JuliaCon 2019 Calendar Monday to Thursday (07:30 - 18:00)

juliacon Baltimore 2019

Monday, 22 July

07:30
Breakfast (Workshops)

08:30 @ PH 111N
Huda Nassar, Jane Herriman
Excelling at Julia: basics and beyond

08:30 @ PH 211N
David P. Sanders
Intermediate Julia for Scientific Computing

08:30 @ PH 103N
Chris Rackauckas
Solving Differential Equations in Julia

08:30 @ PH 203N
Matt Bauman
Machine Learning Workshop

12:00
Lunch

13:30 @ PH 111N
Kristoffer Carlsson, Fredrik Ekre
Writing a package — a thorough guide

13:30 @ PH 211N
Matt Bauman, Avik Sengupta
Parallel Computing Workshop

13:30 @ PH 103N
Vijay Ivaturi, Chris Rackauckas
Pharmaceutical Modeling and Simulation with Pumas

13:30 @ PH 203N
Bogumił Kamiński
Handling Data with DataFrames.jl

Tuesday, 23 July

07:30
Breakfast

08:30 @ NS Room 130
JuliaCon Comaittee
Opening Remarks

08:40 @ NS Room 130
Professor Madeleine Udell
Keynote: Professor Madeleine Udell

09:30 @ NS Room 130
Kristoffer Carlsson ...
Debugging code with JuliaInterpreter

10:00 @ NS Room 130
Paul Petersen

10:05 @ NS Room 130
Viral B. Shah
Julia Survey Results

10:15 @ NS Room 130
Nathan Daly

10:20
Morning break

11:00 @ Room 349
Fredrik Ekre
Pkg, Project.toml, Manifest.toml and Environments

11:30 @ Room 349
Rory Finnegan
FilePaths: File system abstractions and why we need them

11:40 @ Room 349
Jay Dweck
Ultimate Datetime

11:50 @ Room 349
Ahan Sengupta
Smart House with JuliaBerry

11:00 @ Elm B
Robin Deits
The Linguistics of Puzzles: Solving Cryptic Crosswords in Julia

11:30 @ Elm B
Jeffrey Sarnoff
Counting On Floating Point

11:40 @ Elm B
Bogumił Kamiński ...
Analyzing social networks with SimpleNetworkGraphs.jl

11:50 @ Elm B
Takuya Kitazawa
Recommendation.jl: Building Recommender Systems in Julia

11:00 @ BOF
Chris Rackauckas
Dynamical Modeling in Julia

11:00 @ Elm A
Katharine Hyatt ...
Intelligent Tensors in Julia

11:30 @ Elm A
Michiel Stock
A general-purpose toolbox for efficient Kronecker-based learning

11:40 @ Elm A
Jeff Bezanson
Thread Based Parallelism part 2

11:50 @ Elm A
Jameson Nash
Thread Based Parallelism part 1

12:05
Lunch

13:30 @ NS Room 130
Dr Cynthia J Musante
Keynote: Dr Cynthia J Musante

14:30 @ Room 349
Anthony Blaom
MLJ -Machine Learning in Julia

15:00 @ Room 349
Valerie Mori ...
Merging machine learning and econometric algorithms to improve feature selection with Julia

15:10 @ Room 349
Jun Tian
Let's Play Hanabi!

15:20 @ Room 349
Paulito Palmes
TSML (Time Series Machine Learning)

14:30 @ Elm B
Tucker McClure
A New Breed of Vehicle Simulation

15:00 @ Elm B
Andreas Noumayr
Modelica3D: Modeling and Simulation of 3D-Systems in Julia

15:10 @ Elm B
Brian Jackson
TrajectoryOptimization.jl: A testbed for optimization-based robotic motion planning

15:20 @ Elm B
Sam Claassens ...
Non-Gaussian State-estimation with JuliaRobotics/Caesar.jl

14:30 @ BOF
Josh Day
JuliaDB Code and Chat

14:30 @ Elm A
Morten Piibeleht
Generating documentation: under the hood of Documenter.jl

15:00 @ Elm A
Fredrik Ekre
Literate programming with Literate.jl

15:10 @ Elm A
Dominique Luna
Formatting Julia

15:30
Short break

15:45 @ Room 349
Ludovic Räss
Porting a massively parallel Multi-GPU application to Julia: a 3-D nonlinear multi-physics flow solver

16:15 @ Room 349
Keno Fischer ...
XLA.jl: Julia on TPUs

16:45 @ Room 349
James Bradbury
Targeting Accelerators with ML1R.jl

16:55 @ Room 349
Nicolau Leal Werneck
SPRS and cache-aware sorting with ChipSort.jl

17:05 @ Room 349
Ranjan Anantharaman ...
Generic Sparse Data Structures on GPUs

17:15 @ Room 349
Rohan McLure
Array Data Distribution with ArrayChannels.jl

17:25 @ Room 349
Tom Kwong
High-Performance Portfolio Risk Aggregation

15:45 @ Elm B
David Widmann
Solving Delay Differential Equations with Julia

16:15 @ Elm B
Dheepak
Open Source Power System Production Cost Modeling in Julia

16:45 @ Elm B
Chris Rackauckas
Scientific AI: Domain Models with Integrated Machine Learning

17:15 @ Elm B
Andrew Rosemberg
HydroPowerModels.jl: A Julia/JuMP Package for Hydrothermal economic dispatch optimization

17:25 @ Elm B
Michel Behaaen
Modeling in Julia at Exascale for Power Grids

15:45 @ BOF
Viral B. Shah
Julia and NumFocus, a discussion of how money works

16:35 @ BOF
Jarrett Revels ...
Cassette and company — Dynamic compiler passes

15:45 @ Elm A
Alex Lew
Cleaning messy data with Julia and Gen

16:15 @ Elm A
Brandon Taylor
LightQuery.jl

16:45 @ Elm A
Jacob Quinn
State of the Data: JuliaData

16:55 @ Elm A
Mary McGrath
Prototyping Visualizations for the Web with Vega and Julia

17:05 @ Elm A
Simon Danisch
A Showcase for Makie

Wednesday, 24 July

07:30
Breakfast

08:40 @ NS Room 130
Professor Steven G Johnson
Keynote: Professor Steven G Johnson

09:30 @ NS Room 130
Jiahao Chen

09:45 @ NS Room 130
Stefan Karpinski

09:50 @ NS Room 130
Beth Brownberger
Using Julia in Secure Environments

10:10
Poster Session

11:00 @ Room 349
Roger Luo
Yao.jl: Extensible, Efficient Quantum Algorithm Design for Humans.

11:30 @ Room 349
David P. Sanders
Guaranteed constrained and unconstrained global optimisation in Julia

11:40 @ Room 349
Michael Droettboom
Pyodide: The scientific Python stack compiled to WebAssemblY

11:50 @ Room 349
William I. Fredericks ...
Julia for Battery Model Parameter Estimation

11:00 @ Elm B
Jeff Mills
Probabilistic Biostatistics: Adventures with Julia from Code to Clinic

11:30 @ Elm B
Virginia Spanoudaki
Slow images, fast numbers: Using Julia in biomedical imaging and beyond

11:40 @ Elm B
Amita Varma
Brain Tumour Classification with Julia

11:50 @ Elm B
Swakkhar Shatabda ...
Mining Imbalanced Big Data with Julia

11:00 @ BOF
Clark Evans
Sustainable Development and Open Source Monetization

11:00 @ Elm A
Dheepak
Why writing C interfaces in Julia is so easy*

11:30 @ Elm A
Aaron Christianson
Backticks and the Glorious Command Literal

11:40 @ Elm A
Patrick Kofod Mogensen
Re-designing Optim

11:50 @ Elm A
Dai ZJ
Towards Faster Sorting and Group-by operations

12:00
Lunch

13:30 @ NS Room 130
Arch D. Robison
Keynote: Arch D. Robison

14:30 @ Room 349
Rebecca Sarfati
Heterogeneous Agent Dynamic Stochastic General Equilibrium (DSGE) Models in Julia at the Federal Reserve Bank of New York

15:00 @ Room 349
Ethan Matlin
"Online" Estimation of Macroeconomic Models

14:30 @ Elm B
Clark C. Evans
DataKnots.jl -an extensible, practical and coherent algebra of query combinators

15:00 @ Elm B
David Anthoff
Queryverse -Under the Hood

14:30 @ BOF
Nathan Daly ...
Diversity and Inclusion in Julia Community

14:30 @ Elm A
Christine R Herlihy ...
SemanticModels.jl: not just another modeling framework

15:00 @ Elm A
Randy Zwitch
OmniSci.jl: Bringing the open-source, GPU-accelerated relational database to Julia

15:30
Short break

15:45 @ Room 349
Mike Innes
Differentiate All The Things!

16:15 @ Room 349
Avik Pal
Differentiable Rendering and Its Applications in Deep Learning

16:25 @ Room 349
Jesse Bettencourt
Neural Ordinary Differential Equations with Diffeqflux

16:35 @ Room 349
Elisabeth Roesch
Fitting Neural Ordinary Differential Equations with DiffeqFlux.jl

17:05 @ Room 349
Raseshandran Muthukumar
Randomized Sketching for Approximate Graphons : Applications to PDE Constrained Optimization and Backpropagation.

17:15 @ Room 349
Filippo Vicentini
Neural Network states and unsupervised learning for Open Quantum Systems

17:25 @ Room 349
Dhairya Gandhi
Machine Learning for Social Good

15:45 @ Elm B
Anna Harris ...
Raising Diversity & Inclusion among Julia users

15:45 @ BOF
Curtis Vogt
Julia In Production

16:45 @ BOF
Valentin Churavy ...
JuliaGPU

15:45 @ Elm A
Tillmann Weisser ...
Polynomial and Moment Optimization in Julia and JuMP

Thursday, 25 July

07:30
Breakfast

08:40 @ NS Room 130
Professor Heather Miller
Keynote: Professor Heather Miller

09:30 @ NS Room 130
Jeff Bezanson
What's Bad About Julia

10:00 @ NS Room 130
Vijay Ivaturi

10:10
Poster Session

11:00 @ Room 349
Stefan Karpinski
The Unreasonable Effectiveness of Multiple Dispatch

11:30 @ Room 349
Joshua Ballanco
Julia's Killer App(s): Implementing State Machines Simply using Multiple Dispatch

11:40 @ Room 349
JinGuo Liu
Differential Programming Tensor Networks

11:50 @ Room 349
Roger Luo
JuliaCN: A community driven localization group for Julia in China

11:00 @ Elm B
David P. Sanders
Interval methods for scientific computing in Julia

11:30 @ Elm B
Daniel Rachunby
Implicit Geometry with Multi-Dimensional Bisection Method

11:40 @ Elm B
Alberto Paoluzzi
Computational topology and Boolean operations with Julia lparse arrays

11:50 @ Elm B
Michael Reed
Geometric algebra in Julia with Grassmann.jl

11:00 @ BOF
Andreas Noack ...
Performant parallelism with productivity and portability.

11:00 @ Elm A
Shashi Gowda
Julia + JavaScript = <3

11:30 @ Elm A
Mohammed El-Beltagy ...
Julia web servers deployment

11:40 @ Elm A
Bogumił Kamiński
A case study of migrating Timelineapp.co to the Julia language

11:50 @ Elm A
Renee Spear
The Julia Language 1.0 Ephemeris and Physical Constants Reader for Solar System Bodies

12:00
Lunch

13:30 @ NS Room 130
Dr Steven Lee
Keynote: Dr Steven Lee

14:30 @ Room 349
Scott Haney
Writing maintainable Julia code

15:00 @ Room 349
Tim Wheeler
How We Wrote a Textbook using Julia

14:30 @ Elm B
David Anthoff ...
Mimi.jl – Next Generation Climate Economics Modeling

15:00 @ Elm B
Charlie Kawczynski ...
The Climate Machine: A New Earth System Model in Julia

14:30 @ BOF
Vijay Ivaturi
Julia in Healthcare

14:30 @ Elm A
Nathan Daly
If Runtime isn't Funtime: Controlling Compile-time Execution

15:00 @ Elm A
Takafumi Arakaki
Transducers: data-oriented abstraction for sequential and parallel algorithms on containers

15:30
Short break

15:45 @ Room 349
Cameron Pfiffer
Turing: Probabalistic Programming in Julia

16:15 @ Room 349
Will Tebbutt
Gaussian Process Probabilistic Programming with Stheno.jl

16:45 @ Room 349
Chad Scherrer
Soss.jl: Probabilistic Metaprogramming in Julia

17:15 @ Room 349
Marco Cusumano-Towner
Gen: a general-purpose probabilistic programming system with programmable inference, built on Julia

17:25 @ Room 349
Cedric St-Jean-Leblanc
A probabilistic programming language for switching Kalman filters

15:45 @ Elm B
Harrison Grodin
Symbolic Manipulation in Julia

16:15 @ Elm B
Lyndon White (@oxinabox)
Building a Debugger with Cassette

16:45 @ Elm B
Valentin Churavy
Static walks through dynamic programs — a conversation with type-inference.

16:55 @ Elm B
Valentin Churavy
Concolic Fuzzing — Or how to run a theorem prover on your Julia code

17:05 @ Elm B
Tim Holy
Analyzing and updating code with JuliaInterpreter and Revise

17:15 @ Elm B
Kristoffer Carlsson
TimerOutputs.jl –a cheap and cheerful instrumenting profiler

17:25 @ Elm B
Simon Danisch
PackageCompiler

15:45 @ BOF
Stefan Karpinski
Package Management BoF

16:45 @ BOF
Mosé Giordano
Julia in Astronomy

15:45 @ Elm A
Yingbo Ma
Efficient Stiff Ordinary Differential Equation Solvers for Quantitative Systems Pharmacology (QsP)

16:15 @ Elm A
Vaibhav Dixit
Simulation and estimation of Nonlinear Mixed Effects Models with PuMaS.jl

16:45 @ Elm A
Rosa De Jaeghere
An advanced electrofisiolysis process model in the Julia ecosystem

16:55 @ Elm A
Shubham Maddhashiya
JVIVC.jl: In-vitro – in-vivo correlation module as part of an integrated pharmaceutical modeling and simulation platform

17:05 @ Elm A
Vasco Verniano ...
GigaSOM.jl: Huge-scale, high-performance flow cytometry clustering in Julia

17:15 @ Elm A
benjamin chu
MendelNet.jl: How to fit Generalized Linear Models to High Dimensional Genetics (GWAS) data

17:25 @ Elm A
Alec Hills
Electrifying Transportation with Julia

Workshop (half day)
Workshop (full day)
Talk
Lightning Talk
Keynote
Sponsor's Address
Birds of Feather
Minisymposia
Break