KTU-GEOD IVS Analysis Center Annual Report 2009

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Abstract

This report summarizes the establishment process of the KTU-GEOD IVS Analysis Center (AC) and its foreseen scientific activities. Beginning from 23rd of March 2009, the date the IVS Directing Board approved our application for establishing an AC named as KTU-GEOD in Turkey, we equipped our office with two workstations, one server, and one printer. All office supplies and hardware are bought from the budget of Karadeniz Technical University (KTU). KTU-GEOD will be maintained from now on at the department of Geomatics Engineering of KTU which is located in a city on the Black Sea coast of north-eastern Turkey, Trabzon. Being aware of the responsibilities of maintaining an IVS AC, we will strive to do our best in order to answer some of the expected IVS scientific requirements.

1. General Information

The proposal of Karadeniz Technical University (KTU) to become an International VLBI Service for Geodesy and Astrometry Analysis Center (IVS AC) [1] was accepted on March 23, 2009 in a Directing Board meeting during the 19th European VLBI for Geodesy and Astrometry Working Meeting held in Bordeaux, France.
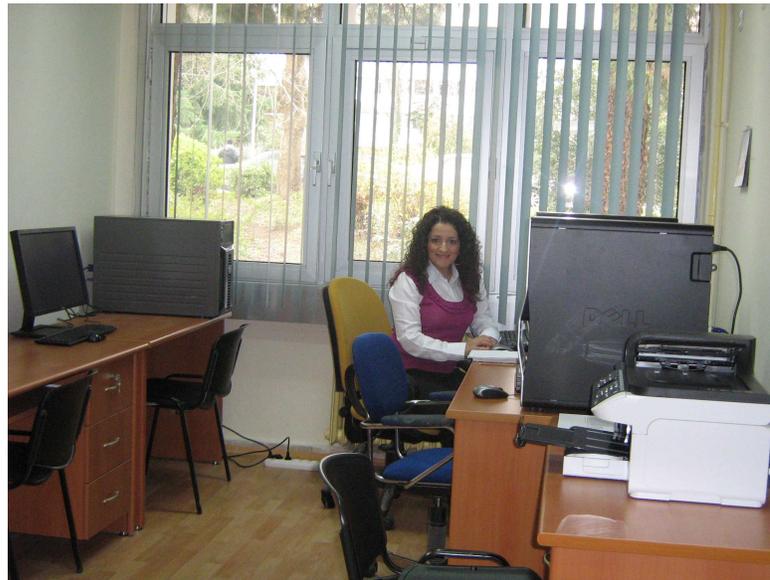
Figure 1. Emine Tanir while working in the office of KTU-GEOD IVS AC

KTU-GEOD IVS AC will be financed and operated by the department of Geomatics Engineering, KTU. Following the approval of being an IVS AC, we gave an oral presentation at the 4th National Engineering Surveying Symposium, which took place at KTU during the days between 14-16 October 2009, concerning the establishment process of KTU-GEOD and its future visions in terms of possible contributions to the IVS [2]. All necessary hardware equipment (two workstations, one server, and one printer) accompanying the MATLAB compiler were provided by the

University budget. Our department provided a separate laboratory room for us to conduct our investigations within the IVS umbrella (see Figure (1)). So far the OCCAM $v.6.0$ [4] VLBI analysis software has been used by myself, especially for my PhD. studies. From now on, besides OCCAM, we plan to use the Vienna VLBI Software (VieVS) [3] which is developed by the members of the VLBI group of the Institute of Geodesy and Geophysics (IGG), Vienna University of Technology (TU Wien).

2. Staff at KTU-GEOD Contributing to the IVS Analysis Center

- Dr. Emine Tanir, responsible for KTU-GEOD (primary scientific/technical contact).

3. Future Plans

In the future, the KTU-GEOD IVS AC plans to use VieVS, which is distributed with its open source code based on Matlab. With accompanying graphical user interfaces and batch process options for single- and multiple-sessions, VieVS is fully compatible with the Windows and Linux Operating Systems. It is compact and easy to use. We are anticipating the release of a geodetic parameter combination module of VieVS. We plan to analyze VLBI sessions with different parameterizations, focusing on the European VLBI Network (EVN). Analysis of EVN sessions is one of our specific interests. In 2010, we plan to study different stochastic models by means of comparing geodetic estimates derived from the analysis of VLBI sessions and from other space geodetic techniques. We would like to highlight that we need your support. Our contribution as an Analysis Center will not be able to be realized without the support of the IVS members and its collaborators.

4. Acknowledgements

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References

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