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Title: The Workshop on Representation Theory of Groups, Lie Algebras, and Hopf Algebras

Event Type: Conference-Workshop

Location:

University of Regina

Dates:

May 31 and June 1, 2012

Topic:

Representation Theory of Groups, Lie Algebras, and Hopf Algebras

Methodology:

Introductory lectures and lecture series on each of the three areas of representation theory were presented, highlighting the commonalities between the different areas.

Objectives Achieved:

Our main objective was to introduce participants, especially early-career ones, to important current themes in these three areas of representation theory. The high level of participation in the CMS Special Session that took place the following three days gave evidence that this goal was achieved.

Scientific Highlights:

In addition to the sharing of ideas between the three areas of representation theory, another highlight was the mix of international representatives, with the established research groups in North American and Europe mixing with a large number of South American visitors, giving the atmosphere of the meeting a very unique and fresh flavour. Each of the areas had its highlight. Bhama Srinivasan's lectures on recent progress on the modular representations of the finite general linear groups and Walter Ferrer's lecture series on a historical perspective of invariant theory were the highlights for group representation theory. Michael Lau and Leandro Cagliero's workshop lecture series on representation theory of Lie algebras gave a fresh perspective to modern constructions of modules and the study of affine Lie algebras. Introductory lectures on finite dimensional Hopf algebras by Gaston Garcia and Sonia Natale were a precursor for special session talks on the effort to classify small-dimensional Hopf algebras.

Organizers:

Herman, Allen (Math and Stats, Regina)// Szechtman, Fernando (Math and Stats, Regina)

Speakers:

Gaston Garcia (Cordoba) : Elements of representation theory of Lie algebras// Leandro Cagilero (Cordoba) : Weyl modules and the Schur duality for $GL(n)-S_n$ // Michael Lau (Laval): Introduction to affine Lie algebras// Bhama Srinivasan (Illinois at Chicago): Modular representations of symmetric groups and finite general linear groups - an overview// Walter Ferrer (U. de Republica, Montevideo): Invariant theory, Differential Methods vs. Integral Methods, Observability// Sonia Natale (Cordoba): Introduction to Hopf algebras and tensor categories//

Links:

<http://www.math.uregina.ca/~aherman/RepTheoryWkshp2012Webpage.html>
