FORWARD 3
WEB TECHNOLOGY SUMMIT
(/)

CONFERENCE: JULY 29TH, 2015
REGENCY BALLROOM, SAN FRANCISCO
TRAININGS: JULY 27, 28, 30, & 31

SCHEDULE OF EVENTS

THE BIG EVENT: WEDNESDAY, JULY 29TH
REGENCY BALLROOM, SAN FRANCISCO
(HTTPS://WWW.GOOGLE.COM/MAPS/PLACE/THE+REGENCY+CENTER/@37.787896,-122.421421,15Z/DAT/

8:00AM - 10:30AM

8:00AM
9:00AM

Registration
Registration

Get checked in, grab your badge and a coffee, and get ready for the keynote

9:00AM
10:00AM

Forward Keynote
Dan Shaw/Kelsey Gilmore-Innis
Track 1 - Regency Ballroom

Dan is the Co-Founder of NodeSource and has been building production Node since v0.2. Previously building node at Voxer, Spreecast and Storify, Dan also hosts the NodeUp podcast and organizes events like NodeBots Day, SFNode and NodeBotsSF.Kelsey is the CTO of Sexual Health Innovations and a back-end engineer with a focus on Scala. She has previously worked at Salesforce and PagerDuty, and is a founder of the Lambda Ladies functional programming group.

10:00AM
10:30AM

Morning Break
Morning Break

Come upstairs to the Lodge to grab a coffee and a light snack.

<center>10:30AM - 11:10AM</center>

10:30AM
11:10AM

D3, React, and a little bit of Flux
Shirley Wu
Track 1 - Regency Ballroom

At their core, React and D3 solve the same problem: on data change, how do we efficiently update the DOM? But they go about the problem very differently; React has the Virtual DOM, and D3 couples data-binding with enter-update-exit. So how should we use them together to take advantage of their respective strengths? How should we create React components while maintaining D3 transitions and behaviors? How does Flux fit into this? When should we even use them all together? This talk is centered around the mistakes I made and the things I learned while exploring these questions.

10:30AM
11:10AM

A Short History of Live Programming
Gilad Bracha
Track 2 - Sutter Room

The world is awakening to the joy of live programming tools. Where do these ideas come from, and where are they going? We'll discuss the roots of live programming in APL, Lisp, Basic (yes Basic) and of course Smalltalk, and see what we can learn about programming in the future.

10:30AM
11:10AM

Using Personality Data to Curate Online Experiences
Dan Sines
Track 3 - Lodge

A short time ago in an internet not so far away, there was so much information that users had literally too many options to choose from and were being bombarded from all angles. But as the remnants of the old ways were swept away a new age of the internet was born: the dawn of personalization. With it came the need to understand users and give them content that was targeted and relevant to only them. But this force of good was met by an evil nemesis, superficial and behavioral observations. Along came the solution: deep, impactful and actionable understanding and the cure for true personalization, Personality. Join Dan Sines as he regales you on the tales of Traitify, the world's first Personality API. Dan will discuss the ins and outs of how to measure personality and how to harness that data for recommendations, targeted marketing and matching.

10:30AM
11:10AM

React: Life without MVC
Priyatam Mudivarti
Track 4 - Lodge Annex

Object Oriented programming has many real benefits but one of its worst influences on User Interfaces is obscuring Data. Yet, dozens of MVC frameworks continue to grow and introduce leaky abstractions with middlemen like Models, Views, Controllers and Directives. React is simple. React, and their interfaces like Om and Reagent in Clojurescript, allow us to view the world of UIs in small, composable blocks. In this talk I will focus on React's core principles—not the tools its ecosystem, and Clojurescript's abstractions on 'React as a Platform': Data, Composition, and State Transitions—all good principles from functional programming.

11:20AM - 12:00PM

11:20AM
12:00PM

Rust + Node = ❤
Steve Klabnik
Track 1 - Regency Ballroom

Rust is a new systems programming language that recently hit 1.0. Its focus is threefold: safety, speed, and concurrency. In this talk, Steve will show you a little bit about Rust, and how it can compliment your projects in any other language, including server-side JavaScript.

11:20AM
12:00PM

High Performance in the Critical Rendering Path
Nicolas Bevacqua
Track 2 - Sutter Room

This talk covers the past, present and future of web application performance when it comes to delivery optimization. I'll start by glancing over what you're already doing -- minifying your static assets, bundling them together, and using progressive enhancement techniques. Then I'll move on to what you should be doing -- optimizing TCP network delivery, inlining critical CSS, deferring font loading and CSS so that you don't block the rendering path, and of course deferring JavaScript. Afterwards we'll look at the future, and what HTTP 2.0 has in store for us, going full circle and letting us forego hacks of the past like bundling and minification.

11:20AM
12:00PM

Visualize.js – Harnessing the Power of Analytics
Daniel Petzold
Track 3 - Lodge

How will you build the next intelligent application? In a world that is continually in flux will your applications remain static or change with the ever-flowing data around us? What's more, who will control all of this data and where will it reside? The answer is in TIBCO Jaspersoft's powerful analytics engine paired with our special recipe for embedding dynamic visualizations, easy interactive reports and data cleanly into your web framework; the JavaScript API - Visualize.js.

11:20AM
12:00PM

WebGL: Down the Rabbit Hole
Jay Oster
Track 4 - Lodge Annex

A look at the WebGL internals from a system architect's point of view. This is a deep-dive talk that explains the gritty guts of WebGL using natural language (very little math included!), based on my blog article. (http://blog.kodewerx.org/2015/02/melonjs-should-be-all-about-speed-part-5.html)

12:10PM - 12:50PM

12:10PM
12:50PM

The Internet Going Forward
Emily Rose
Track 1 - Regency Ballroom

San Francisco hardware artist and founding member of DanceJS. Looks at the future of the net.

12:10PM
12:30PM

Creating a Strong Geek Culture
Diane Tate
Track 2 - Sutter Room

'Culture eats strategy for breakfast'y writes Laszlo Bock, head of People Operations at Google. Learn what culture is, why it is important and some practical approaches to design effective ones for geeks.

12:30PM
12:50PM

Focusing in a Distracted World
Larry Gordon
Track 2 - Sutter Room

The modern day work environment. Cubicles have been replaced with open work spaces. Meeting rooms get turned into war rooms. We get bombarded with notifications from our computers and connected devices like phones, tablets, and smart watches. Week after week our days are filled with meaningful interruptions along with time sucking distractions. How do we ever get work done? Dealing with distractions at work can be difficult for anyone, but toss in ADHD and those distractions become magnified. Larry Gordon will walk you through his experience of being a software engineer with ADHD and will highlight some of the techniques and strategies that helps him stay productive and focused throughout the day.

12:10PM
12:50PM

A Reference Data Infrastructure for IoT
Sujee Maniyam
Track 3 - Lodge

In this talk we will present a reference architecture for IoT. We draw on industry's best practices on Big Data including Lambda architecture patterns. Lambda architecture outlines generic, scalable and fault-tolerant data processing. We will illustrate a potential data pipeline and discuss how each stage might be implemented and technology choices at each stage. The talk will also highlight up and coming Big Data technologies that may play a key role in IoT infrastructures.

12:10PM
12:50PM

Choosing an Accessible UI Framework
Gerard K. Cohen
Track 4 - Lodge Annex

Starting a new project and selecting from the latest UI frameworks is a challenging experience. How do you know the one you choose is accessible? We will begin by evaluating just a few of the more popular frameworks, AngularJS, Bootstrap, Foundation, jQuery/ jQuery UI, and do an apples to apples comparison of some common elements, widgets, and patterns by reviewing real code examples and UI framework documentation. We will test for focus management, keyboard interaction, color contrast, and proper ARIA usage. After evaluating the various frameworks and their elements, widgets, and patterns for accessibility we will have a good idea of how each framework rates on the accessibility scale based on its strengths and weaknesses. We will then discuss what is needed in order to make everything progressively accessible. From form labels to modifying templates, adding keyboard interaction, and adding proper roles, properties, and states. Hopefully, attendees will get exposure to various frameworks, implemented accessibility provided, basic testing techniques, proper ARIA patterns, and easy remediation techniques.

12:50PM - 1:50PM

12:50PM
1:50PM

Lunch
Lunch

Grab your lunch order from the Lodge and find a table to chow down. Extra seating downstairs!

1:50PM - 2:30PM

1:50PM
2:30PM

Stapling and Patching the Modern Web
Christian Heilmann
Track 1 - Regency Ballroom

The modern web is full of technical marvels and beautiful experiences. And also full of duct-tape, staples, superglue and chewing gum. In this talk chris heilmann of Microsoft will tell tales of woe about building apps and browsers and question our fetish of new and convenient over what works for our audience.

1:50PM
2:30PM

More Than You Bargained For: What Your Labor is Funding
Kelsey Gilmore-Innis
Track 2 - Sutter Room

Working as a developer has never been 'just about writing code.' A new generation of activists are doing amazing work questioning who is allowed & encouraged to work in tech and how power structures are established and maintained in our field. As much as the personal is political, the old-fashioned political still is too, and companies and individuals made rich by our labor in the tech industry have been making increasingly direct monetary incursions into U.S. politics. Let's take a look at what policies & politicians our bosses, investors, users and contributors are buying at the local and state levels, with a specific focus on current changes in education policy and future moves in law enforcement.

1:50PM
2:10PM

Your 3D on the Web
Nop Jiarathanakul
Track 3 - Lodge

For decades, 3D design data have always been locked up behind propriety formats and software that cost a fortune. Today, Autodesk provides an API that lets you bring your designs to life with stunning detail, right in your browser, all powered by the latest WebGL technology. Join us as we look at some beautiful 3D samples from our engine, take a lighting tour of the features, and learn how easy it is for you to use it.

2:10PM
2:30PM

JS stacktraces: The good, the Bad, and the Ugly
James Smith
Track 3 - Lodge

Error monitoring in the browser is a thorny problem. On the one hand window.onerror will at least notify you when something goes wrong, on the other, it won't give you enough information to actually debug the problem! Notably absent in many cases is the stack trace. In this talk, I'll explain how with a little bit of work, it's possible to get stack traces that are reasonably complete in all browsers, even IE.

1:50PM
2:30PM

Let's Get High (Assurance)
Justin Leitgeb
Track 4 - Lodge Annex

This talk will start by defining high assurance as it is used in the software industry, and why full-stack developers should care about such a concept. Rather than focusing on academic principles, this talk will give concrete examples of how several types of "high assurance" software practices can lead to reduced software costs and more predictable development timelines. The talk will include: Introduction to expressive types, as present in Haskell. Dependent types, as found in languages such as Idris. Proof-carrying code, as can be created in systems such as Coq. At the end of the presentation, programmers in the audience should have a better idea of advanced software tools and techniques that may warrant further investigation in order to produce systems with reduced cost and better results.

2:40PM - 3:20PM

2:40PM
3:20PM

CSS? WTF!
Estelle Weyl
Track 1 - Regency Ballroom

Estelle Weyl is a an internationally published author, speaker, trainer, and consultant who has authored many books about the open web including Mobile HTML5 and HTML5 and CSS3 for the Real World. Estelle's talk will cover in depth CSS Specificity, the quirks of SVG animation, masking and icon fonts, optimization strategies for Google Fonts and the Clown Car Technique.

2:40PM
3:20PM

Reactive All The Things
Martin Gontovnikas
Track 2 - Sutter Room

AngularJS, React and other FrontEnd frameworks are performant enough for most apps, most of the time; But what happens when you're trying to push every drop of performance out of your browser app? Making your Webapp performant and at the same time have nice, loosely coupled code based on resuable blocks is extremely hard. How would you handle a fire hose of data from socket pushes streaming to your UI while you've got mouse hover events firing? Reactive Programming is the answer to these questions. In this talk, we'll learn first what Reactive Programming really means and then we'll dive into practical examples on how Netflix is leveraging Reactive Programming to make performant, scalable and loosely coupled apps.

2:40PM
3:20PM

States and Nomads: Handling Software Complexity
Zach Tellman
Track 3 - Lodge

We routinely make systems that exceed our ability to understand completely. Instead, we explore pieces at a time – small local details or large global abstractions, but rarely both at once. But software is far from unique in this; we're surrounded by physical and social systems that are too big for any one person to understand. This talk is an exploration of how other, older disciplines have approached these problems, and what we as software engineers can learn from them.

2:40PM
3:20PM

Bringing Web Content to the Big Screen with Google Cast
Kevin Nilson
Track 4 - Lodge Annex

Have you ever wanted to expand your web app to enable a multi-screen experience leveraging large display devices like a television? Google Cast allows you to share content with a Google Cast receiver device, such as a Chromecast. Google Cast web senders use the familiar controls of your desktop browser to control the experience of your application on the big screen. In this talk, Google Technical Solutions Engineer Team Lead Kevin Nilson will talk about Chrome Sender App Development and HTML5/JavaScript Receiver Development. Kevin will also cover some of the best practices to keep your Cast experience simple, intuitive, and predictable.

<div align="center">3:20PM - 3:50PM</div>

3:20PM
3:50PM

Ice Cream Social
Ice Cream Social

I scream, you scream, we all scream in JavaScript syntax arguments. (And
sometimes we scream for Ice Cream, too.)

<div align="center">3:50PM - 4:30PM</div>

3:50PM
4:30PM

Breaking The Broken Web
Kyle Simpson
Track 1 - Regency Ballroom

The web is broken. We have to break it to fix it.

3:50PM
4:30PM

Why You Should be Using Web Components Right Now. And How.
Phil Leggetter
Track 2 - Sutter Room

Web Components are touted as the future of front-end web development.
In this talk you'll learn what Web Components are, how to use them and the
state of native support in web browsers. Finally I'll demonstrate what your
options are for building componentized web apps right now using
AngularJS, Ember, Knockout, React, Polymer etc. And why Web
Components probably are the future of front-end web development.

3:50PM
4:30PM

Interaction Design for Data Visualization
Miles McCrocklin
Track 3 - Lodge

Interactivity is often overlooked as a vital component of data visualization, but it is essential to move visual work from providing information to supplying insight. This talk will cover the basic principles of interaction design – from Fitts's Law to creating an interactive grammar for exploration, explore several case studies, and, finally, discuss methods to assess the effectiveness of interaction design. We will go beyond tooltips, brushing, and scrolling, and look at the principles behind these techniques, looking at work from Heer, Bostock, and others. In addition to learning best practices, and seeing them in the context of well-known products, we develop a framework for interaction criticism; ways to assess interaction utility and effectiveness.

3:50PM
4:30PM

Empathy-Driven Development
Duretti Hirpa
Track 4 - Lodge Annex

The technology industry has a bad rap. Sexism and misogyny run rampant. Marginalized groups get railroaded. Out-of-touch companies look to make as much money as ruthlessly as possible, all while exploiting others and passing it off as disruption. Our industry is losing sight of what it could be. In the sixties, NASA inspired a generation to become scientists and engineers. Today? There is a noticeable and palpable vacuum. Technology, at its heart, has always been aspirational - about dreaming up the impossible and willing it into existence. This talk will discuss what can bring us back from the brink: empathy. Empathy for the people that use the things we make, for our non-technical teammates, and for our fellow engineers.

4:40PM - 5:20PM

4:40PM
5:00PM

JavaScript Tooling in the Future
James Kyle
Track 1 - Regency Ballroom

JavaScript as a language is changing and because of it our tooling will be changing. Many people look at polyfills and transpilers as a stopgap. However, these types of tools are quickly becoming part of our everyday toolset, and the next generation of tooling will be even more awesome.

5:00PM
5:20PM

Signal Processing
Myles Borins
Track 1 - Regency Ballroom

Sound is super cool... but how does it work on computers? This talk will give an introduction to signal processing and explain how sound is represented in a digital system. After the talk people will be able to directly apply what they have learned to make a basic music visualizer.

4:40PM
5:20PM

Is Your Code Too Solid?
Sarah Mei
Track 2 - Sutter Room

Sarah Mei has been doing software since before the internet had cats. She's currently the Chief Consultant at DevMynd, where she helps teams refactor their way out of interesting messes. She also teaches object-oriented design with Sandi Metz and was a founder of RailsBridge, back in the day. Sarah lives in San Francisco, which is way colder than the California you imagine.

4:40PM
5:20PM

Secure Execution of Untrusted Scripts
Gabriel Gonzalez
Track 3 - Lodge

Many program installers request users to download and execute an installation script. These scripts often run with elevated privileges and a user's only defense against a malicious script is to manually audit the code. However, we can automate the verification process for the user by embedding installation scripts in a secure programming language and distributing a trusted client that downloads and interprets scripts written in this secure language. This language must walk a fine line: it must be sufficiently powerful to embed useful installation scripts, but sufficiently restrictive to forbid remote code from damaging the user's system. This talk introduces a proof-of-concept implementation of this secure installer.

4:40PM
5:20PM

Driving GPU Clusters with JavaScript
Thibaud Hottelier
Track 4 - Lodge Annex

Putting the thousands of threads in a GPU to work can achieve 10X+ speedups… if you can program them. With the rise of cloud community, we might even cheaply run on hundreds of GPUs simultaneously! Making this possible is new bindings like Node-OpenCL that give us full access to low-level GPU APIs yet still allows quick scripting in JavaScript. This talk will introduce the physics driving GPU computing, the basic hardware, and the computational model on top. Drawing from our experiences from the last several years, we will then share how JavaScript's frameworks and features like RxJS make working with GPUs easier than in other languages. While the talk should benefit experts, it will still be accessible to beginners.

5:30PM - 7:30PM

5:30PM
7:30PM

After Party
After Party

Join us at Lush Lounge at 1221 Polk, one block downhill from the Regency Ballroom. We'll have drink tickets at the door for the first few attendees, and after that it's a cash bar.

JOIN US, WON'T YOU?

Ticket Information

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TICKET TYPE	SALES END	PRICE	FEE	QUANTITY
[Door] Sessions Only more info	Jul 29, 2015	$249.00	$0.00	0
[Door] Sessions + 1 Day Workshop more info	Jul 29, 2015	$499.00	$0.00	0
[Door] Sessions + 2 Day Workshop more info	Jul 29, 2015	$749.00	$0.00	0
[Door] Sessions + 3 Day Workshop more info	Jul 29, 2015	$999.00	$0.00	Sold Out
[Door] Sessions + 4 Day Workshop more info	Jul 29, 2015	$1,249.00	$0.00	Sold Out

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