

# Sergey Lebedev

## Education:

- 1981–1987 — Physical faculty of M. V. Lomonosov Moscow State University, M. A. diploma in physics;
- 1987–1991 —full-time postgraduate courses in the State Oceanographic Institute, Ph.D. in oceanography

## Appointments:

- Leading researcher of laboratory of geoinformatics and geomagnetic studies.

## Scientific interests:

- Creation of database management systems (DBMS) with elements of GIS and the adaptation of existing databases for specific tasks;
- Development of a specialized database of satellite altimetry and other remote sensing data to solve problems of geodesy, gravimetry and oceanography, such as the study of vortices and frontal zones in the seas of Russia and other regions of the World Ocean; calculation of fields of surface currents for seas of Russia; the study of climate variability level, sea surface temperature of seas of Russia and the oceans;
- Development of methods for assimilation of remote sensing data in thermal hydrodynamic models.

## Main scientific results:

- The method of comprehensive monitoring of the Caspian Sea level variability using satellite altimetry data. Comparison of the results with measurements of the level confirmed the representativeness of this method;
- The model of the average sea surface of the Caspian Sea according to TOPEX / Poseidon and Jason-1 satellites' altimetry data. The constructed model takes full account of the strong interannual variability of sea level. The level anomalies, calculated with respect to the developed model, reflect the real dynamics of the Caspian Sea. They can be successfully used for data assimilation of the thermohydrodynamic model. In addition to the sea level, satellite altimetry has specified zoning of the Caspian Sea by frequently repeated winds and wind waves;
- Evaluation of the possibility of using both satellite altimetry and other remote sensing data for the calculation of the effective evaporation from the surface of the Caspian Sea for several empirical formulas. This work currently continues;
- Evaluation of climate change and level of the Russian seas and the Southern Ocean;

- Regular updating of integrated database of satellite altimetry (IDBSA), developed by the Geophysical Center RAS in 1998 and recorded in the State Register of databases # 0229905292 (certificate # 4989, 19 April, 1999);
- Integrated database of satellite altimetry of the Caspian Sea (IDBSA – “Caspian Sea”), recorded in the State Register of databases # 0220611211 (Certificate # 10505, 14 July 2006).