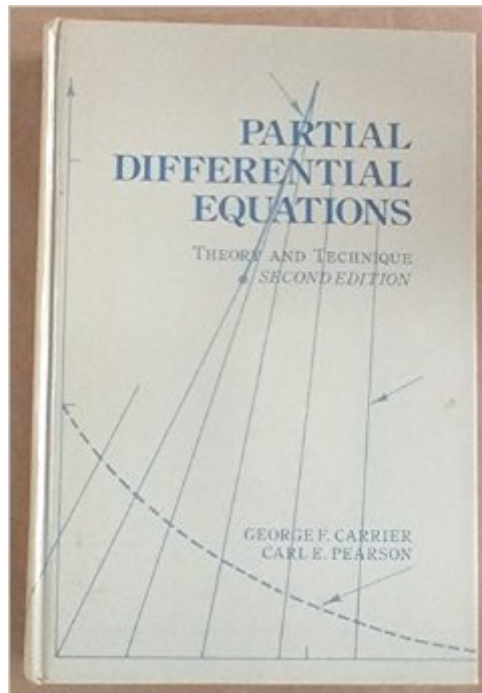# Partial Differential Equations, Second Edition: Theory And Technique

Synopsis

This is the second edition of the well-established text in partial differential equations, emphasizing modern, practical solution techniques. This updated edition includes a new chapter on transform methods and a new section on integral equations in the numerical methods chapter. The authors have also included additional exercises.

Book Information

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Customer Reviews

Based on some of my current research into dynamic data assimilation in meteorology, I needed to review the theory of characteristics in solving partial differential equations. I was introduced to the subject in graduate school and used the text by Courant and Hilbert on mathematical physics. It served me well at the time but I recalled that there were few if any exercises in the book. I knew the name George Carrier as a contributor to geophysical science and had briefly borrowed Carrier and Carl Pearson's book on PDEs from a colleague about 15 years ago and had gained from that brief reading. I then bought the book and started to work my way through it with special attention to the method of characteristics. I found the text material on this subject to be pointed and clear without any dross. The problems were exceptional including some challenging problems related to physical science that appealed to me. I found that when I started to work my way through the problems, I became "captured" by those problems that I couldn't solve quickly (within a matter of minutes). I let these problems rest but kept them in mind until I had another chance to attack them. Solving the problems gave a sense of understanding the concepts. These authors have a knack of finding

problems that push the student beyond the text material in a challenging yet effective way. As a textbook writer myself, I find that the biggest challenge is to offer problems to the student that hone their skills and yet allow them to gain a fuller understanding of the concepts that can bridge the gap between textbook understanding and research. I believe Carrier and Pearson have accomplished this lofty goal at the highest possible level.

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