

## ON THE SYMMETRIC HILBERT'S INEQUALITY AND ITS APPLICATIONS

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*Abstract.* In this paper, it is shown that some improvements on Hilbert's inequality for double series can be established by means of Schwarz's inequality; Hilbert-Ingham's inequality can be sharpened, Hardy-Littlewood's inequality and Fejer-Riesz's inequality can be refined.

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*Key words and phrases:* Double series, absolute convergence, decomposition theorem, Blaschke function.

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