

# THE POWER OF RANDOM INFORMATION: RECENT RESULTS

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We survey recent developments in the study of random standard/linear information for numerical integration and approximation from an Information-based complexity point of view. In particular, we focus on asymptotic worst-case upper bounds as the number of measurements tends to infinity and compare random to optimal information. Regarding asymptotic optimality, linear algorithms based on weighted least squares have proven to be quite effective in different contexts which we try to present in a unified way.

This talk will be accessible also for non-experts interested in i.i.d. random measurements. Based on joint work with A. Hinrichs, D. Krieg, E. Novak and J. Prochno.