

# Sunday July 10, 2011

8:30 – 9:30 *Registration*

## Tutorial Session 1 Chair: John Skilling

9:30 – 10:30 [Giuseppe Tenti](#) “Bayesian data analysis: A gentle introduction”

10:30 – 11:00 *Break*

11:00 – 12:00 [Ariel Caticha](#) “The Design of Probability Theory”

12:00 – 1:30 *Lunch*

## Tutorial Session 2 Chair: John Skilling

1:30 – 2:30 [Adom Giffin](#) “MaxEnt: then and now”

2:30 – 3:00 *Break*

3:00 – 4:00 [Philip Goyal](#) “Information Physics: Towards a New Conception of Physical Reality”

4:00 – 4:30 *Break*

4:30 – 5:30 [Udo von Toussaint](#) “Numerical Methods in Bayesian Inference”

6:30 – 8:30 Welcome Reception

# Monday July 11, 2011

7:30 – 8:15 *Registration*

8:15 – 8:30 *Welcome*

## Session 1 Chair: Philip Goyal

8:30 – 9:30 [Jos Uffink](#) “Entropy, Entanglement, and Utility”  
*(Invited Speaker)*

9:30 – 10:00 [Kevin H. Knuth](#) “Quantification: From inference to physical laws”

10:00 – 10:30 [Keith A. Earle](#) “A Master Equation Approach to the ‘3 + 1’ Dirac Equation”

10:30 – 11:00 *Break*

11:00 – 11:30 [Fabio Mendes](#) “Bayesian inference in the numerical solution of Laplace’s equation”

11:30 – 12:00 [Udo von Toussaint](#) “Beyond Least Squares: Robust Data Analysis”

12:00 – 1:30 *Lunch*

## Session 2 Chair: Carlo Cafaro

1:30 – 3:00 [Gerald H. Pollack](#) “The Secret Life of Water:  $E = H_2O$ ”  
*(Invited Speaker)*

3:00 – 3:30 *Break*

3:30 – 4:00 [Jan Dettmer](#) “Sequential trans-dimensional Monte Carlo for seabed parameter inference”

4:00 – 4:30 [P. G. L. Porta Mana](#) “A critique of the Maximum Entropy Principle by one of its supporters”

# Tuesday July 12, 2011

8:00 – 8:30 Registration

## Session 3 Chair: Robert Niven

8:30 – 9:30 [Ralph D. Lorenz](#) “Full steam ahead, probably”  
(invited speaker)

9:30 – 10:00 [Jingfeng Wang](#) “An Application of the Maximum Entropy Production Principle in Modeling Heat Fluxes over Land Surfaces”

10:00 – 10:30 [Benjamin L. Ruddell](#) “Relationships Between Information Production, Shannon Entropy, Energy Fluxes, and Bounds of Variability in Land Surface Ecosystems”

10:30 – 11:00 Break

11:00 – 12:00 [Timothy E. Jupp](#) “MaxEnt and planetary climates: surely atmospheric dynamics matter?”  
(invited speaker)

12:00 – 2:00 Lunch

## Session 4 Chair: Adom Giffin

2:00 – 3:00 [Robert K. Niven](#) “Application of MaxEnt to Steady-State Flow Systems (and Extremum Entropy Production Principles)”  
(invited speaker)

3:00 – 3:30 [Renaldas Urniezius](#) “Iteration free vector orientation using maximum relative entropy with observational priors”

3:30 – 4:00 Break

4:00 – 4:30 [Nabin K. Malakar](#) “Maximum Joint Entropy and Information-Based Collaboration of Automated Learning Machines”

4:30 – 5:00 [Julian L. Center, Jr.](#) “Calibrating and aligning a low-cost vision-inertial navigation system”

## 6:00 – 10:00 Poster Session & Reception

# Wednesday July 13, 2011

8:00 – 8:30 *Registration*

## Session 5

Chair: Keith Earle

8:30 – 9:30 [Arieh Ben-Naim](#) “Shannon's measure of Information and the thermodynamic Entropy”  
*(invited speaker)*

9:30 – 10:00 [Chris Ferrie](#) “Minimax estimators for noisy coins”

10:00 – 10:30 [Alexis A. Toda](#) “Unification of maximum entropy and Bayesian inference via plausible reasoning”

10:30 – 11:00 *Break*

11:00 – 11:30 [Francesco Palmieri](#) “Consistence of sequence classification with entropic priors”

11:30 – 12:00 [Kai Krajssek](#) “Bayesian Inference in Kernel Feature Space”

12:00– 2:00 *Lunch*

## Session 6

Chair: Edward Vrscaj

2:00 – 2:30 [Yannis Kalaidizis](#) “Maximum entropy approach for non-supervised parameterization of intracellular vesicle tracking algorithm”

2:30 – 3:00 [Mark Ebden](#) “Soft partitioning in networks via Bayesian Nonnegative Matrix Factorisation”

3:00 – 3:30 [Richard P. Mann](#) “Prawns and Probability: Adventures in Learning Models for Collective Animal Behaviour”

3:30 – 4:00 *Break*

4:00 – 5:00

Panel Discussion (Chair:Adom Giffin)

# Thursday July 14, 2011

8:00 – 8:30 *Registration*

## Session 7 Chair: Philip Goyal

8:30 – 9:30 [Robert W. Spekkens](#) “Almost quantum theory: classical theories with a statistical restriction”  
*(invited speaker)*

9:30 – 10:00 [Marcel Reginalto](#) “Quantum theory from the geometry of evolving probabilities”

10:00 – 10:30 [Carlo Cafaro](#) “On a differential geometric viewpoint of Jaynes’ Maxent method and its quantum extension”

10:30 – 11:00 *Break*

11:00 – 11:30 [Ariel Caticha](#) “Entropic dynamics and the quantum measurement problem”

11:30 – 12:00 [Robin Blume-Kohout](#) “Likelihood-ratio confidence intervals for quantum states”

12:00 – 1:30 *Lunch*

## Session 8 Chair: Udo von Touissant

1:30 – 2:30 [Radford M. Neal](#) “New Monte Carlo Methods Based on Hamiltonian Dynamics”  
*(invited speaker)*

2:30 – 3:00 [Michael Betancourt](#) “Cruising the Simplex: Sampling the Dirichlet Distribution With Hamiltonian Monte Carlo”

3:00 – 4:00 [John Skilling](#) “Computing Bayes in big spaces”  
*(invited speaker)*

4:30 – 9:30 Banquet

# Friday July 15, 2011

8:00 – 8:30 *Registration*

## Session 9

Chair: Adom Giffin

8:30 – 9:00 [Edward R. Vrscay](#) “Fractal-based measure approximation with entropy maximization and sparsity constraints”

9:00 – 9:30 [Antoine van de Ven](#) “Modeling the World by Minimizing Relative Entropy”

9:30 – 10:00 [Paul M. Goggans](#) “Inference-based design of FIR filters with sum of signed power-of-two coefficients”

10:00 – 10:30 *Break*

10:30 – 11:00 [Marcelo S. Lauretto](#) “Estimation and model selection in Dirichlet regression”

11:00 – 11:30 [Jonathan Botts](#) “Bayesian Inference for Acoustic Impedance Boundaries in Room-Acoustic Finite Difference Time-Domain Modeling”

11:30 – 12:00 [Brian D. Ziebart](#) “Process-Conditioned Investing with Incomplete Information using Maximum Causal Entropy”

12:00– 2:00 *Lunch*

2:00 – 3:00

Business Meeting

# Poster Session

Tuesday July 12, 2011 6:00pm – 10:00pm

[Arthur H. Baraov](#)

“On the notion of fair games and Bernoulli's concept of moral expectation”

[Jingfeng Wang](#)

“On Ignorance Priors and the Principle of Inference”

[Sean Alan Ali](#)

“Relating dynamical complexity to quantum entanglement via information geometry and maximum relative entropy methods”

[Carlo Cafaro](#)

“An information geometric viewpoint of algorithms in quantum computing”

[Adom Giffin](#)

“Insights into the softening of chaotic statistical models by quantum considerations”

[Veronica Nieves](#)

“Bayesian Analysis of Scale-Invariant Processes”

[Jian Deng](#)

“Maximum partial entropy principle and partial probability-weighted moments”

[Noel van Erp](#)

“Parsimonious priors for regression coefficients”

[Arthur H. Baraov](#)

“The aircraft carrier problem”

[Koki Kyo](#)

“Bayesian estimation of dynamic matching function for u-v analysis in Japan”

[Asif Mehmood](#)

“Application of Bayesian Non-Negative Matrix Factorization to Seismic Footstep Signals Separation”

[Marcel Reginatto](#)

“Neutron spectrometry at high-energy accelerator facilities: a Bayesian approach using entropic priors”

[Nissim Kaufmann](#)

“A note on antidata”

[Barrie Stokes](#)

“Maxent alternatives to Pearson family distributions”

[Chris Granade](#)

“Adaptive Hamiltonian estimation using Bayesian experimental design”

[Marcelo S. Lauretto](#)

“The full Bayesian significance test for symmetry in contingency tables”

[Marcelo S. Lauretto](#)

“Reliability analysis in series systems: an empirical comparison between Bayesian and classical estimators”

[Sha Zhu](#)

“A hierarchical Bayesian method for synthetic aperture radar image reconstruction”

[Michele Pappalardo](#)

“Handling Uncertainty Using Game Theory”

[Ryszard P. Kostecki](#)

“Information geometric foundations of quantum theory”

[Ning Chu](#)

“Super-resolution image from a sequence of low resolution images based on improved Gauss-Markov-Potts model”

[Renaldas Urniezius](#)

“Iteration free vector orientation using maximum relative entropy with observational priors”



<a href="#">Shahid Nawaz</a>	“Momentum and the uncertainty relation in the entropic approach to quantum theory”
<a href="#">Kevin H. Knuth</a>	“From Cox to Emergent Geometry”
<a href="#">Doriano-Boris Pougaza</a>	“New copulas obtained by maximizing Tsallis or Renyi Entropies”
<a href="#">Cameron J. Fackler</a>	“Porous Material Parameter Estimation: A Bayesian Approach”
<a href="#">Adom Giffin</a>	“The error in the two envelope paradox”
<a href="#">Haley A. Maunu</a>	“Maximum entropy production in Daisyworld models”
<a href="#">Keith A. Earle</a>	“Parameter Estimation of Magnetic Resonance Spectra via a Statistical Mechanics Approach”
<a href="#">Mark Ebdon</a>	“Soft partitioning in networks via Bayesian Nonnegative Matrix Factorisation”