

Other

07:30 Breakfast (Workshops)

PH 103N

08:30 **Chris Rackauckas**
Solving Differential Equations in Julia

PH 111N

08:30 **Huda Nassar, Jane Herriman**
Excelling at Julia: basics and beyond

PH 203N

08:30 **Matt Bauman**
Machine Learning Workshop

PH 211N

08:30 **David P. Sanders**
Intermediate Julia for Scientific Computing

12:00 Lunch


13:30 **Vijay Ivaturi, Chris Rackauckas**
Pharmaceutical Modeling and Simulation with Pumas


13:30 **Kristoffer Carlsson, Fredrik Ekre**
Writing a package — a thorough guide

13:30 **Bogumił Kamiński**
Handling Data with DataFrames.jl

3:30 **Matt Bauman, Avik Sengupta**
Parallel Computing Workshop

Tuesday, 23 July					
BOF	Elm A	Elm B	NS Room 130	Other	Room 349
				07:30 Breakfast	
			08:30 JuliaCon Committee Opening Remarks		
			08:40 Professor Madeleine Udell Keynote: Professor Madeleine Udell		
			09:30 Kristoffer Carlsson ... Debugging code with JuliaInterpreter		
			10:00 Paul Petersen		
			10:05 Viral B. Shah Julia Survey Results		
			10:15 Nathan Daly	10:20 Morning break	
11:00 Chris Rackauckas Dynamical Modeling in Julia	11:00 Katharine Hyatt ... Intelligent Tensors in Julia	11:00 Robin Deits The Linguistics of Puzzles: Solving Cryptic Crosswords in Julia			11:00 Fredrik Ekre Pkg, Project.toml, Manifest.toml and Environments
	11:30 Michiel Stock A general-purpose toolbox for efficient Kronecker-based learning	11:30 Jeffrey Sarnoff Counting On Floating Point			11:30 Rory Finnegan FilePaths: File system abstractions and why we need them
	11:40 Jeff Bezanson Thread Based Parallelism part 2	11:40 Bogumił Kamiński ... Analyzing social networks with SimpleHypergraphs.jl			11:40 Jay Dweck Ultimate Datetime
	11:50 Jameson Nash Thread Based Parallelism part 1	11:50 Takuya Kitazawa Recommendation.jl: Building Recommender Systems in Julia			11:50 Ahan Sengupta Smart House with JuliaBerry
				12:05 Lunch	
			13:30 Dr Cynthia J Musante Keynote: Dr Cynthia J Musante		
14:30 Josh Day JuliaDB Code and Chat	14:30 Morten Piibeleht Generating documentation: under the hood of Documenter.jl	14:30 Tucker McClure A New Breed of Vehicle Simulation			14:30 Anthony Blaom MLJ -Machine Learning in Julia
	15:00 Fredrik Ekre Literate programming with Literate.jl	15:00 Andrea Neumayr Modia3D: Modeling and Simulation of 3D-Systems in Julia			15:00 Valentia Mari ... Merging machine learning and econometric algorithms to improve feature selection with Julia
	15:10 Dominique Luna Formatting Julia	15:10 Brian Jackson TrajectoryOptimization.jl: A testbed for optimization-based robotic motion planning			15:10 Jun Tian Let's Play Hanabi!
		15:20 Sam Claassens ... Non-Gaussian State-estimation with JuliaRobotics/Caesar.jl			15:20 Paulito Palmes TSMML (Time Series Machine Learning)
				15:30 Short break	
15:45 Viral B. Shah Julia and NumFocus, a discussion of how money works	15:45 Alex Lew Cleaning messy data with Julia and Gen	15:45 David Widmann Solving Delay Differential Equations with Julia			15:45 Ludovic Räss Porting a massively parallel Multi-GPU application to Julia: a 3-D nonlinear multi-physics flow solver
	16:15 Brandon Taylor LightQuery.jl	16:15 Dheepak Open Source Power System Production Cost Modeling in Julia			16:15 Keno Fischer ... XLA.jl: Julia on TPUs
16:35 Jarrett Revels ... Cassette and company — Dynamic compiler passes	16:45 Jacob Quinn State of the Data: JuliaData	16:45 Chris Rackauckas Scientific AI: Domain Models with Integrated Machine Learning			16:45 James Bradbury Targeting Accelerators with MLIR.jl
	16:55 Mary McGrath Prototyping Visualizations for the Web with Vega and Julia				16:55 Nicolau Leal Werneck SIMD and cache-aware sorting with ChipSort.jl
	17:05 Simon Danisch A Showcase for Makie	17:15 Andrew Rosenberg HydroPowerModels.jl: A Julia/JuMP Package for Hydrothermal economic dispatch Optimization			17:05 Ranjan Anantharaman ... Generic Sparse Data Structures on GPUs
		17:25 Michel Schanen Modeling in Julia at Exascale for Power Grids			17:15 Rohan McLure Array Data Distribution with ArrayChannels.jl
					17:25 Tom Kwong High-Performance Portfolio Risk Aggregation
				19:00 Conference Dinner and Inner Harbor Cruise	
JuliaCon 2019					

Wednesday, 24 July					
BOF	Elm A	Elm B	NS Room 130	Other	Room 349
				07:30 Breakfast	
			08:40 Professor Steven G Johnson Keynote: Professor Steven G Johnson		
			09:30 Jiahao Chen		
			09:45 Stefan Karpinski 09:50 Seth Bromberger Using Julia in Secure Environments		
				10:10 Poster Session	
11:00 Clark Evans Sustainable Development and Open Source Monetization	11:00 Dheepak Why writing C interfaces in Julia is so easy*	11:00 Jeff Mills Probabilistic Biostatistics: Adventures with Julia from Code to Clinic			11:00 Roger Luo Yao.jl: Extensible, Efficient Quantum Algorithm Design for Humans.
	11:30 Aaron Christianson Backticks and the Glorious Command Literal	11:30 Virginia Spanoudaki Slow images, fast numbers: Using Julia in biomedical imaging and beyond			11:30 David P. Sanders Guaranteed constrained and unconstrained global optimisation in Julia
	11:40 Patrick Kofod Mogensen Re-designing Optim	11:40 Amita Varma Brain Tumour Classification with Julia			11:40 Michael Droettboom Pyodide: The scientific Python stack compiled to WebAssembly
	11:50 Dai ZJ Towards Faster Sorting and Group-by operations	11:50 Swakkhar Shatabda ... Mining Imbalanced Big Data with Julia			11:50 William L Fredericks ... Julia for Battery Model Parameter Estimation
				12:00 Lunch	
			13:30 Arch D. Robison Keynote: Arch D. Robison		
14:30 Nathan Daly ... Diversity and Inclusion in Julia Community	14:30 Christine R Herlihy ... SemanticModels.jl: not just another modeling framework	14:30 Clark C. Evans DataKnots.jl -an extensible, practical and coherent algebra of query combinators			14:30 Rebecca Sarfati Heterogeneous Agent Dynamic Stochastic General Equilibrium (DSGE) Models in Julia at the Federal Reserve Bank of New York
	15:00 Randy Zwitch OmniSci.jl: Bringing the open-source, GPU-accelerated relational database to Julia	15:00 David Anthoff Queryverse -Under the Hood			15:00 Ethan Matlin “Online” Estimation of Macroeconomic Models
				15:30 Short break	
15:45 Curtis Vogt Julia In Production	15:45 Tillmann Weisser ... Polynomial and Moment Optimization in Julia and JuMP	15:45 Anna Harris ... Raising Diversity & Inclusion among Julia users			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
					16:35 Elisabeth Roesch Fitting Neural Ordinary Differential Equations with DiffEqFlux.jl
16:45 Valentin Churavy ... JuliaGPU					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
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Thursday, 25 July					
BOF	Elm A	Elm B	NS Room 130	Other	Room 349
				07:30 Breakfast	
			08:40 Professor Heather Miller Keynote: Professor Heather Miller		
			09:30 Jeff Bezanson What's Bad About Julia		
			10:00 Vijay Ivaturi	10:10 Poster Session	
11:00 Andreas Noack ... Performant parallelism with productivity and portability.	11:00 Shashi Gowda Julia + JavaScript = <3	11:00 David P. Sanders Interval methods for scientific computing in Julia			11:00 Stefan Karpinski The Unreasonable Effectiveness of Multiple Dispatch
	11:30 Mohammed El-Beltagy ... Julia web servers deployment	11:30 Daniel Bachrathy Implicit Geometry with Multi-Dimensional Bisection Method			11:30 Joshua Ballanco Julia's Killer App(s): Implementing State Machines Simply using Multiple Dispatch
	11:40 Bogumił Kamiński A case study of migrating Timelineapp.co to the Julia language	11:40 Alberto Paoluzzi Computational topology and Boolean operations with Julia sparse arrays			11:40 JinGuo Liu Differential Programming Tensor Networks
	11:50 Renee Spear The Julia Language 1.0 Ephemeris and Physical Constants Reader for Solar System Bodies	11:50 Michael Reed Geometric algebra in Julia with Grassmann.jl		12:00 Lunch	11:50 Roger Luo JuliaCN: A community driven localization group for Julia in China
			13:30 Dr Steven Lee Keynote: Dr Steven Lee		
14:30 Vijay Ivaturi Julia in Healthcare	14:30 Nathan Daly If Runtime isn't Funtime: Controlling Compile-time Execution	14:30 David Anthoff ... Mimi.jl – Next Generation Climate Economics Modeling			14:30 Scott Haney Writing maintainable Julia code
	15:00 Takafumi Arakaki Transducers: data-oriented abstraction for sequential and parallel algorithms on containers	15:00 Charlie Kawczynski ... The Climate Machine: A New Earth System Model in Julia			15:00 Tim Wheeler How We Wrote a Textbook using Julia
15:45 Stefan Karpinski Package Management BoF	15:45 Yingbo Ma Efficient Stiff Ordinary Differential Equation Solvers for Quantitative Systems Pharmacology (QsP)	15:45 Harrison Grodin Symbolic Manipulation in Julia		15:30 Short break	15:45 Cameron Pfiffer Turing: Probabalistic Programming in Julia
	16:15 Vaibhav Dixit Simulation and estimation of Nonlinear Mixed Effects Models with PuMaS.jl	16:15 Lyndon White (@oxinabox) Building a Debugger with Cassette			16:15 Will Tebbutt Gaussian Process Probabilistic Programming with Stheno.jl
16:45 Mosè Giordano Julia in Astronomy	16:45 Bram De Jaegher An advanced electrodialysis process model in the Julia ecosystem	16:45 Valentin Churavy Static walks through dynamic programs – a conversation with type-inference.			16:45 Chad Scherrer Soss.jl: Probabilistic Metaprogramming in Julia
	16:55 Shubham Maddhashiya IVIVC.jl: In vitro – in vivo correlation module as part of an integrated pharmaceutical modeling and simulation platform	16:55 Valentin Churavy Concolic Fuzzing – Or how to run a theorem prover on your Julia code			
	17:05 Vasco Verissimo ... GigaSOM.jl: Huge-scale, high-performance flow cytometry clustering in Julia	17:05 Tim Holy Analyzing and updating code with JuliaInterpreter and Revise			
	17:15 benjamin chu MendelIHT.jl: How to fit Generalized Linear Models for High Dimensional Genetics (GWAS) Data	17:15 Kristoffer Carlsson TimerOutputs.jl -a cheap and cheerful instrumenting profiler			17:15 Marco Cusumano-Towner Gen: a general-purpose probabilistic programming system with programmable inference built on Julia
	17:25 Alec Bills Electrifying Transportation with Julia	17:25 Simon Danisch PackageCompiler			17:25 Cédric St-Jean-Leblanc A probabilistic programming language for switching Kalman filters
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