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## ONE WORLD OPTIMIZATION SEMINAR

December 7<sup>th</sup> 2020 @ 15:30 CET (Central European Time)

**GUOYIN LI**

(University of New South Wales)

### **Estimating the Exponents of Kurdyka-Łojasiewicz (KL) Inequality and Error Bounds for Optimization Models**

**Abstract.** The Kurdyka-Łojasiewicz (KL) inequality and error bounds are two fundamental tools for establishing convergence of many numerical methods. In particular, the exponents of the KL inequality and error bounds play an important role in estimating the convergence rate of many contemporary first-order methods. Nevertheless, these exponents are extremely hard to estimate in general, particularly in the case where the associated mappings are not polyhedral. In this talk, we will outline some strategies in estimating or identifying these exponents by exploiting the so-called inf-projection operation and specific structure such as polynomial structure, semi-definite cone program representability and  $C^2$ -cone reducible structures.

*The link of the zoom-room of the meeting and the corresponding password will be announced the day before the talk on the mailing list of the seminar, to which one can subscribe on <https://owos.univie.ac.at>.*