most used Language on the Web that it makes sense to use it for Robotics as well! Ever more powerful and cheap Microprocessors (Arduino, Intel Edison, Raspberry Pi) combined with Javascript Frameworks for Robotics (cylon/johnny-five) enable to easily build even complex robots. In this 6h practical Workshop for Robotics Beginners we start by assembling the 2 wheeled Robot Kits (Wifi-enabled, and with custom Lasercut and 3D printed parts), decorate them to your taste and then program them with JavaScript! We end with a Sumo-style Battle or Capture the Flag Session! Topics: Digital Design Digital Fabrication with the Lasercutter Building the Sumobot Installation and Configuration of the Robot Brain (Microcontroller plus Motor Driver) Programming your Robot using JavaScript and the johnny-five framework Add sensors and actors to your Robot After the workshop, you can take the Robot home with you :) Prerequisites: Just bring your own notebook (Linux, Mac or Windows)</p>
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9:00am – 5:00pm	W	<p>Roy Osherove @RoyOsherove - Enterprise DevOps - Patterns and Techniques for accelerating DevOps at the Enterprise Level 4. Zeta</p> <p><i>Speakers: Roy Osherove</i></p> <p>DevOps is the implementation of continuous delivery and agile concepts across the organization, focusing on pipelines as the main building blocks for delivery value internally and to the customer. But getting to that state is complicated because it requires several facets of work: People, process and tools. In large organizations, we have the added complexity of: • Multiple dependencies and sub systems • Multiple teams, groups, business units with competing interests • Varying degrees of agility, culture, tools, technologies and processes • Security, compliance and policy gates In this workshop, we will discuss main patterns and anti-patterns for adopting and implementing DevOps pipelines throughout the organization, that scale.</p>
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