

題名 ISWI Newsletter – Vol. 2 No. 15  
差出人 George Maeda

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\* ISWI Newsletter – Vol. 2 No. 15 23 February 2010 \*  
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\* I S W I = International Space Weather Initiative \*  
\* (www.iswi-secretariat.org) \*  
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\* Publisher: Professor K. Yumoto, SERC, Kyushu University, Japan \*  
\* Editor-in-Chief: Mr. George Maeda, SERC (maeda@serc.kyushu-u.ac.jp) \*  
\* Archive location: www.iswi-secretariat.org (maintained by Bulgaria) \*  
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Attachments:

- (1) Pdf 307 KB, 12 pages.  
Announcement for Year 2010 "SERC School" in India.
- (2) Pdf 491 KB, 1 page.  
Announcement for Year 2011 "International Conference on Mathematical Sciences (ICMS)" in honor of Prof. A. M. Mathai.

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Dear ISWI Participant:

Dr Hans Haubold (UN Office for Outer Space Affairs) prepared the following text (between +s and &s) to help bring to your attention two workshops that will be convened in India -- one this year and one early next year.

Firstly,

+  
Space weather is the conditions on the Sun and in the solar wind, magnetosphere, ionosphere and thermosphere that can influence the performance and reliability of space-borne and ground-based technological systems and can endanger human life or health.

&

Secondly,

+  
... we note the fact that the solar wind, magnetosphere, ionosphere, and thermosphere are partly/fully ionized plasma. These environments are driven non-linear non-equilibrium systems. The Sun injects matter, momentum, energy, and magnetic fields into this environment in a highly variable way. The IHY/ISWI instruments observe/record time series with strong variations in a variable. Tsallis' non-extensive statistical mechanics, considered to be a viable generalization of Boltzmann-Gibbs statistical mechanics, may allow a physical explanation of these variations in terms of departure from thermodynamic equilibrium. We will select time series and explore their underlying deterministic and/or stochastic processes by looking at stochastic models based on Mathai's statistical contributions to Tsallis' theory.

The 2010 SERC School [Editor: see the first attached pdf] will provide mathematics and statistics for the above models for a selected number of scholars. The 2011 Mathai event [Editor: see the second attached pdf] will review the mathematics and statistics as utilized in the past twenty years in basic space science and IHY workshops (as discussed in the 2009 Daejeon workshop).

&

That is all for this issue.  
Kind regards,

George Maeda  
SERC-KU (staff member), Editor of ISWI Newsletter

**Please post**



**Department of Science and Technology,  
Government of India, New Delhi (DST) sponsored  
2010 SERC School at CMS Pala Campus  
[8<sup>th</sup> SERC School at CMS]**

on

Matrix Variable Calculus and Statistical Distribution Theory and Applications in Data  
Analysis, Model Building and Astrophysics Problems

**Theme for 2010: Stochastic Models**

Organized by the

**DST Centre for Mathematical Sciences  
South, Pala and Hill Area Campuses (CMS)**

[Arunapuram P.O, Pala, Kerala 686574, India; Phone/fax 04822 216317

E-mail: [cmspala@gmail.com](mailto:cmspala@gmail.com); website: [www.cmsintl.org](http://www.cmsintl.org) ]

All-India selection: **30 seats**

Dates : **12<sup>th</sup> April 2010 to 14<sup>th</sup> May 2010, five weeks**

Venue : **CMS Pala Campus**

All expenses met by DST

**ELIGIBILITY**

Young faculty below 35 years at any college or university or other institution in India,  
Ph.D degree holders, post-doctoral fellows, others interested in research

**Minimum qualification:**

B.Sc (Mathematics), M.Sc in Mathematics/ Statistics/ Theoretical Physics/  
Theoretical Compute Science – first classes throughout

**Closing date of applications: 28<sup>th</sup> February 2010**

**Topics to be covered**

Multivariable and matrix-variable calculus. Statistical or non-deterministic models.  
Regression type and design type models. Stochastic processes, and time series  
models. Fundamentals of fractional calculus and its applications. Mathai's pathway  
model and its generalizations and applications in various fields including reaction-  
diffusion problems. Order statistics and reliability models.

**Faculty:** Top researchers in these areas will be the faculty.

Proposed main resource persons for the 2010 SERC School: Dr F. Mainardi (Italy), Dr H.J. Haubold (United Nations), Dr A.M. Mathai (Canada/India), Dr R.K. Saxena (Jodhpur), Dr D.V. Pai (IIT Bombay and IIT Gandhinagar), Dr K.K. Jose (India), Dr Yageen Thomas (India), Dr D. Kundu (IIT Kanpur), Dr Ashis SenGupta (ISI, Kolkata ) plus others.

**Lectures**  
**Monday-Friday**

First lecture: 08.30-10.30. Coffee plus first problem session: 10.30-13.00 hrs

Second lecture: 14.00-16.00hrs; Coffee plus second problem session 16.00-18.00hrs

**No lectures on Saturdays and Sundays**

Attendance in every lecture and every problem-solving session is compulsory. Regular class-tests. For Indian participants, all expenses will be met by CMS, including to and fro second class train travel, local accommodation, food and study materials. Best opportunity to learn the subject matter from the top researchers in the field.

**Apply on plain paper (no fees) to the Director, CMS,** with full cv, showing date of birth, marital status, educational background, E-mail ID, phone number (mobile, if any) and copies of all certificates starting with high school. Advance application can be sent by e-mail but signed hard copy is needed for final consideration.

**Free and voluntary TeX, LaTeX, MAPLE/ MATHEMATICA/ SAS/ SPSS training during weekends.**

One to two free educational tours during two Saturdays.

**Address for correspondence:**



**CENTRE FOR MATHEMATICAL SCIENCES PALA CAMPUS,  
ARUNAPURAM P. O., PALA, KERALA -686574, INDIA  
Phone/fax 91+4822 216317 (04822 216317)  
E-mail: [cmapala@gmail.com](mailto:cmapala@gmail.com); Website: [www.cmsintl.org](http://www.cmsintl.org)**

## 2010 SERC School

on

**Multivariable and matrix-variable calculus and statistical distributions theory:**

**Applications in data analysis, model building and astrophysics problems:**

(8<sup>th</sup> School in the sequence of SERC Schools at CMS)

**2010 theme: Stochastic Modeling**

### Proposed dates and arrangements

**Tentative dates:** Monday 12<sup>th</sup> April 2010 to Friday 14<sup>th</sup> May 2010

**Duration:** Five weeks

**Closing date of applications:** 28<sup>th</sup> February 2010 (Sunday)

**Selection committee meeting:** 1<sup>st</sup> March 2010 (Monday)

**Information goes out on :** 1<sup>st</sup> March 2010 (Monday)

**Arrival of participants** 10<sup>th</sup>, 11<sup>th</sup> April 2010 (Saturday & Sunday)

**Classes start on** 12<sup>th</sup> April 2010 (Monday) at 08.30 hrs

**Course coordinator:** Dr A.M. Mathai (CMS Pala Campus)

**Co-coordinator** Dr K.K. Jose (CMS Pala Campus)

**Proposed main lecturers:** Dr A.M. Mathai (Canada/India), Dr D.V. Pai (India), Dr F. Mainardi (Italy), Dr H.J. Haubold (Austria), Dr K.K. Jose (India), Dr Yageen Thomas (India) plus more

**Problem session supervision:** The main lecturers plus Dr Joy Jacob, Dr Seemon Thomas, Dr Sebastian George, Dr Sunil Mathew, Dr Vincent Mathew, Dr Shanoja R. Naik, plus more

### Proposed tentative timetable



**2010 SERC School**

**at**

**CMS Pala Campus**

**12<sup>th</sup> April to 14<sup>th</sup> May 2010**

## PROPOSED TIMETABLE

Saturday 10<sup>th</sup>, Sunday 11<sup>th</sup> April 2010: participants arrive and settle

### Week 1, Day 1, Monday 12<sup>th</sup> April 2010

- 08.30-9.00 Informal talk to the participants by the Course Director Dr A.M. Mathai
- 09.00-09.45 **Inaugural session**
1. **Prayer**
  2. **Welcome:**  
Dr K.K. Jose (Principal, St. Thomas College Pala)
  3. **About SERC School** and congratulating the national prize winners  
Dr A.M. Mathai (Director of 2010 SERC School)
  4. **Presidential address and inauguration**  
(to be selected)  
Presidential address and inauguration by lighting the ceremonial lamp
  5. **Vote of thanks**  
Dr Joy Jacob (Head, Department of Statistics, St. Thomas College Pala)
  6. **National anthem**
- 09.45-10.00 Coffee break
- 10.00-11.00 Library hour
- 11.00-13.00 Lecture 1.1: Dr A.M. Mathai [Model building: deterministic models]
- 13.00-14.00 Lunch
- 14.00-16.00 Lecture 1.2: Dr A.M. Mathai [Model building: deterministic models]
- 16.00-18.00 Tea + problem session (course assistant & Dr A.M. Mathai)

### Week 1, Day 2, Tuesday 13<sup>th</sup> April 2010

- 08.30-10.30 Lecture 1.3: Dr A.M. Mathai [Model building: deterministic models]
- 10.30-13.00 Tea + problem session (course assistnt & Dr A.M. Mathai)
- 13.00-14.00 Lunch
- 14.00-16.00 Lecture 1.4: Dr A.M.Mathai [Model building: deterministic models]
- 16.00-18.00 Tea + problem session (course assistant & Dr A.M. Mathai)

### Week 1, Day 3, Wednesday 14<sup>th</sup> April 2010

- 08.30-10.30 Lecture 1.5: Dr A.M. Mathai [Model building: deterministic models]
- 10.30-13.00 Tea + problem session (course assistant & Dr A.M. Mathai)
- 13.00-14.00 Lunch
- 14.00-16.00 Lecture 1.6: Dr A.M. Mathai [Model building: deterministic models]
- 16.00-18.00 Tea + problem session (course assistant& Dr A.M. Mathai)

### Week 1, Day 4, Thursday 15<sup>th</sup> April 2010

- 08.30-10.30 Lecture 1.7: Dr A.M. Mathai [Statistical preliminaries]

10.30-13.00 Tea + problem session (Dr Joy Jacob & Dr A.M. Mathai)  
13.00-14.00 Lunch  
14.00-16.00 Lecture 1.8: Dr A.M. Mathai [Statistical preliminaries]  
16.00-18.00 Tea + problem session (Dr Joy Jacob & Dr. A.M. Mathai)

**Week 1, Day 5, Friday 16<sup>th</sup> April 2010**

0.8.30-10.30 Lecture 1.9: Dr A.M. Mathai [Statistical preliminaries]  
10.30-13.00 Tea + problem session (Dr Joy Jacob & Dr. A.M. Mathai)  
13.00-14.00 Lunch  
14.00-15.30 Lecture 1.10: Dr A.M. Mathai [Statistical preliminaries]  
15.30-16.30 Tea + written test 1 (Dr A.M. Mathai)  
16.30-18.00 Quiz 1(Dr A.M. Mathai)

Saturday, Sunday: **free, no lectures or problem sessions**

**Saturday 17<sup>th</sup> April 2010:**

**08.30-21.00 Free conducted educational tour to Vaagamon**

**Sunday 18<sup>th</sup> April 2010:**

**10.00-18.00 Voluntary free TEX training (Dr Joy Jacob)**

**Week 2, Day 1, Monday 19<sup>th</sup> April 2010**

08.30-10.30 Lecture 2.1: Dr A.M. Mathai [Joint and conditional distributions]  
10.30-13.00 Tea + problem session (Dr Joy Jacob & Dr. A.M. Mathai)  
13.00-14.00 Lunch  
14.00-16.00 Lecture 2.2: Dr A.M. Mathai [Conditional expectation]  
16.00-18.00 Tea + problem session (Dr Seemon Thomas & Dr A.M. Mathai)

**Week 2, Day 2, Tuesday 20<sup>th</sup> April 2010**

08.30-10.30 Lecture 2.3: Dr A.M. Mathai [Model building: single variable case]  
10.00-13.00 Tea + problem session (Dr Seemon Thomas & Dr A.M. Mathai)  
13.00-14.00 Lunch  
14.00-16.00 Lecture 2.4: Dr A.M. Mathai [Model building: multivariable case]  
16.00-18.00 Tea + problem session (Dr Seemon Thomas & Dr A.M. Mathai)

**Week 2, Day 3, Wednesday 21<sup>st</sup> April 2010**

08.30-10.30 Lecture 2.5: Dr A.M. Mathai [Regression and correlation]  
10.30-13.00 Tea + problem session (Dr Seemon Thomas & Dr A.M. Mathai)  
13.00-14.00 Lunch  
14.00-16.00 Lecture 2.6: Dr A.M. Mathai [Regression and correlation]  
16.00-18.00 Tea + problem session (Dr Seemon Thomas & Dr A.M. Mathai)

**Week 2, Day 4, Thursday 22<sup>nd</sup> April 2010**

08.30-10.30 Lecture 2.7: Dr A.M.Mathai [Correlation analysis]  
10.30-13.00 Tea + problem session (Shanoja R. Naik & Dr A.M.Mathai)  
13.00-14.00 Lunch  
14.00-16.00 Lecture 2.8 : Dr A.M. Mathai [Multiple and partial correlations]  
16.00-18.00 Tea + problem session (Dr Seemon Thomas & Dr K. K. Jose)

**Week 2, Day 5, Friday 23<sup>rd</sup> April 2010**

08.30-10.30 Lecture 2.9: Dr A.M.Mathai [Recent results]  
10.30-13.00 Tea + problem session (Shanoja R. Naik & Dr A.M. Mathai)  
13.00-14.00 Lunch  
14.00-15.30 Lecture 2.10: Dr A.M. Mathai [Recent results]  
15.30-16.30 Written test 2 (Dr A.M. Mathai)  
16.30-18.00 Quiz 2 (Dr A.M.Mathai)

Saturday, Sunday: free, no lectures or problem sessions  
**Saturday 24<sup>th</sup> April 2010, free voluntary TEX/ Maple training  
09.00-18.00hrs (Dr Seemon Thomas)**  
**Sunday 25<sup>th</sup> April 2010, free voluntary TEX/Maple training  
10.00-18.00hrs (Dr Joy Jacob)**

**Week 3, Day 1, Monday, 26<sup>th</sup> April 2010**

08.30-10.30 Lecture 3.1: Dr D.V. Pai [Multivariable calculus]  
10.30-13.00 Tea + problem session (Dr D.V. Pai)  
13.00-14.00 Lunch  
14.00-16.00 Lecture 3.2: Dr D.V. Pai [Multivariable calculus]  
15.30-18.00 Tea + problem session (Dr D.V. Pai)

**Week 3, Day 2, Tuesday 27<sup>th</sup> April 2010**

08.30-10.30 Lecture 3.3: Dr D.V. Pai [Multivariable calculus]  
10.30-13.00 Tea + problem session (Dr D.V. Pai)  
13.00-14.00 Lunch  
14.00-16.00 Lecture 3.4: Dr D.V. Pai [Multivariable calculus]  
16.00-18.00 Tea + problem session (Dr D.V. Pai)

**Week 3, Day 3, Wednesday 28<sup>th</sup> April 2010**

08.30-10.30 Lecture 3.5: Dr D.V. Pai [Multivariable calculus]  
10.30-13.00 Tea + problem session (Dr D.V. Pai)  
13.00-14.00 Lunch  
14.00-16.00 Lecture 3.6: Dr D.V. Pai [Multivariable calculus]  
16.00-18.00 Tea + problem session (Dr D.V. Pai)

**Week 3, Day 4, Thursday 29<sup>th</sup> April 2010**

08.30-10.30 Lecture 3.7: Dr A.M. Mathai [Matrix variable calculus]/guest  
10.30-13.00 Tea + problem session (Dr A.M. Mathai)/guest  
13.00-14.00 Lunch  
14.00-16.00 Lecture 3.8: Dr A.M. Mathai [Matrix variable calculus]/guest  
16.00-18.00 Tea + problem session (Dr A.M. Mathai)/guest

**Week 3, Day 5, Friday 30<sup>th</sup> April 2010**

08.30-10.00 Lecture 3.9: Dr A.M. Mathai [Matrix variable calculus]/guest  
10.00-12.00 Tea + problem session (Dr A.M. Mathai)/guest  
12.00-13.00 Library hour  
13.00-14.00 Lunch  
14.00-15.30 Lecture 3.10: Dr A.M. Mathai [Matrix variable calculus]/guest  
15.30-16.30 Tea + written test 3 (Dr D.V. Pai & Dr A.M. Mathai)/guest  
16.30-18.00 Quiz 3(Dr A.M. Mathai )

Saturday, Sunday: **free, no classes or problem sessions**

**Saturday 1<sup>st</sup> May 2010: 08.30-21.00hrs: Conducted educational tour: Kumarakom**  
**Sunday, 2<sup>nd</sup> May 2010: voluntary Maple, SAS training**  
**10.00-18.00hrs (Dr Joy Jacob)**

**Week 4, Day 1, Monday 3<sup>rd</sup> May 2010**

08.30-10.30 Lecture 4.1: Dr F. Mainardi [Fractional calculus]  
10.30-13.00 Tea + problem session (Dr F. Mainardi)  
13.00-14.00 Lunch  
14.00-16.00 Lecture 4.2: Dr F. Mainardi [Fractional calculus]  
16.00-18.00 Tea + problem session (Dr F. Mainardi)

**Week 4, Day 2, Tuesday 4<sup>th</sup> May 2010**

08.30-10.30 Lecture 4.3: Dr F. Mainardi [Fractional calculus]  
10.30-13.00 Tea + problem session (Dr F. Mainardi)  
13.00-14.00 Lunch  
14.00-16.00 Lecture 4.4: Dr F. Mainardi [Fractional calculus]  
16.00-18.00 Tea + problem session (Dr F. Mainardi)

**Week 4, Day 3, Wednesday 5<sup>th</sup> May 2010**

08.30-10.30 Lecture 4.5: Dr F. Mainardi [Fractional calculus]  
10.30-13.00 Tea + problem session (Dr F. Mainardi)  
13.00-14.00 Lunch  
14.00-16.00 Lecture 4.6: Dr F. Mainardi [Fractional calculus]  
16.00-18.00 Tea + problem session (Dr F. Mainardi)

#### **Week 4, Day 4, Thursday 6<sup>th</sup> May 2010**

- 08.30-10.30 Lecture 4.7: Dr F. Mainardi [Fractional calculus] /guest  
10.30-13.00 Tea + problem session (Dr F. Mainardi) /guest  
13.00-14.00 Lunch  
14.00-16.00 Lecture 4.8: Dr F. Mainardi [Fractional calculus] /guest  
16.00-18.00 Tea + problem session (Dr F. Maiardi)/guest

#### **Week 4, Day 5, Friday 7<sup>th</sup> May 2010**

- 08.30-10.00 Lecture 4.9: Dr F. Mainardi [Fractional calculus] /guest  
10.00-12.00 Tea + problem session (F. Mainardi) /guest  
12.00-13.00 Library hour  
13.00-14.00 Lunch  
14.00-15.30 Lecture 4.10: Dr F. Mainardi [Fractional calculus] /guest  
15.30-16.30 Written test 4 (Dr F. Mainardi)  
16.30-18.00 Quiz 4 (Dr F. Mainardi)

Saturday, Sunday: **free, no lectures or problem sessions**

**Saturday 8<sup>th</sup> May 2010: voluntary Maple, SAS training  
09.30-17.00hrs (Dr Joy Jacob)**

**Sunday 9<sup>th</sup> May 2010: voluntary TEX, SAS training  
10.00-17.00hrs (Dr Joy Jacob)**

#### **Week 5, Day 1, Monday 10<sup>th</sup> May 2010**

- 08.30-10.30 Lecture 5.1: Dr K.K. Jose [Time series modeling]  
10.30-13.00 Tea + problem session (Dr K.K. Jose & Dr Shanoja R. Naik)  
13.00-14.00 Lunch  
14.00-16.00 Lecture 5.2: Dr K.K. Jose [Time series modeling]  
16.00-18.00 Tea + problem session (Dr K.K. Jose & Dr. Shanoja R. Naik)

#### **Week 5, Day 2, Tuesday 11<sup>th</sup> May 2009**

- 08.30-10.30 Lecture 5.3: Dr K.K. Jose [Time series modeling]  
10.30-13.00 Tea + problem session (Dr K.K. Jose & Dr Shanoja R. Naik)  
13.00-14.00 Lunch  
14.00-16.00 Lecture 5.4: Dr K.K. Jose [Time series modeling]  
16.00-18.00 Tea + problem session (Dr K.K. Jose & Dr. Shanoja R. Naik)

#### **Week 5, Day 3, Wednesday 12<sup>th</sup> May 2010**

- 08.30-10.30 Lecture 5.5: Dr Yageen Thomas [Order statistic, reliability]  
10.30-13.00 Tea + problem session (Dr Yageen Thomas)  
13.00-14.00 Lunch  
14.00-16.00 Lecture 5.6: Dr Yageen Thomas [Order statistics, reliability]

16.00-18.00 Tea + problem session (Dr Yageen Thomas)

**Week 5, Day 4, Thursday 13<sup>th</sup> May 2010**

08.30-10.30 Lecture 5.7: Dr H.J. Haubold [Tsallis statistics and superstatistics]  
10.30-13.00 Tea + problem session (Dr H.J. Haubold & Dr Vincent Mathew)  
13.00-14.00 Lunch  
14.00-16.00 Lecture 5.8: Dr H.J. Haubold [Generalized entropies]  
16.00-18.00 Tea + problem session (Dr H.J. Haubold & Dr Vincent Mathew)

**Week 5, Day 5, Friday 14<sup>th</sup> May 2010**

08.30-09.30 Written test 5 (Dr H.J. Haubold)  
09.30-12.00 Quiz 5 (Dr H.J. Haubold)

**Valedictory session**

12.00-13.00 Program

**1. Prayer**

**2. Welcome :**

(Dr K.K. Jose, Principal, St. Thomas College Palai)

**3. Inauguration of the session**

(Dr Hans Haubold, by lighting the ceremonial lamp)

**4. Felicitation and Distribution of certificates**

(Dr Ashok K. Singh (DST, New Delhi))

**5. Presidential address and distribution of prizes**

(Dr Hans J. Haubold)

**6. Remarks by the participants**

**7. Comments**

(Dr A.M. Mathai)

**8. National Anthem**

13.00-14.00 Lunch

From 14.00 on Friday, Saturday 15<sup>th</sup>, Sunday 16<sup>th</sup>, Monday 17<sup>th</sup> and Tuesday 18<sup>th</sup> :  
**departures of participants.**

**ANNEXURE –I** (format of the first circular)

(Format of the proposed first circular to universities, colleges and other institutes all across India)

**Department of Science and Technology,  
Government of India, New Delhi (DST) sponsored**

# 2010 SERC School

on

Matrix Variable Calculus and Statistical Distribution Theory and Applications in Data Analysis, Model Building and Astrophysics Problems

(12<sup>th</sup> April 2010 to 14<sup>th</sup> May 2010, five weeks)

Organized by the



## Centre for Mathematical Sciences South, Pala and Hill Area Campuses (CMS)

All-India selection: **30 seats**

All expenses met by DST

### ELIGIBILITY

Young faculty below 35 years at any college or university or other institution in India, Ph.D degree holders, post-doctoral fellows, others interested in research

### Minimum qualification:

B.Sc (Mathematics), M.Sc in Mathematics/ Statistics/ Theoretical Physics/ Theoretical Compute Science – first classes throughout. Desirable: exposure to basic probability and statistics and good background in calculus

**Closing date of applications: 28<sup>th</sup> February 2010**

Multivariable and matrix-variable calculus, statistical distribution theory and basic analysis are important tools for tackling serious problems in applied mathematics, physics and engineering. For dealing with more advanced problems in various disciplines it became necessary to develop the theory of generalized functions, and matrix-variable functions. Quadratic forms and bilinear forms in complex Gaussian variables have found many applications in sonar, radar and other communication problems and engineering recently. Matrix variable functions are useful tools for handling generalized quadratic and bilinear forms. For dealing with spherically symmetric and elliptically contoured distributions matrix variable calculus is essential. These generalized distributions have applications in many areas. Currently, during 2000-2009, there is a great revival of the area of generalized special functions and matrix variable functions because they found ready applications in reaction-diffusion problems in physics, stochastic processes (Mittag-Leffler and alpha Laplace processes), Mathai's pathway models, and in the current hot topics of Tsallis statistics and superstatistics. The proposed School will cover the above topics to provide

knowledge to research workers so that they will be fully equipped to deal with stochastic models, which are applied in a wide variety of fields such as biological modeling, financial modeling, demographic modeling, reliability modeling etc.

### **Topics to be covered**

Multivariable and matrix-variable calculus. Statistical or non-deterministic models. Regression type and design type models. Stochastic processes, and time series models. Fundamentals of fractional calculus and its applications. Mathai's pathway model and its generalizations and applications in various fields including reaction-diffusion problems. Order statistics and reliability models.

**Venue:** The 2010 SERC School will be held in the picturesque Pala (Kerala) area, in calm and quiet atmosphere. Admission is open to all with the minimum qualifications irrespective of nationality, sex, caste or creed.

Apply on plain paper with all the following details (if details are incomplete such applications will not be considered. Advance e-mail applications can be made to open a file but signed hard copies are needed for final consideration.): Name, age, male/female, married /single, full address, e-mail, phone number, copies (not originals) of all certificates, one paragraph detailing why you wish to participate plus permission certificate if employed and a self addressed empty envelope with Rs 5/- stamp affixed if acknowledgement is required.

### **Faculty**

Top researchers in these areas will be the faculty.

**Proposed resource persons** for the 2010 SERC School: Dr F. Mainardi (Italy), Dr H.J. Haubold (Austria), Dr A.M. Mathai (Canada/India), Dr R.K. Saxena (Jodhpur), Dr D.V. Pai (IIT Bombay and IIT Gandhinagar), Dr K.K. Jose (India), Dr Yageen Thomas (India).

**Proposed guest lecturers:** Dr G. Rangarajan (IISc, Bangalore), Dr B.N. Bhattacharya (ISI, Kolkatta), Dr D. Kundu ( IIT Kanpur), Dr Ashish Sen Gupta (IS, Kolkatta), Dr. M.K. Ghosh (IISc Bangalore), Dr K. Suresh (IIT Bombay).

### **Lectures**

#### **Monday-Friday**

First lecture: 08.30-10.30. Coffee plus first problem session: 10.30-13.00 hrs  
Second lecture: 14.00-16.00hrs; Coffee plus second problem session 16.00-18.00hrs

#### **No lectures on Saturdays and Sundays**

Attendance in every lecture and every problem-solving session is compulsory. No part-time attendance. Class tests in every week, cumulative grades will appear on the certificate. For Indian participants, all expenses will be met by CMS, including to and

fro second class train travel, local accommodation, food, study materials, stationery etc. Foreign participants must come with return international air tickets and valid visas. Their local hospitality and study materials will be met by CMS.

**Free and voluntary TeX, LaTeX, MAPLE/ MATHEMATICA/ SAS/ SPSS training during weekends.**

One to two free educational tours during two Saturdays.

**Address for correspondence:**



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CMS Pala  
12<sup>th</sup> September 2009

Dr A.M. Mathai  
Director

**ICMS 2011: "International Conference on Mathematical Sciences in honour of Professor A.M.Mathai"**

January 3-5, 2011

Venue: St Thomas College Pala, Kottayam - 686 574, Kerala, INDIA

[www.stcp.ac.in](http://www.stcp.ac.in)**International Organizing Committee**

Prof. H. J. Haubold (Chairman),  
United Nations Office at Vienna (Austria)  
Prof. Thomas Mathew,  
University of Maryland (USA)  
Prof. R. K. Saxena,  
JNV University, Jodhpur (India)  
Prof. A. A. Kilbas,  
Belarusian State University (Belarus)  
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University of Bologna (Italy)  
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Alex Thannippara  
Sebastian George  
Benny Kurian  
Seemon Thomas (Co-ordinator)  
Dilip Kumar  
Vishnudas V.

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St Thomas College Pala is one of the first institutions in India to introduce masters program in Statistics. To celebrate the 75th birth anniversary of Professor A.M. Mathai who is one of our prestigious alumni and former faculty, we organize an international conference in his honour during January 3-5, 2011. For a cv of Professor A.M. Mathai log on to [www.math.mcgill.ca/mathai/](http://www.math.mcgill.ca/mathai/).

The International Conference on Mathematical Sciences (ICMS 2011) aims to bring together academic scientists and researchers to exchange and share their experiences and research findings in Mathematical Sciences, and discuss the practical challenges encountered and the solutions adopted. To promote international participation of researchers from outside India, foreign experts are proposed as invited speakers. The section titles of ICMS-2011 include but are not limited to:

Integral transforms and special functions; Differential equations and applications; Integral, difference, functional equations and fractional calculus; Real and complex analysis; Applied problems of analysis; Theoretical and applied problems of mechanics; Astrophysics; Distribution theory; Stochastic processes; Statistical inference; Multivariate analysis; Mathematical and stochastic modeling; Computation and simulation.

**Call for Abstracts**

The organizers will accept papers for presentation at the conference subject to approval by referees. Please send abstracts electronically (preferably in LaTeX or Word format) to Dr. Joy Jacob at the email address [jjstc2000@yahoo.com](mailto:jjstc2000@yahoo.com). The title of the abstract must be followed by the name(s) of the author(s) (please underline the name of the presenter), their affiliation(s) and e-mail address (es), the body of the abstract, AMS classification numbers, and up to five keywords.

**Deadline for submission of abstract: 31 August 2010.**

**Paper Submission**

All full papers will be peer reviewed and chosen based on originality, content, correctness, relevance to conference, contributions and readability. Prospective authors are kindly invited to submit full text including results, tables, figures and references. Full text (.doc, .tex with .pdf) will be accepted only by electronic submission through [seemonpala@rediffmail.com](mailto:seemonpala@rediffmail.com) or [jjstc2000@yahoo.com](mailto:jjstc2000@yahoo.com).

**Deadline for submission of full manuscript: 30 September 2010.**

**Special Journal Issue**

All submitted papers in ICMS 2011 will have opportunities for consideration for a Special Issue of a reputed international journal. The selection will be carried out during the review process as well as at the conference presentation stage. Submitted papers must not be under consideration by any other journal for publication. The final decision will be made based on peer review reports by the guest editors and the Editor-in-Chief jointly.

**Important Dates**

Submission of abstract	by August 31, 2010
Submission of full manuscript	by September 30, 2010
Notification of acceptance for presentation	by October 15, 2010
Conference dates	January 3-5, 2011

**Registration**

All participants will have to be registered and the registration form in word format is available from [www.stcp.ac.in](http://www.stcp.ac.in). Early registration is recommended since the number of participants will be limited.

Registration Fees	For foreign participants	For Indian participants
By October 31, 2010	US \$150.00	Rs 1200
Between November 1, 2010 and December 31, 2010	US \$175.00	Rs 1300
After December 31, 2010	US \$200.00	Rs 1500

Students and local participants who do not require accommodation are allowed a reduction of US \$50 or Rs 400 in the above tariffs. Registration fee includes:

Food and moderate accommodation in the guest house during conference days, conference materials, banquet and entertainment programs.

Registration fee can be transferred electronically to: A/c- Co-ordinator ICMS 2011, Account No. 0453053000006856, South Indian Bank, Arunapuram, India. For transfer in India (RTGS or NEFT) use IFSC Code: SIBL0000453. For international transfer use SWIFT Code: SOININ 55. Electronic transfer of fee must be indicated with full reference in the registration form.

Please send completed registration form through email or by post to: Seemon Thomas, Co-ordinator, ICMS 2011, Department of Statistics, St. Thomas College, Pala-686 574, INDIA, Ph: +91-4822-201288, Fax: +91-4822-216313, Email: [seemonpala@rediffmail.com](mailto:seemonpala@rediffmail.com), [seemon@stcp.ac.in](mailto:seemon@stcp.ac.in).

Presentation certificate will be issued to those who present papers, and all others will be issued attendance certificate provided they attend all sessions.

Technical Equipments for Electronic PowerPoint/Acrobat Presentations will be available. For more details regarding the conference log on to our website [www.stcp.ac.in](http://www.stcp.ac.in).

Information concerning hotels and their charges will be provided later. We also plan to have a cultural event, and a short sightseeing trip.

For details regarding nearby places of tourist interest log on to [www.keralatourism.org](http://www.keralatourism.org).