Preface

In our media-centered age obsessed with various semi-known and unknown personalities and celebrities, the life and work of one of the founders of modern machine learning, Alexey Chervonenkis, somehow remains largely unknown. Alexey celebrated his 75th anniversary in 2013, and several of his colleagues organized a symposium devoted to his life and work. The symposium was held in Paphos, Cyprus, on October 2, 2013, and was called "Measures of Complexity." To some degree, the present volume is an outcome of that meeting; some of the chapters (such as Chap. 13 by Alexey Chervonenkis and Chaps. 4 and 14 by Richard Dudley) are based on the talks delivered by their authors at the symposium. But the vast majority of the chapters were prepared specifically for this volume.

Two years earlier the machine learning community had celebrated the 75th anniversary of Alexey's close friend and co-author Vladimir Vapnik, and the Vapnik Festschrift was published recently as [1]. Compared to the Vapnik Festschrift, this volume is somewhat less theoretical. It contains four parts: history; reviews of different notions of complexity; discussion of possible refinements of VC bounds; and technical contributions (in fact quite a few of them are reviews of specialized areas of machine learning, or contain such reviews). The main strength of this volume might be not so much in its original results (although there are a few impressive new results in Part IV) as in being a source of motivation and information for Ph.D. students and new researchers entering the field.

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June 2015

Reference

1. Schölkopf, B., Luo, Z., Vovk, V. (eds.): Empirical Inference: Festschrift in Honor of Vladimir N. Vapnik. Springer, Berlin (2013)

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