



## **The International Service for the Geoid and its products**

Mirko Reguzzoni, Giovanna Sona, Riccardo Barzaghi, Fernando Sansò, Alberta Albertella, Daniela Carrion, Carlo Iapige De Gaetani, and Lorenzo Rossi

Department of Civil and Environmental Engineering (DICA), Politecnico di Milano, Milan, Italy (mirko.reguzzoni@polimi.it)

The International Service for the Geoid (ISG) was established in 1992 and it is currently an official service of the International Association of Geodesy (IAG). Its activities are coordinated by the International Gravity Field Service (IGFS) and they are also related to those of the IAG Commission 2 on Gravity Field. ISG is hosted by Politecnico di Milano in Italy.

The main task of ISG is to collect, analyze and redistribute local, regional and even continental geoid models, which are therefore the main products of the service. In this work the geoid repository is described, specifying the information provided for the models, the unified ASCII format used for their storing and the possible policy rules for their redistribution. Moreover, the current state-of-art of the repository is presented, in particular analyzing the geographical distribution of the available models and their years of computation. Note that not only the latest released geoid models are collected in the ISG repository, but also less recent ones, with the aim of keeping memory of the progress done in this research field during the years. Software for estimating and handling geoid models is provided too.

Apart from distributing geoid models and software, the service has also educational and research purposes. From this perspective, additional products are the international schools on geoid computation that have been organized by ISG since 1994, basically every 2-3 years. A historical overview of the schools, with emphasis on the school program and its evolution in time, is here presented. As for the research activities, apart from participating to international projects and working groups, the main ISG product was the publication of the IGeS Bulletin in the past and the Newton's Bulletin nowadays, in cooperation with the International Gravimetric Bureau (BGI). The Newton's Bulletin has a technical and applied nature and it has been recently selected by the geodetic community for publications on the assessment of EGM2008 and GOCE global gravity models.

Finally a short presentation of the service website as the main platform for the product distribution and advertising is here provided.