

## **On the connection between Kronecker and Hadamard convolution products of matrices and some applications.**

### ABSTRACT

We are concerned with Kronecker and Hadamard convolution products and present some important connections between these two products. Further we establish some attractive inequalities for Hadamard convolution product. It is also proved that the results can be extended to the finite number of matrices, and some basic properties of matrix convolution products are also derived.

**Keyword:** Convolution product; Kronecker convolution product; Hadamard convolution product; Dirac identity matrix.