

Statistics and Probability Group

Department of Mathematical Sciences

Presented by Ian Jermyn

26/11/2014

The Group



Camila
Caiado

Frank
Coolen

Peter
Craig

Jonathan
Cumming

Jochen
Einbeck

Michael
Goldstein

Ostap
Hryniv



Ian
Jermyn

Mikhail
Menshikov

Hasanjan
Sayit

Matthias
Troffaes

Ian
Vernon

Andrew
Wade

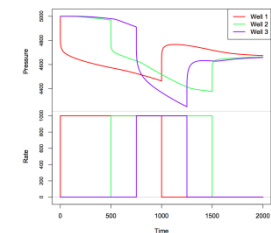
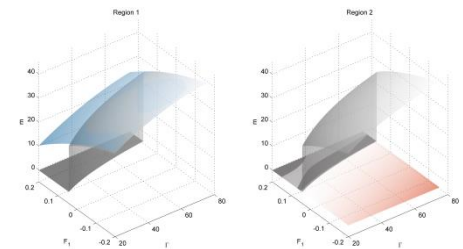
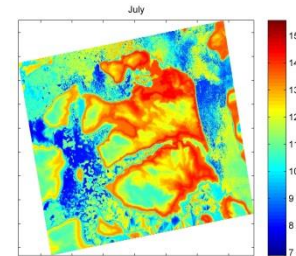
David
Wooff

The Group

- ~ 20 PhD students, ~ 5 postdocs.
- Exciting intellectual environment
 - Weekly seminars and postgraduate seminars
 - Conferences and workshops
 - Training events with Newcastle University
 - External training courses (APTS member institution)
 - Many contacts with, and visits to and from universities, institutes, and companies all over the world.

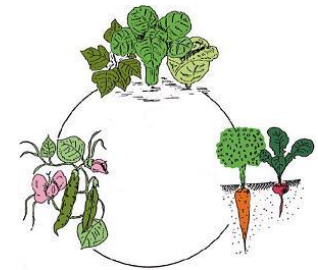
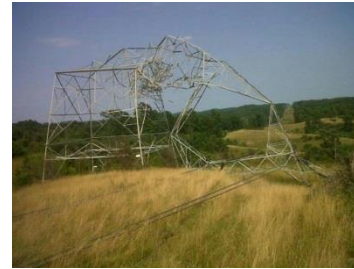
Research Topics

- Uncertainty analysis for large-scale physical problems
 - Caiado, Cumming, Goldstein, Vernon
 - Statistical models of computer simulations: climate; galaxy formation...
 - Bayes linear methodology
- Applied industrial statistics
 - Wooff, Cumming
 - Software testing; oil and gas reservoir modelling; deconvolution of well test data; online pricing strategies.



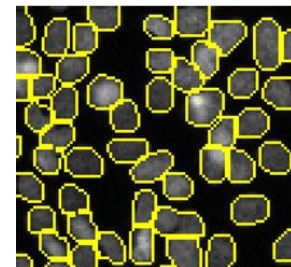
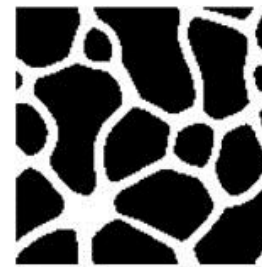
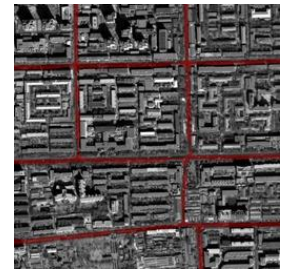
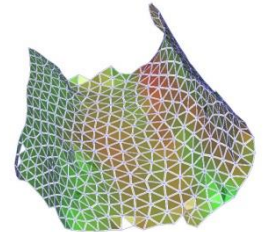
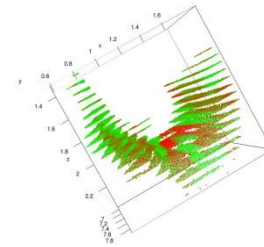
Research Topics

- Imprecise/Interval probability
 - Coolen, Troffaes
 - Uncertainty about uncertainty.
 - Prediction with weak assumptions.
- Robust decision making under severe uncertainty
 - Troffaes
 - Engineering, environment
- Reliability and risk
 - Craig, Troffaes, Coolen
 - Agriculture, environment



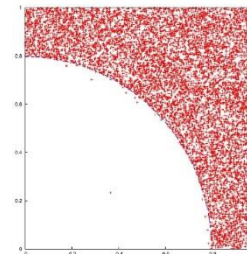
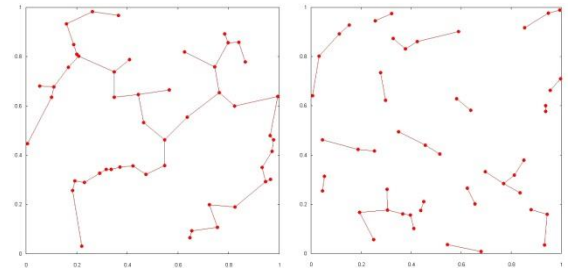
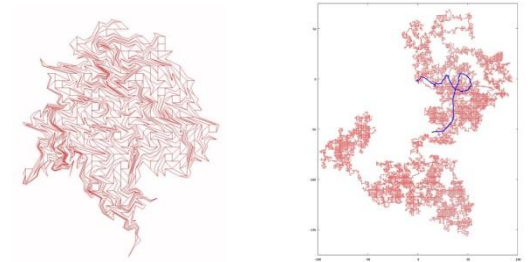
Research Topics

- Statistical modelling
 - Einbeck
 - Dimension reduction and efficient descriptions of data.
 - Diverse applications
- Shape and spatial statistics
 - Jermyn
 - Random fields, differential geometry
 - Applications to image processing and computer vision, geology,...



Research Topics

- **Mathematical Finance**
 - Sayit
 - Arbitrage and hedging; stochastic control and optimization.
- **Probability and stochastic processes**
 - Hryniv, Menshikov, Wade
 - Random walks; particle systems
 - Communication and queueing networks
 - Percolation and random graphs; random spatial networks
 - Limit theorems and large deviations



Grant for 2015: apply now!

- EPSRC 3.5 year grant.
- Application deadline: January 5.
- If you are interested, get in touch with us now:
 - p.g.statistics@durham.ac.uk
- Further information:
 - www.dur.ac.uk/mathematical.sciences/stats