

TENTATIVE TAIME TABLE

FOR THE 2005 SERC SCHOOL ON

SPECIAL FUNCTIONS, FUNCTIONS OF MATRIX ARGUMENT :

Recent Developments and Recent Applications in Statistics and Astrophysics

[Changes may be made according to the arrival at the venue of the main lecturers]

12th, 13th March 2005, Saturday, Sunday: Arrival of the participants

Inaugurated on 14th March 2005 observing the International Year of Physics at the Occasion of Albert Einstein's Annus Mirabilis

Week 1, Day 1, Monday, 14th March 2005

- 08.30-09.15 Informal talk to the participants by the Course Director Dr.A.M.Mathai
- 09.30-11.00 **Inaugural session**
- 11.00-13.00 Lecture 1.1: Dr. A.M. Mathai [Gamma, beta, psi, zeta functions]
13.00-14.00 Lunch
- 14.00-15.00 **Guest lecture:** Dr.A.Sukumaran Nair [Topic relevant to the School]
- 15.00-16.00 Lecture 1.2: Dr. A.M. Mathai [Hypergeometric series]
- 16.00-18.00 Tea + problem session (Dr. Alex Thannippara & Dr. Sebastian George)

Week 1, Day 2, Tuesday, 15th March 2005

- 08.30-10.30 Lecture 1.3: Dr.A.M.Mathai [Contour evaluations, series forms]
10.30-13.00 Tea + problem session (Dr. Alex Thannippara & Dr. Sebastian George)
- 13.00-14.00 Lunch
- 14.00-16.00 Lecture 1.4: Dr.A.M.Mathai [G and H-functions]
- 16.00-18.00 Tea + problem session (Dr. Alex Thannippara & Dr. Sebastian George)

Week 1, Day 3, Wednesday, 16th March 2005

- 08.30-10.30 Lecture 1.5: Dr.A.M. Mathai [Special cases of G and H-functions]
10.30-13.00 Tea + problem session (Dr. Alex Thannippara & Dr. Sebastian George)
- 13.00-14.00 Lunch
- 14.00-16.00 Lecture 1.6: Dr.A.M.Mathai [Statistical distributions]
- 16.00-18.00 Tea + problem session (Dr. Alex Thannippara & Dr. Sebastian George)

Week 1, Day 4, Thursday, 17th March 2005

08.30-10.30 Lecture 1.7: Dr. S.B. Provost [Density estimation and special functions]
10.30-13.00 Tea + problem session (Dr. Alex Thannippara & Dr. Sebastian George)
13.00-14.00 Lunch
14.00-16.00 Lecture 1.8: Dr. S.B. Provost [Density estimation, recent results]
16.00-18.00 Tea + problem session (Dr. Alex Thannippara & Dr. Sebastian George)

Week 1, Day 5, Friday 18th March 2005

08.30-10.30 Lecture 1.9: Dr. S.B. Provost [Density estimation, recent results]
10.30-13.00 Tea + problem session (Dr. Alex Thannippara & Dr. Sebastian George)
13.00-14.00 Lunch
14.00-16.00 Lecture 1.10: Dr. S.B. Provost [Density estimation, recent results]
16.00-17.00 Tea + written test (Dr.A.M. Mathai and Dr. S.B. Provost)
17.00-18.00 Quiz (Dr.A.M. Mathai and Dr. S.B. Provost)

19th, 20th March 2005, Saturday, Sunday: **free, no lectures or problem sessions**

Week 2, Day 1, Monday, 21st March 2005

08.30-10.30 Lecture 2.1: Dr. R.K. Saxena [Fractional calculus]
10.30-13.00 Tea + problem session (Dr. K.K. Jose & Dr. K. Jayakumar)
13.00-14.00 Lunch
14.00-16.00 Lecture 2.2: Dr. R.K. Saxena [Fractional integration]
16.00-18.00 Tea + problem session (Dr.K.K. Jose & Dr. K. Jayakumar)

Week 2, Day 2, Tuesday, 22nd March 2005

08.30-10.30 Lecture 2.3: Dr. H.J. Haubold [Applications in astrophysics]
10.30-13.00 Tea + problem session (Dr. K.K. Jose & Dr. K. Jayakumar)
13.00-14.00 Lunch
14.00-16.00 Lecture 2.4: Dr. H.J. Haubold [Applications in astrophysics]
16.00-18.00 Tea + problem session

Week 2, Day 3, Wednesday, 23rd March 2005

08.30-10.30 Lecture 2.5: Dr. H.J. Haubold [Applications in astrophysics]
10.30-13.00 Tea + problem session (Dr. K.K. Jose & Dr. K. Jayakumar)
13.00-14.00 Lunch
14.00-16.00 Lecture 2.6: Dr. H.J. Haubold [Applications in astrophysics]
16.00-18.00 Tea + problem session (Dr. K.K. Jose & Dr. K. Jayakumar)

Week 2, Day 4, Thursday, 24th March 2005

08.30-10.30 Lecture 2.7: Dr. H.J. Haubold [Recent results]
11.00-12.00 Tea + written test (Dr. R.K. Saxena and Dr. H.J. Haubold)

12.00-13.00 Quiz (Dr. R.K. Saxena and Dr. H.J. Haubold)
13.00-14.00 Lunch

Monty Thursday: **afternoon session is cancelled**

Week 2, Day 5, Friday, 25th March 2005 (good Friday, holiday)

26th, 27th, Saturday, Sunday: **free, no lectures or problem sessions**

Week 3, Day 1, Monday, 28th March 2005

08.30-10.30 Lecture 3.1: Dr. R.K. Saxena [Reaction-diffusion problems]
10.30-13.00 Tea + problem session (Dr. Sebastian George & Dr. Benny Kurian)
13.00-14.00 Lunch
14.00-16.00 Lecture 3.2: Dr. R.K. Saxena [Reaction-diffusion problem]
16.00-18.00 Tea + problem session (Dr. Sebastian George & Dr. Benny Kurian)

Week 3, Day 2, Tuesday, 29th March 2005

08.30-10.30 Lecture 3.3: Dr. R.K. Saxena [Recent results]
10.30-13.00 Tea + problem session (Dr. Sebastian George & Dr. Benny Kurian)
13.00-14.00 Lunch
14.00-16.00 Lecture 3.4: Dr. R.K. Saxena [Recent results]
16.00-18.00 Tea + problem session (Dr. Sebastian George & Dr. Benny Kurian)

Week 3, Day 3, Wednesday, 30th March 2005

08.30-10.30 Lecture 3.5: Dr. R.N. Pillai and Dr. V. Seethalakshmi [Mittag-Leffler processes]
10.30-13.00 Tea + problem session (Dr. Sebastian George & Dr. Benny Kurian)
13.00-14.00 Lunch
14.00-16.00 Lecture 3.6: Dr. Alice Thomas [Mittag-Leffler process, recent results]
16.00-18.00 Tea + problem session (Dr. Sebastian George & Dr. Benny Kurian)

Week 3, Day 4, Thursday, 31st March 2005

08.30-10.30 Lecture 3.7: Dr. K. Jayakumar [Recent results]
10.30-13.00 Tea + problem session (Dr. Sebastian George & Dr. Benny Kurian)
13.00-14.00 Lunch
14.00-16.00 Lecture 3.8: Dr. K.K. Jose [Recent results]
16.00-18.00 No problem session (holiday)

Week 3, Day 5, Friday, 1st April 2005

08.30-10.30 Lecture 3.9: Dr. S. Satheesh [Recent results]
10.30-13.00 Tea + problem session (Dr. Sebastian George & Dr. Benny Kurian)

13.00-14.00 Lunch
14.00-16.00 Lecture 3.10: Dr. E. Sandhya [Recent results]
16.00-17.00 Tea + written test (Dr. K.K. Jose and Dr. K. Jayakumar)
17.00-18.0 Quiz (Dr. K. K. Jose and Dr. K. Jayakumar)

2nd, 3rd, Saturday, Sunday: **free, no classes or problem sessions (possible tour)**

Week 4, Day 1, Monday, 4th April 2005

08.30-10.30 Lecture 4.1: Dr. K.S.S. Nambooripad [Semigroups]
10.30-13.00 Tea + problem session (Dr. T.P. Johnson & Dr. Sunil C. Mathew)
13.00-14.00 Lunch
14.00-16.00 Lecture 4.2: Dr. K.S.S. Nambooripad [Semigroups]
16.00-18.00 Tea + problem session (Dr. T.P. Johnson & Dr. Sunil C. Mathew)

Week 4, Day 2, Tuesday, 5th April 2005

08.30-10.30 Lecture 4.3: Dr. S. Bhargava [q-hypergeometric functions]
10.30-13.00 Tea + problem session (Dr. T.P. Johnson & Dr. Sunil C. Mathew)
13.00-14.00 Lunch
14.00-16.00 Lecture 4.4: Dr. S. Bhargava [q-hypergeometric functions]
16.00-18.00 Tea + problem session (Dr. M. S. Samuel & Dr. Sunil C. Mathew)

Week 4, Day 3, Wednesday, 6th April 2005

08.30-10.30 Lecture 4.5: Dr. S. Bhargava [Recent results]
10.30-13.00 Tea + problem session (Dr. M. S. Samuel & Dr. Sunil C. Mathew)
13.00-14.00 Lunch
14.00-16.00 Lecture 4.6: Dr. S. Bhargava [Recent results]
16.00-18.00 Tea + problem session (Dr. M. S. Samuel & Dr. Sunil C. Mathew)

Week 4, Day 4, Thursday, 7th April 2005

08.30-10.30 Lecture 4.7: Dr. S. Bhargava [Recent results]
10.30-13.00 Tea + problem session (Dr. M. S. Samuel & Dr. Sunil C. Mathew)
13.00-14.00 Lunch
14.00-15.00 Lecture 4.8: **Guest Lecture**: Dr. V.K. Sharma [Applications]
15.00-16.00 Lecture 4.8: **Guest Lecture** : Dr. M.R. Kaimal (Applications)
16.00-18.00 Tea + problem session (Dr. M. S. Samuel & Dr. Sunil C. Mathew)

Week 4, Day 5, Friday, 8th April 2005

08.30-10.30 Lecture 4.9: Dr. S. Bhargava [Recent results]
10.30-13.00 Tea + problem session (Dr. M. S. Samuel & Dr. Sunil C. Mathew)
13.00-14.00 Lunch
14.00-15.00 Lecture 4.10: **Guest Lecture**: Dr. M.I. Jinnah [Applications]

- 15.00-16.00 Lecture 4.10: **Guest Lecture**: Dr. Yageen Thomas [Applications]
 16.00-17.00 Tea + written test (Dr. S. Bhargava)
 17.00-18.00 Quiz (Dr. S. Bhargava)

9th, 10th, Saturday, Sunday: **free, no lectures or problem sessions (possible tour)**

Week 5, Day 1, Monday, 11th April 2005

- 08.30-10.30 Lecture 5.1: Dr. Srinivasa Rao [Recent results]
 10.30-13.00 Tea + problem session (Dr. K.K. Jose)
 13.00-14.00 Lunch
 14.00-16.00 Lecture 5.2: Dr. Srinivasa Rao [Recent results]
 16.00-18.00 Tea + problem session (Dr. K.K. Jose)

Week 5, Day 2, Tuesday, 12th April 2005

- 08.30-10.30 Lecture 5.3: Dr. A.M. Mathai [Jacobians of matrix transformations]
 10.30-13.00 Tea + problem session (Dr.K. K. Jose)
 13.00-14.00 Lunch
 14.00-16.00 Lecture 5.4: Dr. A.M. Mathai [Jacobians of matrix transformations]
 16.00-18.00 Tea + problem session (Dr.K. K. Jose)

Week 5, Day 3, Wednesday, 13th April 2005

- 08.30-10.30 Lecture 5.5: Dr. A.M. Mathai [Functions of matrix argument]
 10.30-13.00 Tea + problem session (Dr. K. K. Jose & Dr. Sebastian George)
 13.00-14.00 Lunch
 14.00-16.00 Lecture 5.6: Dr. A.M. Mathai [Functions of matrix argument]
 16.00-18.00 Tea + problem session (Dr. K. K. Jose & Dr. Sebastian George)

Week 5, Day 4, Thursday, 14th April 2005

- 08.30-10.30 Lecture 5.7: Dr. A.M. Mathai [Recent results]
 10.30-13.00 Tea + problem session (Dr. K. K. Jose & Dr. Sebastian George)
 13.00-14.00 Lunch
 14.00-16.00 Lecture 5.8: Dr. A.M. Mathai [Recent applications]
 16.00-17.00 Tea + written test (Dr. A.M. Mathai)
 17.00-18.00 Quiz (Dr. A.M. Mathai)

Week 5, Day 5, Friday, 15th April 2005

- 08.30-10.30 TEX training at the lab (Seemon Thomas, Joy Jacob, K.M. Kurian)
 10.30-13.00 TEX training at the lab (Seemon Thomas, Joy Jacob, K.M. Kurian)
 13.00-14.00 Lunch

14.00-15.30 Valedictory session

From 15.30 on Friday, 15th April, 16th, 17th April 2005: **departures of participants** .

Note: If sufficient interest is there then **TEX** training will start from Monday 14th March 2005 onwards, possibly 18.00-19.30 hrs. Training in the use of statistical packages will also be arranged if there is interest among the participants.

Conducted tours:

Depending upon the funds available, there will be one or two conducted tours during two weekends. Tours are not compulsory. Only those who wish to participate need to join any of the proposed tours.

Proposed tour 1: Saturday 19th March 2005

Start at 08.30 hrs, after breakfast, on Saturday 19th March 2005, reach Vaagamon area and see the rolling hills, pine gardens etc. Then by 18.00 hrs reach Kanjirappally, have dinner and reach back to Pala by 21.00 hrs. Transportation and the dinner at Kanjirappally will be paid for by the School. Daily allowance for food will be given and the participants pay for other meals on their own from the daily allowance.

Proposed tour 2: Saturday 9th April 2005

Start at 08.30 hrs, after breakfast, on Saturday 9th April 2005 and reach Kumarakom resort at Kottayam. Take boat trips at Vembanad lake (a favorite resort of the former Prime Minister Mr. Bajpai). Transportation and the boat trips will be paid for by the School. The participants pay for their meals, including evening meals, from their daily allowance; reach back to Pastoral Institute by 9.00 pm.

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THIRD S.E.R.C. SCHOOL
ON
SPECIAL FUNCTIONS AND FUNCTIONS
OF MATRIX ARGUMENT:

Recent Developments and Recent Applications
in
Statistics and Astrophysics

Sponsored by
DST, Government of India, New Delhi

(14th March – 15th April 2005)

TIME TABLE

February 2005