



Convex Analysis and Monotone Operator Theory in Hilbert Spaces [

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Monografía

This book presents a largely self-contained account of the main results of convex analysis, monotone operator theory, and the theory of nonexpansive operators in the context of Hilbert spaces. Unlike existing literature, the novelty of this book, and indeed its central theme, is the tight interplay among the key notions of convexity, monotonicity, and nonexpansiveness. The presentation is accessible to a broad audience and attempts to reach out in particular to the applied sciences and engineering communities, where these tools have become indispensable. Graduate students and researchers in pure and applied mathematics will benefit from this book. It is also directed to researchers in engineering, decision sciences, economics, and inverse problems, and can serve as a reference book. Author Information: Heinz H. Bauschke is a Professor of Mathematics at the University of British Columbia, Okanagan campus (UBCO) and currently a Canada Research Chair in Convex Analysis and Optimization. He was born in Frankfurt where he received his "Diplom-Mathematiker (mit Auszeichnung)" from Goethe Universität in 1990. He defended his Ph.D. thesis in Mathematics at Simon Fraser University in 1996 and was awarded the Governor General's Gold Medal for his graduate work. After a NSERC Postdoctoral Fellowship spent at the University of Waterloo, at the Pennsylvania State University, and at the University of California at Santa Barbara, Dr. Bauschke became College Professor at Okanagan University College in 1998. He joined the University of Guelph in 2001, and he returned to Kelowna in 2005, when Okanagan University College turned into UBCO. In 2009, he became UBCO's first "Researcher of the Year". Patrick L. Combettes received the Brevet d'Études du Premier Cycle from Académie de Versailles in 1977 and the Ph.D. degree from North Carolina State University in 1989. In 1990, he joined the City College and the Graduate Center of the City University of New York where he became a Full Professor in 1999. Since 1999, he has been with the Faculty of Mathematics of Université Pierre et Marie Curie -- Paris 6, laboratoire Jacques-Louis Lions, where he is presently a Professeur de Classe Exceptionnelle. He was elected Fellow of the IEEE in 2005

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