

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

Tuesday, 23 July

07:30 Breakfast			
08:30 @ NS Room 130 JuliaCon Committee Opening Remarks			
08:40 @ NS Room 130 Professor Madeleine Udell Keynote: Professor Madeleine Udell			
09:30 @ NS Room 130 Sebastian Pfitzner ... Debugging code with JuliaInterpreter			
10:00 @ NS Room 130 Paul Peterson			
10:05 @ NS Room 130 Vital 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	11:00 @ Elm B Robin Deits The Linguistics of Puzzles: Solving Cryptic Crosswords in Julia	11:00 @ BOF Chris Rackauckas Dynamical Modeling in Julia	11:00 @ Elm A Katharine Hyatt ... Intelligent Tensors in Julia
11:30 @ Room 349 Rory Finnegan Purifies: The system abstractions and why we need them	11:30 @ Elm B Jeffrey Ranooff Counting On Floating-Point	11:30 @ Elm A Michael Stock A general purpose toolbox for efficient Kolovector-based learning	11:30 @ Elm A Michael Stock A general purpose toolbox for efficient Kolovector-based learning
11:40 @ Room 349 Jay Dwek Offense Outlines	11:40 @ Elm B Bogumił Kamiński ... Answering social networks with SimplicialGraphs.jl	11:40 @ Elm A Jeff Beaman PySolve: The scientific Python stack compiled to WebAssembly	11:40 @ Elm A Amila Varma Brain Tumor Classification with Julia
11:50 @ Room 349 Akash Sengupta Smart House with JuliaBerry	11:50 @ Elm B Takuya Kitawawa Recommendation in Building Recommender Systems in Julia	11:50 @ Elm A Jameson Nash Thrust Based Parallelism part 1	11:50 @ Elm A Jameson Nash Thrust 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	14:30 @ Elm B Tucker McClure A New Breed of Vehicle Simulation	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 @ Room 349 Valentin Maré ... Heuristic machine learning and economic algorithms to improve feature selection with Julia	15:00 @ Elm B Andree Neumayr Modeling and Simulation of 3D-Systems in Julia	15:00 @ Elm A Fredrik Ekre Literate programming with Literate.jl	15:00 @ Elm A Domènique Lema Formatting Julia
15:10 @ Room 349 Jon Tiao Let's Play Hurdle!	15:10 @ Elm B Brian Jackson TrajectoryOptimization.jl: A toolbox for optimization-based robotic motion planning	15:10 @ Elm A Domènique Lema Formatting Julia	15:10 @ Elm A Domènique Lema Formatting Julia
15:30 @ Room 349 Paulito Palames ... TDSP (Deep Sparse Machine Learning)	15:30 @ Elm B Ram Claessens ... Non-Gaussian State estimation with JuliaStatistics/Calvin.jl	15:30 @ Elm A Domènique Lema Formatting Julia	15:30 @ Elm A Domènique Lema 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	15:45 @ Elm B David Widmann Solving Delay Differential Equations with Julia	15:45 @ BOF Vital B. Shah Julia and NumFocus, a discussion of how money works	15:45 @ Elm A Alex Lew Cleaning messy data with Julia and Gen
16:15 @ Room 349 Elliot Saba XLA.jl: Julia on TPUs	16:15 @ Elm B Brandon Taylor Open Source Power System Production Cost Modeling in Julia	16:15 @ Elm A Simon Danisch LightQuery.jl	16:15 @ Elm A Simon Danisch LightQuery.jl
16:45 @ Room 349 James Bradbury Targeting Accelerators with MLJ.jl	16:45 @ Elm B Chris Rackauckas Model-Enhanced Machine Learning for Accelerated Scientific Computing	16:45 @ Elm A Simon Danisch LightQuery.jl	16:45 @ Elm A Simon Danisch LightQuery.jl
16:55 @ Room 349 Nicolas Leal Wernick SDEs and stochastic control with Dyn.jl	16:55 @ Elm B Chris Rackauckas Model-Enhanced Machine Learning for Accelerated Scientific Computing	16:55 @ Elm A Simon Danisch LightQuery.jl	16:55 @ Elm A Simon Danisch LightQuery.jl
17:05 @ Room 349 Ranjana Banthararaman ... Genetic Sparse Data Structures on GPUs	17:05 @ Elm B Andrew Rosenberg HybridJulia.jl: A Julia/JuMP Package for heterogeneous economic dispatch optimization	17:05 @ Elm A Simon Danisch LightQuery.jl	17:05 @ Elm A Simon Danisch LightQuery.jl
17:15 @ Room 349 Rohan McClure Array Data Generation with ArrayChannels.jl	17:15 @ Elm B Andrew Rosenberg HybridJulia.jl: A Julia/JuMP Package for heterogeneous economic dispatch optimization	17:15 @ Elm A Simon Danisch LightQuery.jl	17:15 @ Elm A Simon Danisch LightQuery.jl
17:25 @ Room 349 Tom Kwong High-Performance Portfolio Risk Aggregation	17:25 @ Elm B Michael Schenker Modeling in Julia or Excel for Power Grids	17:25 @ Elm A Simon Danisch LightQuery.jl	17:25 @ Elm A Simon Danisch LightQuery.jl

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 Seth Bromberger Using Julia in Server Environments			
10:10 Poster Session			
11:00 @ Room 349 Roger Luo Yao.jl: Extensible, Efficient Quantum Algorithm Design for Humans.	11:00 @ Elm B Jeff Mills Probabilistic Biostatistics: Adventures with Julia from Code to Clinic	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 @ Room 349 David P. Sanders Stateful, fast, memory-efficient Julia in biomedical imaging and beyond	11:30 @ Elm B Virginia Spanoudaki Stateful, fast, memory-efficient Julia in biomedical imaging and beyond	11:30 @ Elm A Aaron Christianson Backticks and the GNU Command Line	11:30 @ Elm A Aaron Christianson Backticks and the GNU Command Line
11:40 @ Room 349 Michael Drouthron PySolve: The scientific Python stack compiled to WebAssembly	11:40 @ Elm B Amila Varma Brain Tumor Classification with Julia	11:40 @ Elm A Patrick Kofod Mogensen Re-designing Optim	11:40 @ Elm A Patrick Kofod Mogensen Re-designing Optim
11:50 @ Room 349 William L. Fredericks ... Julia for Battery Model Parameter Estimation	11:50 @ Elm B Dwarkhar Shastha ... Using Julia for Battery Model Parameter Estimation	11:50 @ Elm A Dai ZJ TensorFlow Sorting and Group-by operations	11:50 @ Elm A Dai ZJ TensorFlow 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 (DSGE) Models in Julia at the Federal Reserve Bank of New York	14:30 @ Elm B Clark C. Evans DataKnots.jl - an extensible, practical and coherent algebra of query combinators	14:30 @ BOF Nathan Daly ... Inclusion in Julia Community	14:30 @ Elm A Christine R Herlihy ... SemanticModels.jl: not just another modeling framework
15:00 @ Room 349 Edhan Matin "Online" Estimation of Macroeconomic Models	15:00 @ Elm B David Anthoff Queryverse - Under the Hood	15:00 @ Elm A Randy Zwitich OmniSci.jl: Bringing the open-source, GPU-accelerated relational database to Julia	15:00 @ Elm A Randy Zwitich 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!	15:45 @ Elm B Elwin van 't Wout ... Raising Diversity & Inclusion among Julia users	15:45 @ BOF Curtis Vogt Julia In Production	15:45 @ Elm A Tillmann Weisser ... Polynomial and Moment Optimization in Julia and JuMP
16:15 @ Room 349 Arvi Pa Differentiable Rendering and its Applications in Deep Learning	16:15 @ Elm B David Anthoff Queryverse - Under the Hood	16:15 @ Elm A Randy Zwitich OmniSci.jl: Bringing the open-source, GPU-accelerated relational database to Julia	16:15 @ Elm A Randy Zwitich OmniSci.jl: Bringing the open-source, GPU-accelerated relational database to Julia
16:25 @ Room 349 James Rattencourt Basic Ordinary Differential Equations with	16:25 @ Elm B David Anthoff Queryverse - Under the Hood	16:25 @ Elm A Randy Zwitich OmniSci.jl: Bringing the open-source, GPU-accelerated relational database to Julia	16:25 @ Elm A Randy Zwitich OmniSci.jl: Bringing the open-source, GPU-accelerated relational database to Julia
16:35 @ Room 349 Elisabeth Roesch Fitting Neural Ordinary Differential Equations with DiffEqFlux.jl	16:35 @ Elm B David Anthoff Queryverse - Under the Hood	16:35 @ Elm A Randy Zwitich OmniSci.jl: Bringing the open-source, GPU-accelerated relational database to Julia	16:35 @ Elm A Randy Zwitich OmniSci.jl: Bringing the open-source, GPU-accelerated relational database to Julia
17:05 @ Room 349 Ranchoadran Muthukumar Randomized Sampling for Approximate Optimal Control: Applications to RIS Controlled Optimal Control and Policy Iteration	17:05 @ Elm B David Anthoff Queryverse - Under the Hood	17:05 @ Elm A Randy Zwitich OmniSci.jl: Bringing the open-source, GPU-accelerated relational database to Julia	17:05 @ Elm A Randy Zwitich OmniSci.jl: Bringing the open-source, GPU-accelerated relational database to Julia
17:15 @ Room 349 Filippo Vicentini Reinforcement Learning and supervised learning for Open Quantum Systems	17:15 @ Elm B David Anthoff Queryverse - Under the Hood	17:15 @ Elm A Randy Zwitich OmniSci.jl: Bringing the open-source, GPU-accelerated relational database to Julia	17:15 @ Elm A Randy Zwitich OmniSci.jl: Bringing the open-source, GPU-accelerated relational database to Julia
17:25 @ Room 349 Cédric M. Jean-Louis A Julia-based programming language for switching quantum flows	17:25 @ Elm B David Anthoff Queryverse - Under the Hood	17:25 @ Elm A Randy Zwitich OmniSci.jl: Bringing the open-source, GPU-accelerated relational database to Julia	17:25 @ Elm A Randy Zwitich OmniSci.jl: Bringing the open-source, GPU-accelerated relational database to Julia

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 Interval methods for scientific computing with Multiple Dispatch	11:00 @ Elm B David P. Sanders Interval methods for scientific computing in Julia	11:00 @ BOF Andreas Noack ... Performant parallelism with productivity and portability.	11:00 @ Elm A Shashi Gowda Julia + JavaScript = <3
11:30 @ Room 349 Joshua Ballarín Julia: A Community-driven Specification State Machines Simply using Multiple Dispatch	11:30 @ Elm B Daniel Bachmuth Interval Computing with Multi-Dimensional Bracketing Method		11:30 @ Elm A Mohammed El-Bachy ... Julia web servers deployment
11:50 @ Room 349 Higor Liao JuliaPlots: A community-driven localization wrapper for Julia in China	11:40 @ Elm B Alberto Puchner Computational topology and Borelson operators with Julia Image arrays		11:40 @ Elm A Rogumił Kamiński A case study of migrating Timelapse.co to the Julia language
	11:50 @ Elm B Michael Reed Geometric Algebra in Julia with Grassmann.jl		11:50 @ Elm A Rogumił Kamiński The Julia Language: 1.0 Epiphenomena 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	14:30 @ Elm B David Anthoff ... Mimi.jl – Next Generation Climate Economics Modeling	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 @ Room 349 Tim Wheeler How We Wrote a Textbook using Julia	15:00 @ Elm B Charlie Kawczynski ... The Climate Machine: A New Earth System Model in Julia		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 Pfliffer Turing: Probabilistic Programming in Julia	15:45 @ Elm B Harrison Grodin Symbolic Manipulation in Julia	15:45 @ BOF Stefan Karpinski Package Management BoF	15:45 @ Elm A Yingbo Ma Efficient Stiff Ordinary Differential Equation Solvers for Quantitative Systems Pharmacology (QSP)
16:15 @ Room 349 Will Tebbutt Gaussian Process Probabilistic Programming with Stheno.jl	16:15 @ Elm B Lyndon White (@oxinabox) Building a Debugger with Cassette		16:15 @ Elm A Vaibhav Dixit Simulation and estimation of Nonlinear Mixed Effects Models with PuMas.jl
16:45 @ Room 349 Chad Scherrer Soss.jl: Probabilistic Metaprogramming in Julia	16:45 @ Elm B Valentin Churavy Static walks through @chain programs – a conversation with type-inference.	16:45 @ BOF Valentin Churavy ... JuliaGPU	16:45 @ Elm A Brian De Jaeger An advanced electrophysiology process model in the Julia ecosystem
	16:55 @ Elm B Valentin Churavy Cognitive Fuzzing – Or how to run a theorem prover on your Julia code		16:55 @ Elm A Shashank Madhushya HYPER: A Julia library for data assimilation module as part of an integrated phenomenon monitoring and prediction platform
	17:05 @ Elm B Tim Rely Analyzing and updating code with JuliaInterpreter and Abstrus		17:05 @ Elm A Vaibhav Dixit HYPER: A Julia library for data assimilation module as part of an integrated phenomenon monitoring and prediction platform
17:15 @ Room 349 Marco Cusumano-Towner Genetic parameter estimation for genome-wide association studies with probabilistic programming in Julia	17:15 @ Elm B Kristoffer Carlson Timelapser.jl: a fast and cheerful instrumenting profiler		17:05 @ Elm A Vaibhav Dixit HYPER: A Julia library for data assimilation module as part of an integrated phenomenon monitoring and prediction platform
17:25 @ Room 349 Cédric M. Jean-Louis A probabilistic programming language for switching quantum flows	17:25 @ Elm B Rimon Dautsch PackageCompiler		17:25 @ Elm A Alex Bille Electrifying Transportation with Julia