

**Report to the 47th General Assembly
FIG Working Week 2024, Accra, Ghana**

FIG Commission 6 - Engineering Surveys

Report of Activities 2023

1. General

Commission 6 had a very successful presence at the Working Week 2023 in Orlando. The pre-conference workshop on Multi-Sensor Systems (Fig. 1) was well attended and the audience was very involved in lively discussions. Furthermore Commission 6 was involved in the organization of 5 technical sessions. 2 of them were organized jointly with Commission 6. All gained at a lot of interest and the seminar rooms were fully occupied.



Fig. 1: Comm. 6 Presentations at the FIG Working Week 2023

At the annual meeting (Fig. 2) new commission members could be reached and after the working 6, the commission started its ongoing work. The further development of Commission 6 happened in the 4 working groups individually and was aligned with the overall goals of Commission 6 in the regular online meetings.



Fig. 2: Annual Meeting of Comm. 6

In order to promote the activities of Commission 6, a linked in page was set up and all working group chairs are active content-admins.

2. Working Groups

2.1 WG 6.1: Deformation Monitoring and Analysis

Working group 6.1. started the preparation of the 6th Joint International Symposium of Deformation Monitoring which will take place in Karlsruhe in April 2025 (Fig. 3). The date is now secured and the website (<https://jisdm2025.gik.kit.edu/>) went live. This conference is jointly supported by the three major geodetic organisations FIG, IAG and ISPRS.



Fig. 3: Logo of the 6th JISDM conference

2.2 WG 6.2: Dynamic Structural Monitoring

Working group 6.2 is preparing a pre-conference workshop on dynamical structural monitoring linked to the JISDM conference. Further it is in planning of a big monitoring experiments with the idea that several researchers and practitioners use their experience and equipment for the monitoring of a large structure. Goal is to generate a test data set to derive best practice standards and publish them as a FIG document.

2.3 WG 6.3: Applications of immersive technologies in Engineering Geodesy

Working group 6.2 was in contact with ISPRS TC V / WG1: Education and Training through Curricula Development and Enhanced Learning Practices. The plan is to prepare a joint paper with the working title “Review and sample cases of immersive technologies in geospatial learning”. The working group is also in close contact with the Young Surveyors. To promote and accelerate the use of VR in geodetic application a virtual surveyors catalogue at sketch fab (<https://sketchfab.com/>) was initiated. WG 6.3 started on developing 3D models of surveying equipment which can be found on the new sketch fab page https://sketchfab.com/FIG_ImmersiveTechnologies (Fig. 4). One of the goals is to present a VR application at the FIG booth in the exhibition area of the working week in Brisbane in 2025.

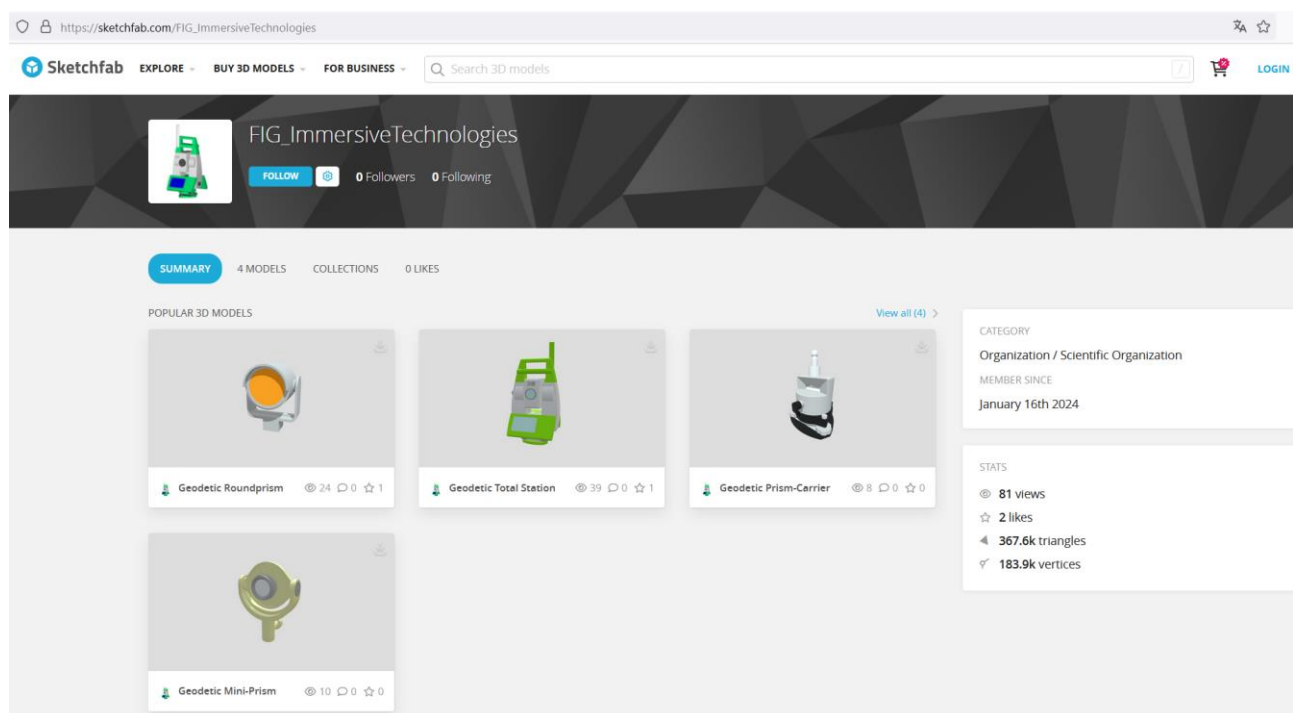


Fig. 4: FIG Immersive Technologies Sketch Fab Site

2.4 WG 6.4: Engineering Surveying Outreach

Working group 6.4 started to set up a list of potential conferences where special geodetic session can be initiated to further link FIG with other organizations and enhance the visibility of surveyors in the engineering field.

3. Cooperation

Working together with ISPRS and IAG in the preparation of the JISDM conference. Close cooperation with FIG Comm. 6 in the preparation of joint sessions for the FIG working week in Ghana.

4. Events

Regular online meetings and start of preparation of JISDM conference. Preparation of the 2 technical sessions of Commission 6 for the working week in Ghana.

5. Communication and publications

The linked in page and the JISDM conference page went live and first VR models were published on sketch fab.