Satya Deo

Research Summary:

I continue to work in two areas of algebraic topology; (i) Cohomology Theory of Group Actions and (ii) Mapping Class Groups of nonmetrizable manifolds. My main interest has been the cohomological study of the group actions on finitistic spaces. These include various generalizations of Smith theorems on the cohomology structure of fixed point sets and Floyd's theorem on acyclicity of orbit spaces.

Publications:

1. Satya Deo and J.K.Maitra *Freeness of homogenized spline module from a divided domain to a subdivided domain,* Frontiers in Interpolation and Approximation **Editor, N.K.Govil et al**, Francis and Taylor, (2006)

2. Satya Deo and J.K.Maitra, *Hilbert Series of free spline modules,* Journal of Indian Math Soc **73**, page number, (2006)

3. Satya Deo, *Algebraic Topology- a Primer*, **TRIM Series of Hindustan Book Agency, New Delhi, IInd Edition, 2006**

Preprints:

1. Satya Deo, David Gauld and Mathiew Baillif, *Mapping Class Groups of some nonmetrizable manifolds,*

2. Satya Deo and V.V.Awasthi, *Homology and Dimension -further pathological examples*

3. Satya Deo and K. Varadarajan *A note on Weakly Co-hopfian and generalized Hopfian modules*

Conference/Workshops Attended:

1. *International Congress of Mathematicians*, Madrid, Spain, Aug 2006.

2. *Annual Conference of Indian Mathematical Society*, Jabalpur, December 2006.

3. *Annual Conference of Bharat Ganit Parishad*, Lucknow, November 2006.

Visits to other Institutes:

1. University of Poona, Pune, for lectures in a Refresher Course in Mathematics, December 2006,

2. University of Arkansas, Fayetteville, AR, USA Jan 9-March 31, 2007

Invited Lectures/Seminars:

1. *Three lectures on "An introduction to Algebraic Topology"*, University of Poona, Pune, Dec 2006.

2. *Six lectures on "Homology of Group Actions"*, Topology Seminar, University of Arkansas, USA, Spring 2007.

3. *Two lectures on "Homology and Dimension"*, University of Poona, Pune, Dec 2006.

4. *Story of Poincare Conjecture- Ricci Flow* University of Lucknow, Annual conference of Bharat Ganit Parishad, Nov 2006.

5. *Maping Class Groups of nonmetrizable manifolds*, IMS Annual conference at Jabalpur, Dec 2006.

6. *Mathematical Concepts and Fellowship Competitions in Mathematics,* Dept of Mathematics, University of Allahabad, Oct 2006.

Other Activities:

1. Organized a Symposium on "Recent Trends in Topology" during the annual conference of IMS at Jabalpur, Dec 2006.

2. Organized a series of Seminars at HRI on different topics by K.Varadarajan (University of Calgary), Ramji Lal (University of Allahabad) and John Ryan (University of Arkansas, USA) during the year of report.