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## **Study on the weighting determination of leveling control network adjustment and programming**

*Monday, 8 May 2023 16:30 (2 hours)*

In this paper, we combine the problems in the determination of the adjustment weight of the current control network and the increasingly updated information processing model, taking the typical level network and making rational use of the function of MATLAB to systematically study the determination of the weight in the adjustment of control network. A variety of objective weighting methods are applied in the leveling network, the sub-method models are introduced in turn and the prior weighting methods such as entropy weighting method, coefficient of variation method, CRITIC weight method are applied in the leveling network combined by programming with actual engineering case to improve reliability. The determination of the adjustment weights of commonly used leveling control networks from the perspective of a priori confirmation of weights was studied by us, lays a foundation for the research on the reasonable weighting and data fusion of multiple types of observation data when using various measuring instruments such as DNA03, AT960 to establish leveling control networks in the construction of Hefei Advanced Light Facility.

### **Funding Agency**

### **Footnotes**

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Yes

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