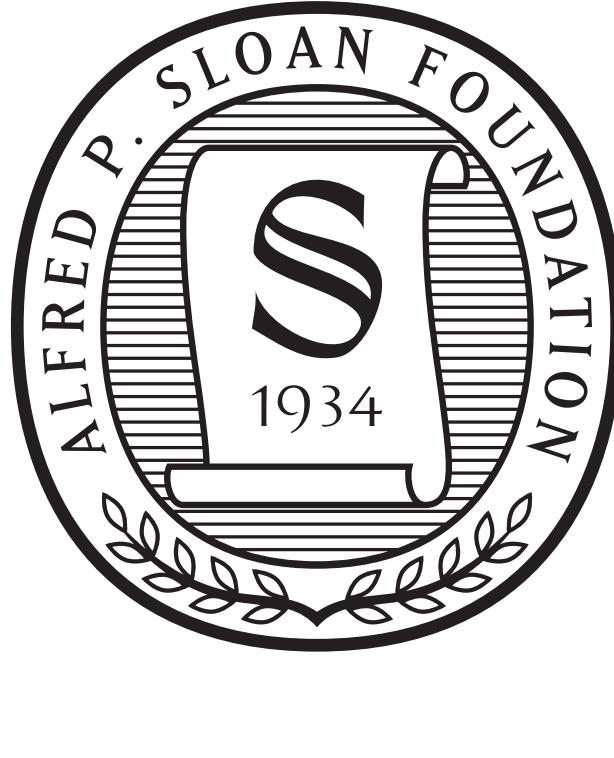
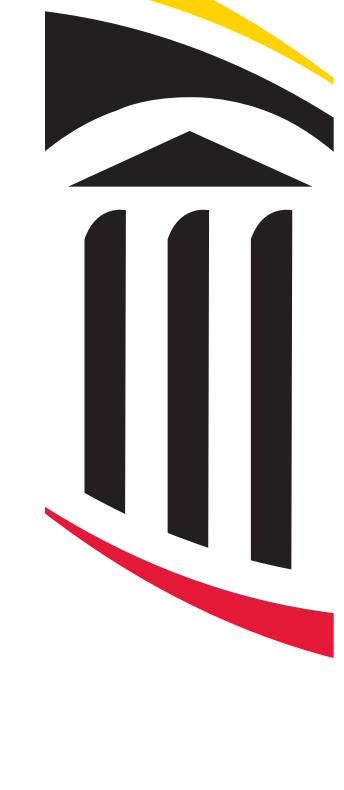


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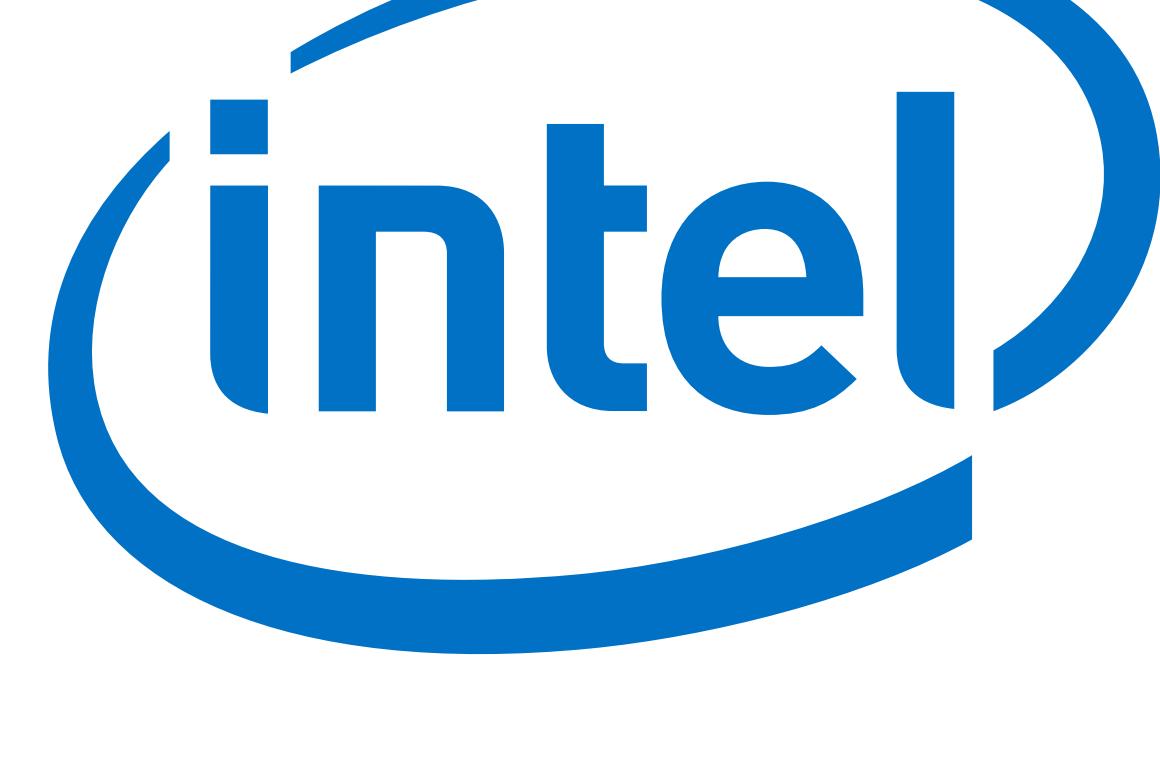


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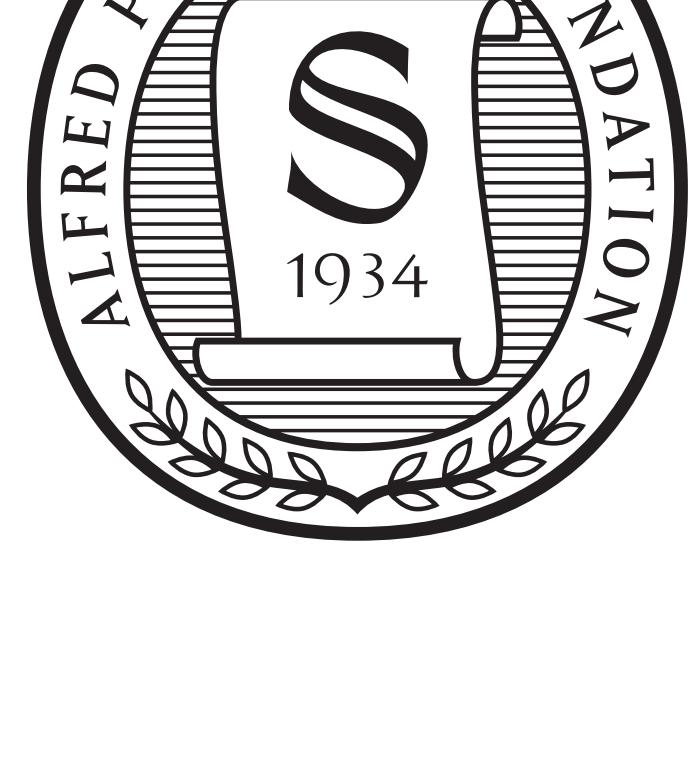
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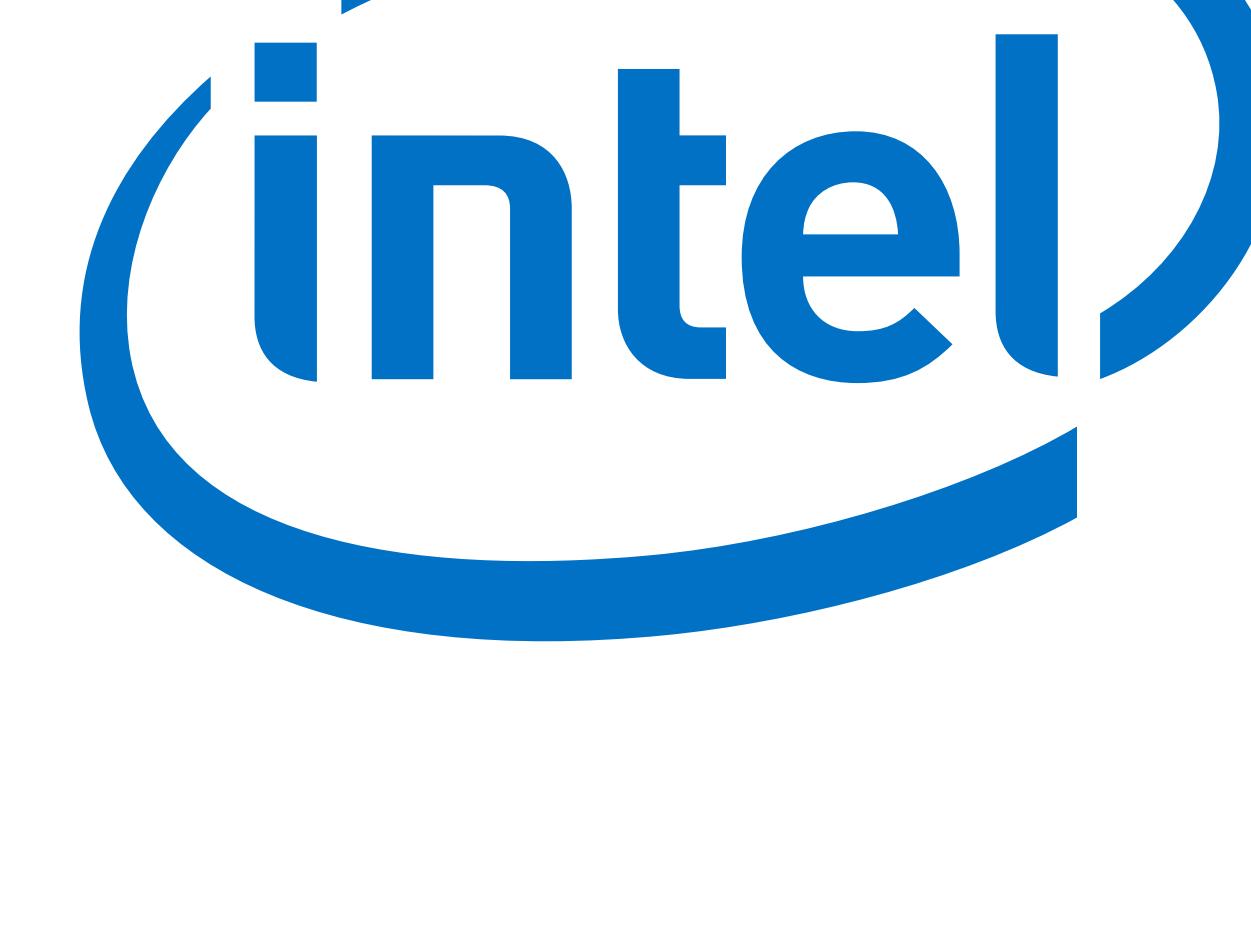


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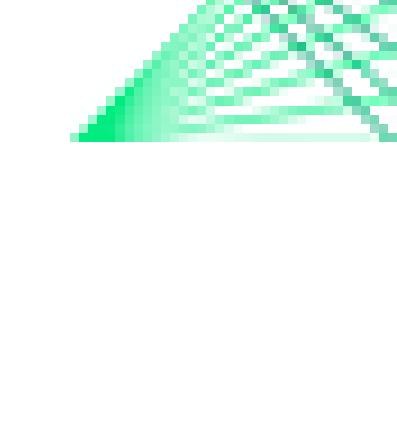
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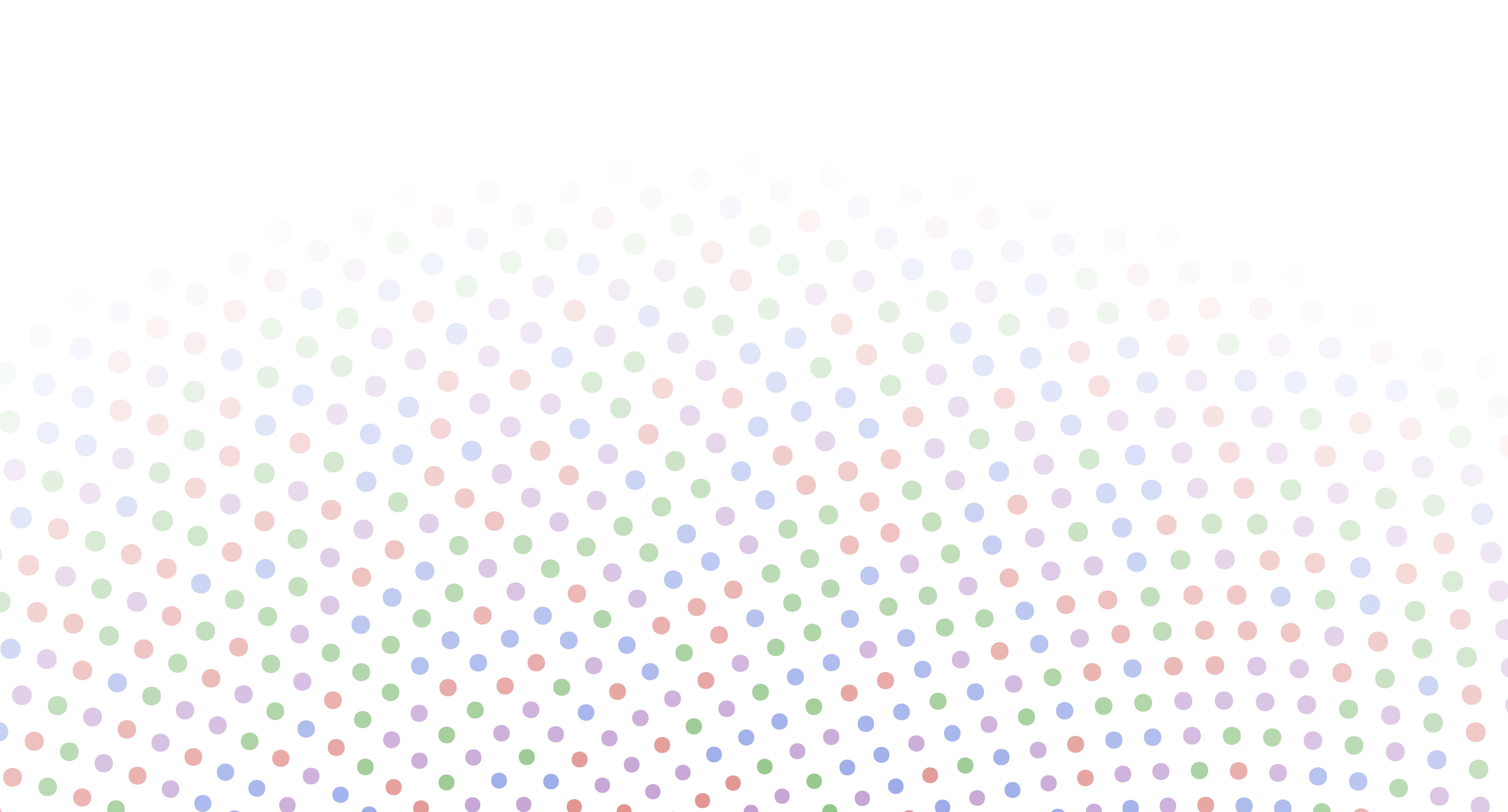
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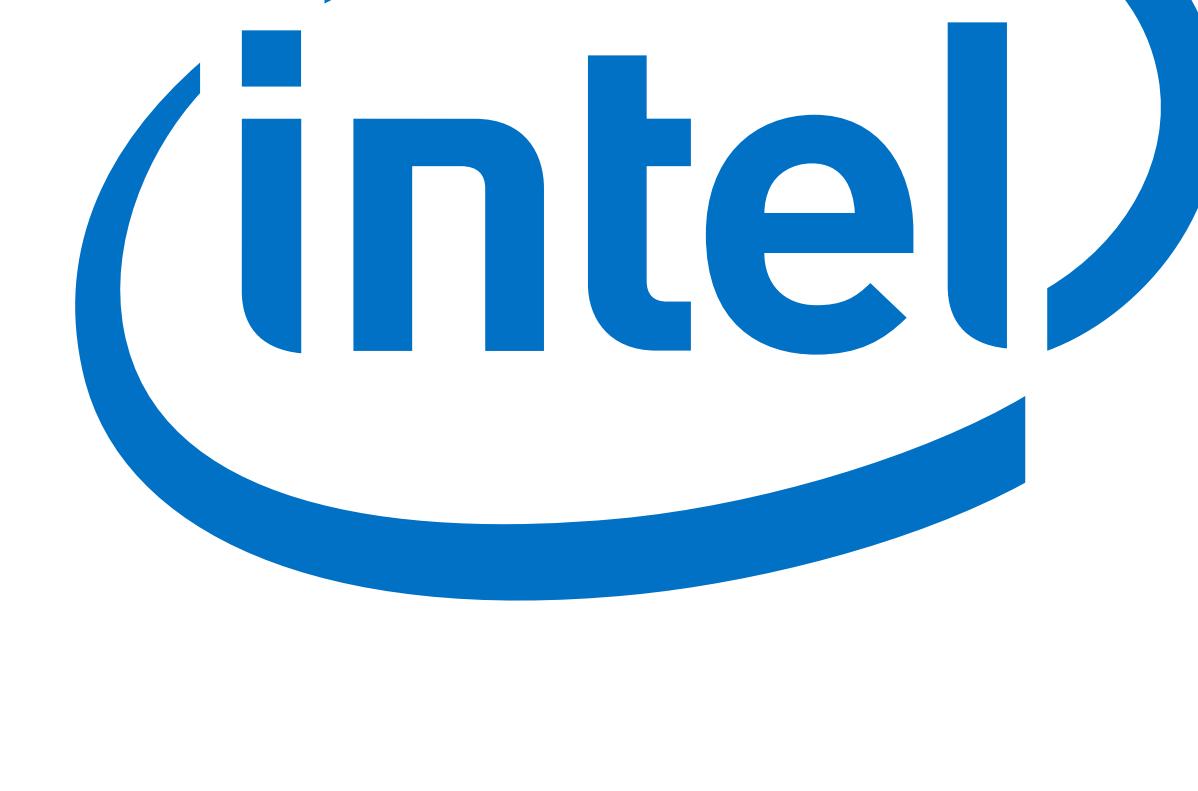


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## Baltimore 2019

### Room 349

#### Tuesday, 23 July

**11:00 Fredrik Ekre**  
Pkg, Project.toml, Manifest.toml and Environments

**11:30 Rory Finnegans**  
FilePaths: File system abstractions and why we need them

**11:40 Jay Dweck**  
Ultimate Datetime

**11:50 Ahan Sengupta**  
Smart House with JuliaBerry



**14:30 Anthony Blaom**  
MLJ - Machine Learning in Julia

**15:00 Valentin Mari, Nicolás Monzón, Adán Mauri Ungaro, Demian Panigo**  
Merging machine learning and econometric algorithms to improve feature selection with Julia

**15:10 Jun Tian**  
Let's Play Hanabi!

**15:20 Paulito Palms**  
TSML (Time Series Machine Learning)



**15:45 Ludovic Räss**  
Porting a massively parallel Multi-GPU application to Julia: a 3-D nonlinear multi-physics flow solver

**16:15 Elliot Saba**  
XLA.jl: Julia on TPUs

**16:45 James Bradbury**  
Targeting Accelerators with MLIR.jl

**16:55 Nicolau Leal Werneck**  
SIMD and cache-aware sorting with ChipSort.jl

**17:05 Ranjan Anantharaman, Sungwoo Jeong**  
Generic Sparse Data Structures on GPUs

**17:15 Rohan McLure**  
Array Data Distribution with ArrayChannels.jl

**17:25 Tom Kwong**  
High-Performance Portfolio Risk Aggregation

#### Wednesday, 24 July

**11:00 Roger Luo**  
Yao.jl: Extensible, Efficient Quantum Algorithm Design for Humans.

**11:30 David P. Sanders**  
Guaranteed Constrained and unconstrained global optimization in Julia

**11:40 Michael Droettboom**  
Pyodide: The scientific Python stack compiled to WebAssembly

**11:50 William L Fredericks, Venkat Viswanathan, Shashank Sripad, Matthew Guttenberg**  
Julia for Battery Model Parameter Estimation



**14:30 Rebecca Sarfati**  
Heterogeneous Agent Dynamic Stochastic General Equilibrium (DSGE) Models in Julia at the Federal Reserve Bank of New York

**15:00 Ethan Matlin**  
"Online" Estimation of Macroeconomic Models



**15:45 Mike Innes**  
Differentiate All The Things!

**16:15 Avik Pal**  
Differentiable Rendering and its Applications in Deep Learning

**16:25 Jesse Bettencourt**  
Neural Ordinary Differential Equations with DiffEqFlux.jl

**16:35 Elisabeth Roesch**  
Fitting Neural Ordinary Differential Equations with DiffEqFlux.jl

**17:05 Ramchandran Muthukumar**  
Randomized Sketching for Approximate Gradients : Applications to PDE Constrained Optimization and Backpropagation.

**17:15 Filippo Vicentini**  
Neural Network states and unsupervised learning for Open Quantum Systems

**17:25 Dhairya Gandhi**  
Machine Learning for Social Good

#### Thursday, 25 July

**11:00 Stefan Karpinski**  
The Unreasonable Effectiveness of Multiple Dispatch

**11:30 Joshua Ballanco**  
Julia's Killer App(s): Implementing State Machines Simply using Multiple Dispatch

**11:40 Xingjian Guo**  
What I learned from developing ExponentialUtilities.jl

**11:50 Roger Luo**  
JuliaCN: A community driven localization group for Julia in China



**14:30 Scott Haney**  
Writing maintainable Julia code

**15:00 Tim Wheeler**  
How We Wrote a Textbook using Julia



**15:45 Cameron Pfiffer**  
Turing: Probabilistic Programming in Julia

**16:15 Will Tebbutt**  
Gaussian Process Probabilistic Programming with Steno.jl

**16:45 Chad Scherrer**  
Soss.jl: Probabilistic Metaprogramming in Julia

**17:15 Marco Cusumano-Towner**  
Gen: a general-purpose probabilistic programming system with programmable inference built on Julia

**17:25 Cédric St-Jean-Leblanc**  
A probabilistic programming language for switching Kalman filters



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## Baltimore 2019

### Elm A

**Tuesday, 23 July**

**11:00 Katharine Hyatt, Matthew Fishman**

Intelligent Tensors in Julia

**11:30 Michiel Stock**

A general-purpose toolbox for efficient Kronecker-based learning

**11:40 Jeff Bezanson**

Thread Based Parallelism part 2

**11:50 Jameson Nash**

Thread Based Parallelism part 1



**14:30 Morten Püblecht**

Generating documentation: under the hood of Documenter.jl

**15:00 Fredrik Ekre**

Literate programming with Literate.jl

**15:10 Dominique Luna**

Formatting Julia



**15:45 Alex Lew**

Cleaning messy data with Julia and Gen

**16:15 Brandon Taylor**

LightQuery.jl

**16:45 Jacob Quinn**

State of the Data: JuliaData

**16:55 Mary McGrath**

Prototyping Visualizations for the Web with Vega and Julia

**17:05 Simon Danisch**

A Showcase for Makie

**Wednesday, 24 July**

**11:00 Dheepak**

Why writing C interfaces in Julia is so easy\*

**11:30 Aaron Christianson**

Backticks and the Glorious Command Literal

**11:40 Patrick Kofod Mogensen**

Re-designing Optim

**11:50 Dai ZJ**

Towards Faster Sorting and Group-by operations



**14:30 Christine R Herlihy, James Fairbanks**

SemanticModels.jl: not just another modeling framework

**15:00 Randy Zwitch**

OmniSci.jl: Bringing the open-source, GPU-accelerated relational database to Julia



**15:45 Tillmann Weisser, Benoit Legat, Chris Coey, Lea Kapelevich, Juan Pablo Vielma**

Polynomial and Moment Optimization in Julia and JuMP

**17:30**



**Thursday, 25 July**

**11:00 Shashi Gowda**

Julia + JavaScript = <3

**11:30 Mohammed El-Beltagy, Amgad Naiem**

Julia web servers deployment

**11:40 Bogumił Kamiński**

A case study of migrating Timelineapp.co to the Julia language

**11:50 Renee Spear**

The Julia Language 1.0 Ephemeris and Physical Constants Reader for Solar System Bodies

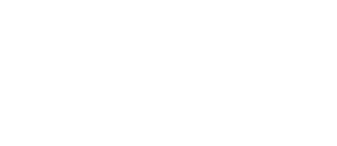


**14:30 Nathan Daly**

If Runtime isn't Funtime: Controlling Compile-time Execution

**15:00 Takafumi Arakaki**

Transducers: data-oriented abstraction for sequential and parallel algorithms on containers



**15:45 Yingbo Ma**

Efficient Stiff Ordinary Differential Equation Solvers for Quantitative Systems Pharmacology (QsP)

**16:15 Vaibhav Dixit**

Simulation and estimation of Nonlinear Mixed Effects Models with PuMaS.jl

**16:45 Bram De Jaegher**

An advanced electrodialysis process model in the Julia ecosystem

**16:55 Shubham Maddhashiya**

IVIVC.jl: In vitro – in vivo correlation module as part of an integrated pharmaceutical modeling and simulation platform

**17:05 Vasco Verissimo, Laurent Heirendt**

GigaSOM.jl: Huge-scale, high-performance flow cytometry clustering in Julia

**17:15 benjamin chu**

MendelIHT.jl: How to fit Generalized Linear Models for High Dimensional Genetics (GWAS) Data

**17:25 Alec Bills**

Electrifying Transportation with Julia



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### Elm B

**Tuesday, 23 July**

**11:00 Robin Deits**

The Linguistics of Puzzles: Solving Cryptic Crosswords in Julia

**11:30 Jeffrey Sarnoff**

Counting On Floating Point

**11:40 Bogumił Kamiński, Przemysław Szufel**

Analyzing social networks with SimpleHypergraphs.jl

**11:50 Takuya Kitazawa**

Recommendation.jl: Building Recommender Systems in Julia



**14:30 Tucker McClure**

A New Breed of Vehicle Simulation

**15:00 Martin Otter, Andrea Neumayr**

Modia3D: Modeling and Simulation of 3D-Systems in Julia

**15:10 Brian Jackson**

TrajectoryOptimization.jl: A testbed for optimization-based robotic motion planning

**15:20 Sam Claassens, Dehann Fourie**

Non-Gaussian State-estimation with JuliaRobotics/Caesar.jl



**15:45 David Widmann**

Solving Delay Differential Equations with Julia

**16:15 Dheepak**

Open Source Power System Production Cost Modeling in Julia

**16:45 Chris Rackauckas**

Real-time prediction and control of dynamical models via machine learning

**17:15 Andrew Rosenberg**

HydroPowerModels.jl: A Julia/JuMP Package for Hydrothermal economic dispatch Optimization

**17:25 Michel Schanen**

Modeling in Julia at Exascale for Power Grids

**Wednesday, 24 July**

**11:00 Jeff Mills**

Probabilistic Biostatistics: Adventures with Julia from Code to Clinic

**11:30 Virginia Spanoudaki**

Slow images, fast numbers: Using Julia in biomedical imaging and beyond

**11:40 Amita Varma**

Brain Tumour Classification with Julia

**11:50 Swakkhar Shatabda, Dewan Md. Farid**

Mining Imbalanced Big Data with Julia



**14:30 Clark C. Evans**

DataKnots.jl - an extensible, practical and coherent algebra of query combinators

**15:00 David Anthoff**

Queryverse - Under the Hood



**15:45 Elwin van 't Wout, Kevin S Bonham**

Raising Diversity & Inclusion among Julia users

**17:30**



**Thursday, 25 July**

**11:00 David P. Sanders**

Interval methods for scientific computing in Julia

**11:30 Daniel Bachrathy**

Implicit Geometry with Multi-Dimensional Bisection Method

**11:40 Alberto Paoluzzi**

Computational topology and Boolean operations with Julia sparse arrays

**11:50 Michael Reed**

Geometric algebra in Julia with Grassmann.jl



**14:30 David Anthoff, Lisa Rennels, Cora Kingdon**

Mimi.jl – Next Generation Climate Economics Modeling

**15:00 Charlie Kawczynski, Simon Byrne**

The Climate Machine: A New Earth System Model in Julia



**15:45 Harrison Grodin**

Symbolic Manipulation in Julia

**16:15 Lyndon White (@oxinabox)**

Building a Debugger with Cassette

**16:45 Valentin Churavy**

Static walks through dynamic programs – a conversation with type-inference.

**16:55 Valentin Churavy**

Concolic Fuzzing – Or how to run a theorem prover on your Julia code

**17:05 Tim Holy**

Analyzing and updating code with JuliaInterpreter and Revise

**17:15 Kristoffer Carlsson**

TimerOutputs.jl - a cheap and cheerful instrumenting profiler

**17:25 Simon Danisch**

PackageCompiler



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## Baltimore 2019

# NS Room 130

### Tuesday, 23 July

**08:30 JuliaCon Committee**

Opening Remarks

**08:40 Professor Madeleine Udell**

\* Keynote: Professor Madeleine Udell

**09:30 Sebastian Pfitzner, Tim Holy**

Debugging code with JuliaInterpreter

**10:00 Paul Petersen**

Sponsor Address: Intel

**10:05 Viral B. Shah**

Julia Survey Results



### Wednesday, 24 July

**08:40 Professor Steven G Johnson**

\* Keynote: Professor Steven G Johnson

**09:30 Jiahao Chen**

Sponsor Address: J P Morgan Chase & Co.

**09:45 Stefan Karpinski**

Sponsor Address: Julia Computing

**09:50 Seth Bromberger**

Using Julia in Secure Environments



**13:30 Dr Cynthia J Musante**

\* Keynote: Dr Cynthia J Musante

**13:30 Arch D. Robison**

\* Keynote: Arch D. Robison

### Thursday, 25 July

**08:40 Professor Heather Miller**

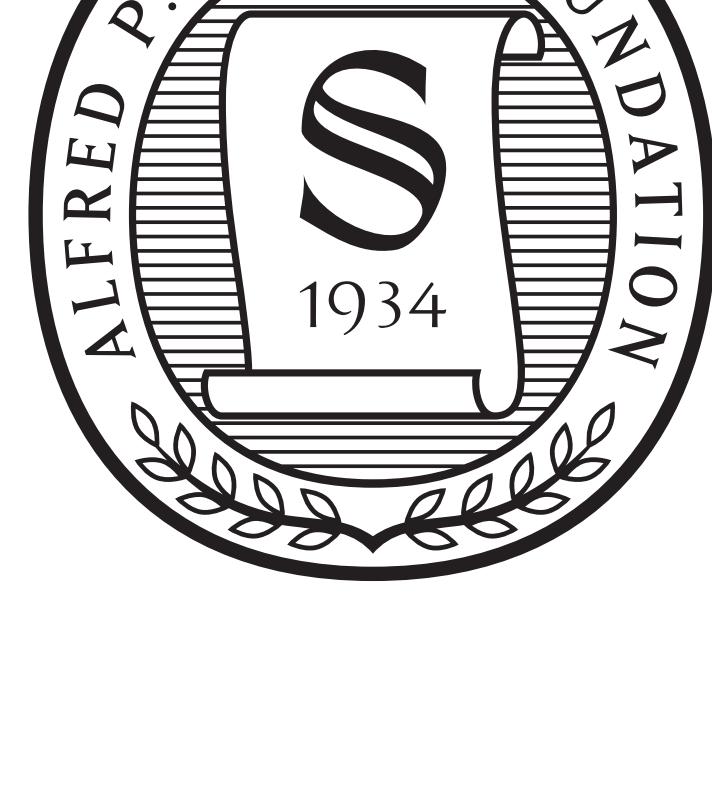
\* Keynote: Professor Heather Miller

**09:30 Jeff Bezanson**

What's Bad About Julia

**10:00 Vijay Ivaturi**

Sponsor Address: University of Maryland

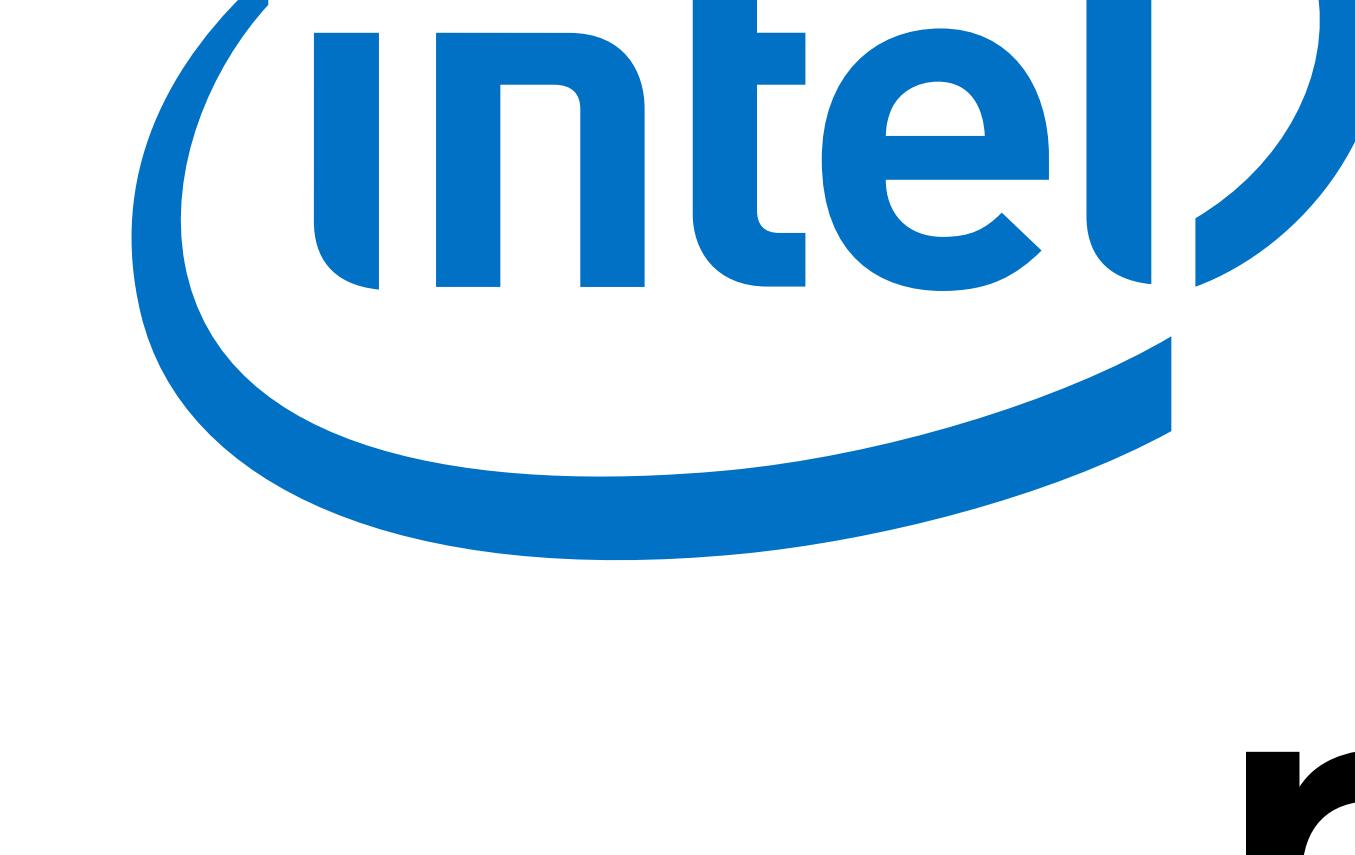


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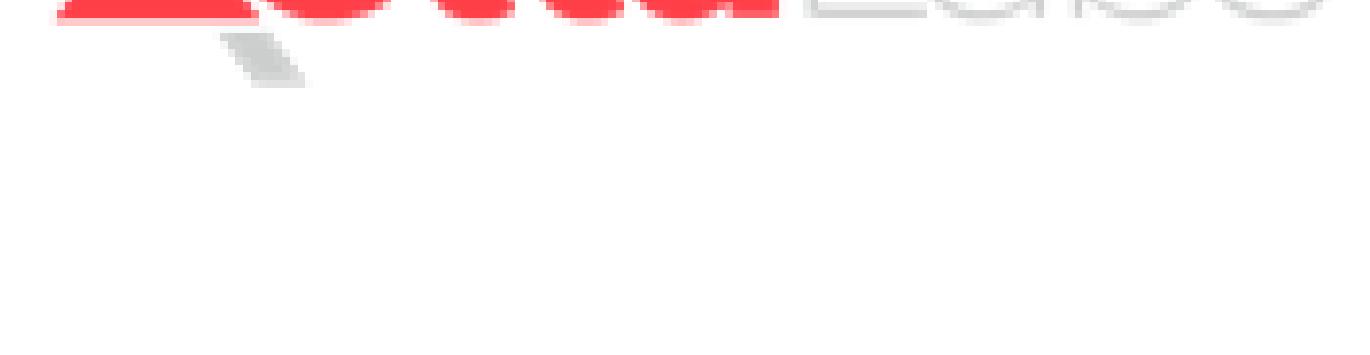
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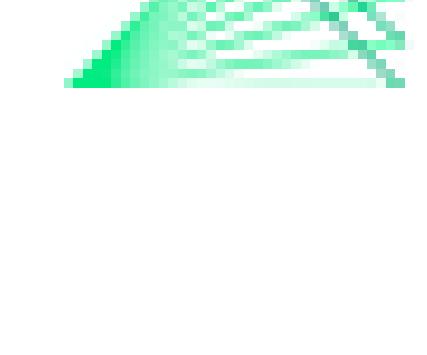


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