

Preface

The International School and Conference on Foliations, Dynamical Systems, Singularity Theory and Perverse Sheaves was held in Samarkand State University, Samarkand, Uzbekistan (October 6 - 21, 2009). The main aim of this School and Conference was to bring together specialists, researchers and students working on various aspects of Algebraic Geometry, Foliation Theory and Dynamical Systems to discuss and develop the interactions among these subjects. Some areas of interest were: singularities in algebraic and analytic geometry, Hodge theory, local and global theory of foliations on varieties, the theory of D-modules and representation theory.

The academic program consisted of a School during the first week and a Conference during the second week. In the School there were courses on topics of current interest taught by leading experts. In the Conference there were Plenary Talks and Sessions on Dynamical Systems, on Foliations, on Hodge theory and perverse sheaves.

The participating institutions were Samarkand State University (Samarkand, Uzbekistan), National University of Uzbekistan (Tashkent, Uzbekistan), International Centre for Pure and Applied Mathematics CIMPA (Nice, France), International Mathematical Union IMU.

The event was organized by Fouad El Zein (IMJ, Paris, France), Sabir Gusein-Zade (Moscow, Russia), Rémi Langevin (Bourgogne, France), Le Dung Trang (ICTP, Trieste, Italy), David Massey (Northeastern, Boston, USA), Abdigappar Narmanov (Tashkent, Uzbekistan) and Ahmadjon Soleev (Samarkand, Uzbekistan).

This event, initiated by the International Centre for Theoretical Physics ICTP and organized jointly by the Samarkand State University, National University of Uzbekistan, has been generously supported by International Centre for Pure and Applied Mathematics CIMPA (Nice, France), and the International Mathematical Union IMU.

The following courses were offered in the work of School (October 6 - 10, 2009):

- Dynamical Systems - Professors Azamov A. (Tashkent, Uzbekistan) and Bruno A.D. (Moscow, Russia)
- Geometry of projective varieties, Singularities and Perverse sheaves - Professors Le Dung Trang (ICTP, Trieste, Italy), El Zein F. (IMJ, Paris, France), Gusein-Zade S. and Sadullaev A. (Tashkent, Uzbekistan)
- Foliations - Professor Langevin R. (France)

The programme of Conference (October 11 - 21, 2009), consisted of morning Plenary Lectures and the following afternoon Sessions:

- Singularity theory and perverse sheaves (coordinated by El Zein F.)
- Dynamical Systems (coordinated by Soleev A., Narmanov A.)
- Foliations and Catastrophe theory (coordinated by Chaperon M.)

The plenary lectures were presented by Azamov A. (Tashkent, Uzbekistan), Chaperon M. (IMJ, Paris, France), Dzhililov A. (Samarkand, Uzbekistan), Gusein-Zade S. (Moscow, Russia), Ikromov I. (Samarkand, Uzbekistan), Narmanov A. (Tashkent, Uzbekistan), Soleev A. (Samarkand, Uzbekistan), Sadullaev A. (Tashkent, Uzbekistan), Tosun M. (Istanbul, Turkey), Zaare-Nahandi. R. (Teheran, Iran).

70 participants from 15 countries including France, Brazil, Iran, Mexico, Turkey, Uzbekistan, Georgia, USA, Russia participated at the School and Conference.

Samarkand State University is placed in the excellent and enjoyable area. Samarkand is one of the oldest cities in the world, prospering from its location on the trade route between China and the Mediterranean (Silk Road). At times Samarkand has been one of the greatest cities of Central Asia. UNESCO included the city to its World Heritage List as *Samarkand - Crossroads of Cultures*. Besides the presentations, participants had plenty of time to discuss and collaborate. They also enjoyed to the historical and cultural places of Samarkand.

This special issue consists of the papers submitted by the participants of the International School and Conference and one paper-controversy submitted as a discussion and expression of the opposing views.

We would like to thank all the contributors, in particular prof. Sabir Gusein-Zade who made this special issue possible, and express our warmest gratitude to the referees for their careful reviews of the manuscripts.

We are also thankful to the Editor-in-Chief of the Journal prof. Fikret Aliev and to all editors for presenting the Journal as a natural home for these papers.

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