Ritumoni Sarma

Research Summary:

I have showed the virtual 3 generation property (known for arithmetic groups) for S-arithmetic groups under certain rank conditions. We are expecting to reduce the rank condition to improve the very result.

If the lengths of the two sides and the angle between them are known then we know the length of the third side. This is often referred to as the cosine formula. This can be generalized to the non-Euclidean spaces. The formula is known for the classical rank one symmetric spaces. There is an exceptional rank one symmetric space. We write the so called cosine formula for this space and expecting some interesting application.

Publications:

1. Ritumoni Sarma, *On Virtual 3-Generation of S-Arithmetic Subgroups of SL_2,* Asian Journal of Mathematics **Vol. 10, No. 4,** pp. 749-756.

Preprints:

1. Ritumoni Sarma, *Virtual 3-generation for S-arithmetic groups* (in preparation).

2. Ratnakumar P.K. and Ritumoni Sarma, *A cosine formula for the rank one symmetric spaces* (in preparation).

Conference/Workshops Attended:

1. Asymptotic Group Theory (Midrasha Mathematicae), Israel, May, 2006.

2. International Congress of Mathematicians, Spain, August, 2006.

3. Geometric and Asymptotic Group theory with Applications, Spain, September, 2006.

Other Activities:

1. Gave a course on elementary Topology as a part of VSSP in HRI, Allahabad, July (first half) 2006.

2. Participated as a tutor in AFS for college teachers, IITB, Mumbai, July (second half) 2006.