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Kaiserslautern, 67653 Kaiserslautern, RP. *Satellite Gravity Gradiometry (SGG)*

Satellite gravity gradiometry is a modern domain of studying the characteristics, the structure, and the variation process of the Earth's gravitational field. In 2009, the ESA began to realize the concept of SGG with the launch of the most sophisticated mission ever to investigate the Earth's gravitational field, viz. GOCE. The talk presents a mathematically reflected approach to SGG with strong interest in inverse modeling corresponding to the realistic geoscientific geometry (orbit as well as Earth's surface). (Received September 29, 2010)