## ON THE SPACES OF SPHERICAL POLYNOMIALS AND GENERALIZED THETA-SERIES

Ketevan Shavgulidze Iv. Javakhishvili Tbilisi State University Ketevan.shavgulidze@tsu.ge

In this paper the bases of spherical polynomials with respect to quadratic form of r variables are constructed. The generalized theta-series is considered. The upper bounds of the dimensions of the spaces of generalized theta-series with some quadratic forms of r and five variables are obtained.

## References

- 1. K. Shavgulidze, On the dimensions of some spaces of generalized theta-series, Lithuanian Mathematical Journal, Vol. 53, No. 2, 2013, pp.235-240
- 2. K. Shavgulidze, On the number of representacions of integers by the sums of quadratic forms  $x_1^2+x_1x_2+3x_2^2$ , International J. of Number Theory, vol.5, No 3, 2009, pp. 515-525.