

## APPROXIMATIONS OF THE SPECTRUM OF IRREGULAR SEA WAVES

**Burenin A.A., Kuvshinov G.E., Naumov L.A., Chepurin P.I.**

Institute for Marine Technology Problems FEB RAS  
5a Sukhanov Street, Vladivostok, 690091. E-mail: [kuvsh@marine.febras.ru](mailto:kuvsh@marine.febras.ru), [chepurinp@mail.ru](mailto:chepurinp@mail.ru)

**Chupina K.V.**

Far Eastern Federal University  
8 Sukhanov Street, Vladivostok, 690950

### ABSTRACT

For the mathematical description of the spectrum of sea waves is widely used group of exponential spectra and fractional rational approximation. Most of them have drawbacks. The article deals with methods for the determination of rational approximations for which a rational spectral density is greater than that of the known approximations to the difference of the degrees of the polynomials of the numerator and denominator, which eliminates defects and reduce unnecessary chaotic simulated random process.

**Keywords:** the spectrum of the irregular sea waves, a fractional-rational approximation, analog shaping filter, the variance of the wave's ordinates, average period of wave's ordinate

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