

APPLICATION OF INTELLECTUAL DSS TO MEDIUM-TERM FORECASTING OF THE SEA ICE AREA IN THE NORTHERN HEMISPHERE

Oleg Bukharov

National Research University - Higher School of Economics, Russia
oleg_bukh.box@mail.ru

Dmitry Bogolyubov

National Research University - Higher School of Economics, Russia
bogolub@mail.ru

Valery Fedorov

Moscow State University, Russia
fedorov.msu@mail.ru

Pavel Grebennikov

Moscow State University, Russia

Abstract:

The paper is devoted to the description of a new multi-purpose intellectual decision support system. We present the algorithms used and the results achieved in applying the system to analyzing and forecasting the sea ice area in the Northern Hemisphere. The impact of solar radiation on the changes in the sea ice area was confirmed. Application of interval neural nets to medium-term forecasting of sea ice area changes was justified.

Keywords: decision support system, DSS, sea ice, solar radiation, neural network, genetic algorithm

