

Second Autumn School on High Energy Physics and Quantum Field Theory

October 6-10, 2014

Guesthouse of Yerevan State University

Program

6 October, Monday

- 08.45 - 09.15 **Registration**
- 09.15 - 09.30 **Opening**
- 09.30 - 10.30 **V. P. Nair**
“Geometric quantization and applications to fields and fluids”. Lecture 1

10.30 - 11.00 *Coffee break*

- 11.00 - 12.00 **V. P. Nair**
“Geometric quantization and applications to fields and fluids”. Lecture 2

12.00 - 14.00 *Lunch*

- 14.00 - 15.00 **Dmitri Kazakov**
“Supersymmetric extension of the Standard Model”. Lecture 1

15.00 - 15.30 *Coffee break*

- 15.30 - 16.30 **Dmitri Kazakov**
“Supersymmetric extension of the Standard Model.” Lecture 2:

16:30-16:45 *Break*

- 16.45 - 17.45 **Jarah Margar Evslin**
“Dimensional Analyses”

7 October, Tuesday

- 09.30 - 10.30 **V. P. Nair**

“Geometric quantization and applications to fields and fluids.” Lecture 3

10.30 - 11.00 *Coffee break*

- 11.00 - 12.00 **V. P. Nair**

“Geometric quantization and applications to fields and fluids”. Lecture 4

12.00 - 13.45 *Lunch*

14.00-15.30 **Visit to Matenadaran (Institute of Ancient Manuscripts)**

- 15.30 - 16.30 **Dmitri Kazakov**

“Supersymmetric extension of the Standard Model.” Lecture 3

16.30 - 17.00 *Coffee break*

- 17.00 - 18.00 **Dmitri Kazakov**

“Supersymmetric extension of the Standard Model.” Lecture 4

8 October, Wednesday

- 9.30 - 10.30 **T. Mannel**

“Introduction to effective quantum field theories.” Lecture 1

10.30 - 11.00 *Coffee break*

- 11.00 - 12.00 **T. Mannel**

“Introduction to effective quantum field theories”. Lecture 2

12.00 - 14.00 *Lunch*

- 14.00 - 15.00 **Feng-Kun Guo**

“Introduction to Chiral Perturbation Theory”. Lecture 1

15.00 - 15.30 **Coffee break**

- 15.30 - 16.30 **Feng-Kun Guo**

“Introduction to Chiral Perturbation Theory”. Lecture 2

16.30 - 16.45 *Break*

- 16.45 - 17.45 **Boris Ioffe**

“Origin of the proton mass in Quantum Chromodynamics”

19.00 Dinner in home-style restaurant

9 October, Thursday

- 09.30 - 10.30 **T. Mannel**

“Introduction to effective quantum field theories”. Lecture 3

10.30 - 11.00 *Coffee break*

- 11.00 - 12.00 **T. Mannel**

“Introduction to effective quantum field theories”. Lecture 4

12.00 - 14.00 *Lunch*

- 14.00 - 15.00 **Feng-Kun Guo**

“Introduction to Chiral Perturbation Theory”. Lecture 3

15.00 - 15.30 *Coffee break*

- 15.30 - 16.30 **Feng-Kun Guo**

“Introduction to Chiral Perturbation Theory”. Lecture 4

16.30 - 16.45 *Break*

- 16.45 - 17.45 **Ashot Chilingarian**

“High energy physics in atmosphere: observations and models”

10 October, Friday

Mini-Workshop on Quantum Field Theory and Condensed Matter Physics

Chairman: Nerses Ananikian

- 9.30-10.15 **George Jorjadze**, Tbilisi State University
“S-Matrix of Liouville field theory”
- 10.15-10.45 **Gor Sarkissian**, Yerevan State University
“Defects in Liouville field Theory”
- 10.45-11.15 **Merab Gogberashvili**, Tbilisi State University
“Split Quaternions and Particles in $(2+1)$ -Space”

11.15 - 11.30 *Break*

- 11.30-12.15 **George Tsitsishvili**, Tbilisi State University
“Edge states in 2D lattices and Chebyshev polynomials”
- 12.15-12.45 **Vadim Ohanyan**, Yerevan State University
“Integrable model of magneto-electric effect”
- 12.45 Closing

13.00-19.00 Excursion to **Garni** and **Geghard**