

MaxEnt 2009 Program
July 5-10, 2009
University of Mississippi

Sunday July 5, 2009

7:30 - 8:30 *Registration*

Tutorial Session: Paul Goggans, Chair

8:30 - 9:30 Devinder Sivia Stating the Obvious

9:30 - 10:30 John Skilling Basic Bayesian Computation

10:30 - 11:00 *Break*

11:00 - 12:00 Tom Loredo Decision, Information, and Experimental Design

12:00 - 2:00 *Lunch - BBQ in The Grove*

2:00 - 3:00 Peter Cheeseman Bayes, MaxEnt, Their Relationship and Limitations

3:00 - 3:30 *Break*

3:30 - 4:30 Steve Gull Misconceptions About Entropy

5:30 *Bus Departs for Welcoming Dinner in Taylor Mississippi*

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Monday July 6, 2009

7:30 - 8:30 *Registration*

8:15 - 8:30 *Welcome*

Morning Session: Tom Lored, Chair

8:30 - 9:25 Christian P. Robert "On the Computational Side of Bayesian Model
Invited Speaker Choice"

9:30 - 9:55 Udo von Toussaint "Fitting of Functions with Uncertainties in Dependent and
Independent Variables"

10:00 - 10:25 Kevin H. Knuth "Measuring on Lattices"

10:30 - 11:00 *Break*

11:00 - 11:25 Julian L. Center "Inquiry Calculus and Information Theory"

11:30 - 11:55 Fábio Macêdo Mendes "A Gaussian Process Approach to Moving Averages
Smoothing"

12:00 - 2:00 *Lunch*

Afternoon Session: Larry Bretthorst, Chair

2:00 - 2:40 John Skilling "Conjugate Gradient in Bayesian Computation"
Invited Speaker

2:45 - 3:25 Gabor Csanyi "Full Sampling of Atomic Configurational Spaces"

3:30 - 4:00 *Break*

4:00 - 4:25 Richard Mann "Gaussian Processes for Prediction of Homing Pigeon
Flight Trajectories"

4:30 - 4:55 Mame-Diarra Fall "Spatial Emission Tomography Reconstruction Using
Pitman-Yor Process"

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Tuesday July 7, 2009

8:00 - 8:30 *Registration Opens*

Morning Session: Kevin Knuth, Chair

8:30 - 9:25 Lawrence Carin "Sparse Non-Parametric Bayesian Learning
Invited Speaker and Applications"

9:30 - 9:55 Larry Bretthorst "The Bayesian Analysis Software Developed at
Washington University"

10:00 - 10:25 Karen R. Marutyan "A New Multi-Platform Interface To The Bayesian Analysis
Software Developed at Washington University "

10:30 - 11:00 *Break*

11:00 - 11:25 Christian C. Anderson "Decomposition of Interfering Ultrasonic Waves in Bone
and Bone-Mimicking Materials"

11:30 - 11:55 Abd-Krim Seghouane "Maximum A Posteriori Maximum Entropy HRF Estimation
in fMRI"

12:00 - 2:00 *Lunch*

Afternoon Session: Udo von Toussaint, Chair

2:00 - 2:25 Joshua Shimony "Brain Perfusion Measurement in Clinical Setting: A
Practical Application of A Tracker Kinetic Model"

2:30 - 2:55 Rudy Gunawan "Bayesian Inference of Tumor Hypoxia"

3:00 - 3:25 Timothy Mitchell "Using Bayesian Model Selection to Characterize
Neonatal EEG Recordings"

3:30 - 4:00 *Break*

4:00 - 4:25 Paul M. Goggans "Array Design Using Inference: Recent Advances"

4:30 - 4:55 Mahsa Ahmadian "Mathematical Modeling for Stress-Strain Behavior of
Nezhad Monfared Wet Reinforced Silty Sandy Soils Using a Bayesian
Regression Approach"

6:00 - 8:00 *Poster Session and Reception*

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Tuesday July 7, 2009

Poster Session

P01	Ali Abbas	"On a Class of Discrete-Time Stochastic Processes with Constant Valuation"
P02	Ali Abbas	"Invariance of Multiattribute Utility Functions Under a Class of Multivariate Transformations"
P03	Carlo Cafaro	"On Correlations, Dynamical Complexity and Information Geometric Compression"
P04	Carlo Cafaro	"From Geometric Clifford Algebra to Classical and Quantum Computing"
P05	John Campbell	"Universal Darwinism and Bayesian Methods"
P06	Ariel Caticha	"Fine Tuning Cox"
P07	Chung Yong Chan	"Using Bayesian Inference for Linear Phase Log FIR Filter Design"
P08	Rotem Dov Guttman	"Automated Antenna Orientation for Wireless Data Transfer using Bayesian Modeling"
P09	Marcelo de Souza Laretto	"FBST for Generalized Poisson Distribution"
P10	Nabin Kumar Malakar	"Estimating the Point Spread Function of a Light Sensor "
P11	Fábio Macêdo Mendes	"Jumping Processes as the Solution to the Chapman-Kolmogorov Equation"
P12	Subhadeep Mukhopadhyay	"Bayesian Analysis of High Dimensional Data"
P13	Esam Obiedat	"Distributed Turbo Product Codes Over Multiple Relays"
P14	Robert J. Papoular	"Two Novel Applications of Maximum Entropy to Light and Neutron Scattering: Static Debye Functions and Dynamic Stretched Exponentials"
P15	Adriano Polpo	"Binary Data Regression: Weibull Distribution"
P16	Abd-Krim Seghouane	"Activation Detection in fMRI Using Kullback Symmetric Divergence"
P17	John Skilling	"The Convergence of Nested Sampling"
P18	Barrie James Stokes	"Continuous MaxEnt Distributions in Mathematica: A "Parameter-Free" Approach"
P19	Junqian Xu	"Automatic Phasing of Magnetic Resoance Images"

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Wednesday July 8, 2009

Morning Session: Richard Raspet, Chair

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|-------|---|-------|--|---|
| 8:30 | - | 9:25 | David Hestenes
<i>Invited Speaker</i> | "Snarks or Boojums: Probabilities in Quantum Mechanics" |
| 9:30 | - | 10:25 | Walter Thomas Grandy
<i>Invited Speaker</i> | "Probable Inference and Quantum Mechanics" |
| 10:30 | - | 11:00 | <i>Break</i> | |
| 11:00 | - | 11:25 | Philip Goyal | "Why is Quantum Mechanics Complex? " |
| 11:30 | - | 11:55 | Ariel Caticha | "From Entropic Dynamics to Quantum Mechanics" |
| 12:00 | - | 2:00 | <i>Lunch</i> | |

Afternoon Session: Jianxia Xue

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|------|---|------|-------------------|--|
| 2:00 | - | 2:25 | Asif Mehmood | "Local-Model Spectrogram for Ultrasonic Doppler Vibrometry Signals" |
| 2:30 | - | 2:55 | Tao Ma | "Nonlinear Statistical Modeling of Speech" |
| 3:00 | - | 3:25 | Stepan Albrecht | "Generative Model for Music Signal Decomposition" |
| 3:30 | - | 4:00 | <i>Break</i> | |
| 4:00 | - | 4:25 | Emmanuel Nguyen | "Detection of Cylinder Unbalance from Bayesian Inference Combining Cylinder Pressure and Vibration Block Measurement in a Diesel Engine" |
| 4:30 | - | 4:55 | Philippe Regnault | "Plug-In Estimator of the Entropy Rate of a Pure-Jump Markov Process" |

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Thursday July 9, 2009

Morning Session: John Skilling, Chair

8:30	-	8:55	Robert K. Niven	"The Maximum Entropy Production Principle and its Application to Turbulent Fluid Flow"
9:00	-	9:25	Robert J. Papoular	"KKRAMERS: Kramers-KRonig Analysis using Maximum Entropy for Reflectance Spectroscopy"
9:30	-	9:55	Ali Ghaderi	"On Application of MaxEnt to Modelling of Complex Systems"
10:00	-	10:25	Brendon James Brewer	"Entropic Priors and Bayesian Model Selection"
10:30	-	11:00	<i>Break</i>	
11:00	-	11:25	Gary Holness	"Training Ensembles Using Max-Entropy Error Diversity"
11:30	-	11:55	Yannis L. Kalaidzidis	"Revisit Generalization of Entropy for Non-Positive Distribution: Application for Exponent Spectra Analysis"

12:00 - 2:00 *Lunch*

Afternoon Session: Lei Cao, Chair

2:00	-	2:25	Adriano Polpo	"Distributions in Presence of Right Left Censoring"
2:30	-	2:55	Christophe Vignat	"Geometric Aspects of the Non-Extensive Statistical Theory"
3:00	-	3:25	Rafael Bassi Stern	"In Defense of Randomization: A Subjectivist Bayesian Approach"
3:30	-	4:00	<i>Break</i>	
4:00	-	4:25	Ali Abbas	"Bidirectional Utility Diagrams"
4:30	-	5:00	John Parker Burg	"What I Have Been Doing the Last Four Years"

6:00 - 7:00 *Cocktails at City Grocery Bar*
7:00 *Banquet at City Grocery*

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Friday July 10, 2009

Morning Session: Julio Stern, Chair

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|-------|---|-------|-----------------------|---|
| 8:30 | - | 8:55 | David John Blower | "Jaynes's View on the Meaning of Uninformative Distributions" |
| 9:00 | - | 9:25 | Carlos C. Rodriguez | "Beyond Bayes" |
| 9:30 | - | 9:55 | Sunil Kumar Mathur | "A Nonparametric Bayesian Technique for Assigning Priors for Ordered and Bounded Parameters" |
| 10:00 | - | 10:25 | Adom Giffin | "Approximation for a Toy Defective Ising Model" |
| 10:30 | - | 11:00 | <i>Break</i> | |
| 11:00 | - | 11:25 | Alberto Solana-Ortega | "Morality Principles for Risk Modelling: Needs and Connections with the Origins of Probability" |
| 11:30 | - | 11:55 | Nestor Caticha | "Learning in a Society of Agents and the Effective Dimension of the Moral Matrix" |
| 12:00 | - | 2:00 | <i>Lunch</i> | |
| 2:00 | - | 3:00 | | |