THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS
First International Conference on
Mathematical Modelling in Sport, IMASport 2007

Programme

MONDAY, 25th June 2007			
0820-0850	Registration and refreshments, *Lyric Circle Bar*		
0850-0900	Opening remarks, *Hexagon Room*		
0900-0940	Keynote, *Hexagon Room* John Haigh, *University of Sussex.* Uses and Limitations of Maths in Sport. Chair: Phil Scarf		
0940-0950	Break		
0950-1050	Cricket statistics *Hexagon Room* Chair: Gordon Hunter	Sports Performance 1 *Studio 2* Chair: Mark King	
	Tony Lewis *Oxford Brookes University* Use of the D/L Methodology to Provide Additional Benefits for One-day Cricket	Greg Atkinson *Liverpool John Moores Univ.* Between-match Variability in Performance Characteristics of Elite Soccer Players	
	Uday Damodaran *XLRI* Developing Criteria to Evaluate Consistency of Batting Performance in ODI Cricket	Emma Ball *Middlesex University* Axels, Loops, Steps, Spins: What are the Differences Between the Top Skaters?	
	Trevor Ringrose *Cranfield University* Neutral Umpires and LBW Decisions in Test Cricket	Anthony Bedford *RMIT University* Evaluating an Ice Hockey Team's Performance Using Interactive Phases of Play	
1050-1120	Refreshments, *Lyric Circle Bar*		
1120-1240	Sports Outcome Modelling 1 *Hexagon Room* Chair: Trevor Ringrose	Sports Performance 2 *Studio 2* Chair: Les Hatton	Sports Scheduling *South Room* Chair: Steve McKeever
	Petr Volf *Academy of Sciences of the Czech Republic* Random Point Process Models for Score of Sport match	Michael Hiley *Loughborough University* Optimisation of the Backward Giant Circle Prior to Release for a Triple Piked Somersault Dismount from the High Bar	Cole Smith *University of Florida* On the Organization of the NCAA College Baseball Tournament
	Ray Stefani *California State University* Predicting Score Difference Versus Score Total in Rugby and Soccer	Cassie Wilson *University of Wales Institute* Considerations that Affect Optimised Simulation in a Running Jump for Height	Dries Goossens *Katholieke Universiteit Leuven* Experiences in Scheduling the Belgian Soccer Divisions
	Øyvind Salvesen *Norwegian University of Science and Technology* Prediction of Soccer Matches	Fred Yeadon *Loughborough University* Modelling the Torque Activation Profile in Springboard Diving Takeoffs	John Reade *University of Manchester* Round Robin Tournaments
	David Edelman *Univeristy College Dublin* Modelling Distance Preference and Pace Character in Horseracing	Mark King *Loughborough University* The Effect of Approach Velocity on Optimal Tumbling	
1240-1330	Lunch, *Lyric Circle Bar*		
1330-1410	Keynote, *Hexagon Room* Stephen Clarke, *Swinburne University.* Increasing your Media Profile by Publicising Sports Research. Chair: Carol Robinson		

MONDAY, 25th June 2007			
1410-1420	Break		
1420-1520	Sports Engineering *Hexagon Room* Chair: Fred Yeadon	Events *Studio 2* Chair: Martin Grossman	
	Mickael Begon *Loughborough University* Simulation of Paddling an Ergometer	Elmer Sterken *University of Groningen* The Economic Impact of Organizing Large Sporting Events	
	Matthew Pain *Loughborough University* Optimising Landing Strategies to Minimise Injury Risk During Gymnastics Landings	Wolfgang Maennig *University of Hamburg* Mono-Functional Arenas vs. Multifunctional Stadia – What do Spectators Prefer?	
	Les Hatton *Kingston University* Modelling the Flight of a Javelin in a Prevailing Wind	Philip Scarf *University of Salford* Match Importance and Tournament Design	
1520-1550	Refreshments, *Lyric Circle Bar*		
1550-1710	Sports Outcome Modelling 2 *Hexagon Room* Chair: Øyvind Salvesen	Sports General *Studio 2* Chair: Elmer Sterken	
	Coby Durham *University of Arkansas* Probabilistic Models of the Outcomes of Professional Golf Matches	Stephen Clarke *Swinburne University* Successful Applications of Statistical Modeling to Betting markets	
	Yong Jiang *Nanjing University of Science and Technology* Gray Models for the Prediction of Results in Track and Field Events	Jerome Bastien *UTBM* A New Geometrical Characterization of Boundaries of Planar Workspaces	
	Dimitris Karlis *Athens University of Economics* Bayesian Modelling of Football Outcomes	Paul Stephenson *Grand Valley State University* An Analysis of GOLO (A Dice-Based Golf Game)	
	Bayo Lawal *Auburn University Montgomery* Modeling the 2002-2003 English Premier League Results	Carol Robinson *Loughborough University* Motivating Students to Learn Mathematics Using Applications from Sport	
1710-1740	Poster session, with refreshments, *Lyric Circle Bar*		
	Marc Wells, *Liverpool John Moores University.* Is the Power-speed Relationship for the SRM Ergometer Valid to Real Cycling?		
	Yong Jiang, *Nanjing University of Science and Technology.* Mathematical Model of Velocity Variations on 100m Race		
	Yong Jiang, *Nanjing University of Science and Technology.* Statistical Analysis of Influencing Factors on Sports Developing		
	Reza Noubary, *Bloomsburg University. An* Analysis of a Table Tennis Game		
	Annibal Parracho Sant'Anna, *Universidade Federal Fluminense.* A Framework to Explain the Brazilian Soccer Championships Classifications		
	Xin Shi, *University of Salford.* Establishing Batting Strategies Considering the Distribution of Runs Scored During Partnership in Test Cricket		
	Anne Woolf, *Kingston University.* An Investigation of the Current Scoring System for the Decathlon		
1900	Conference dinner. *Old Trafford Cricket (LCCC) Ground.* Drinks at 7.00pm, dinner at 7.30pm. Speaker: Rob Eastaway.		

TUESDAY, 26th June 2007			
0900-0940	Keynote, *Hexagon Room* Ruud Koning, *University of Groningen.* Efficiency of Sport Betting Markets. Chair: David Percy		
0940-0950	Break		
0950-1050	Economics of Sport 1 *Hexagon Room* Chair: Franc Klaassen	Computation in Sport *Studio 2* Chair: Dries Goossens	
	Martin Grossmann *University of Zurich* A Dynamic Team Sport Model	Steve McKeever *University of Oxford* Describing Analysis Techniques and Code Generation for Optimising Sporting Performance	
	Tony Syme *University of Salford* A Random Walk down the Fairway? An Investigation into Streakiness on the PGA Tour, 2004-2006	Gerard Sierksma *University of Groningen* Computer Support for Coaching and Scouting in Football (Elmer Sterken to present)	
	Ron Dorsey *RHUL* Relative Age Effects in County Championship Cricket	Gordon Hunter *Kingston University* Modelling Tennis Rallies Using Information from both Video and Audio Signals	
1050-1120	Refreshments, *Lyric Circle Bar*		
1120-1240	Economics of Sport 2 *Hexagon Room* Chair: Michael Cain	Sport Statistics 1 *Studio 2* Chair: John Haigh	
	Babatunde Buraimo *University of Central Lancashire* Living in the Shadows: Effects of Market Size and Competition within English League Football	Stephen Dobson *University of Otago* Strategic Decision-Making Under Conditions of Risk and Uncertainty in Test Match Cricket (John Goddard to present)	
	Fiona Carmichael *University of Salford* Production, Wage Expenditure and Investment in the Premier League	Nick Linthorne *Brunel University* Population Size and Success in Athletics	
	James Reade *University of Oxford* Modelling and Forecasting Demand for Oldham Athletic Soccer Matches	Joao Carlos Soares de Mello *University Federal Fluminese* A Ranking for the Olympic Games with Unitary input DEA Models	
		Antony Unwin *Universität Augsburg* Parallel Coordinates for Parallel Events — Graphical Analysis of Decathlon Results and the Decathlon Points System	
1240-1330	Lunch, *Lyric Circle Bar*		

TUESDAY, 26th June 2007			
1330-1450	Economics of Sport 3 *Hexagon Room* Chair: Ruud Koning	Sport Statistics 2 *Studio 2* Chair: Greg Atkinson	
	John Goddard *University of Wales Swansea* Modelling Goal Scoring and the Incidence of Disciplinary Sanction over the Course of Association Football Matches	Linda Wolstenholme *City University* Regression Modelling in Sailing Handicap Systems	
	Franc Klaassen *University of Amsterdam* Are Economic Agents Successful Optimizers? An Analysis Through Service Strategy in Tennis	David Percy *University of Salford* Handicapping Systems for Disabled Alpine Skiing	
	Liam Lenten *La Trobe University* The Extent to which Unbalanced Schedules Affect Reported Competitive Balance in the Scottish Premier League	Hugh Morton *Massey University* Bioenergetic Models and Optimal Race Pace	
	Michael Cain *University of Wales, Bangor* Evaluating the Performance of Team Players in Sports League	Ian McHale *Salford University* A forecasting model for international football matches	
1450-1520	Refreshments, *Lyric Circle Bar*		
1520-1640	Ranking *Hexagon Room* Chair: Fiona Carmichael	Sport Statistics 3 *Studio 2* Chair: Tony Lewis	
	Nobuyoshi Hirotsu *Juntendo University* An Evaluation of Performance of Football Players using a DEA Model	Alistair Fitt *University of Southampton* A Mathematical Analysis of Soccer Spread Betting	
	Kelly Sullivan *University of Arkansas* Incorporating Schedule Strength into an Optimization-Based Method for Ranking Sports Teams	Karen Croxson *University of Oxford* Goal Arrival in Soccer: A High Frequency Study of Efficiency in Betting Pricing	
	Jonathan Sargent *RMIT University* Calculating Australian Football League Player Ratings Using a T4253H ELO Model	Reza Noubary *Bloomsburg University* Prediction of Sports Records	
	Andrew Swift *University of Nebraska-Omaha* Paired Comparison Models for Ranking National Soccer	Gerard Kuper *University of Groningen* Modelling Limits in Cycling	
1640-1650	Closing remarks, *Hexagon Room*		