Chapter VIII

Suggested Readings

Chapter I

This material is covered in almost every text on functional analysis. We mention specifically references [22], [25], [47].

Chapter II

Our definition of distribution in Section 1 is inadequate for many purposes. For the standard results see any one of [8], [24], [25]. For additional information on Sobolev spaces we refer to [1], [3], [19], [33], [36].

Chapter III

Linear elliptic boundary value problems are discussed in the references [2], [3], [19], [33], [35], [36] by methods closely related to ours. See [22], [24], [43], [47] for other approaches. For basic work on nonlinear problems we refer to [5], [8], [32], [41].

Chapter IV

We have only touched on the theory of semigroups; see [6], [19], [21], [23], [27], [47] for additional material. Refer to [8], [19], [28], [30] for hyperbolic problems and [8], [26], [29], [35] for hyperbolic systems. Corresponding results for nonlinear problems are given in [4], [5], [8], [32], [34], [41], [47].

Chapter V and VI

The standard reference for implicit evolution equations is [9]. Also see [30] and [32], [41] for related linear and nonlinear results, respectively.

Chapter VII

For extensions and applications of the basic material of Section 2 see [8], [10], [17], [39], [45]. Applications and theory of variational inequalities are presented in [16], [18], [32]; their numerical approximation is given in [20]. See [31] for additional topics in optimal control. The theory of approximation of partial differential equations is given in references [3], [11], [37], [40], [42]; also see [10], [14].

Additional Topics

We have painfully rejected the temptation to pursue many interesting topics; each of them deserves attention. A few of these topics are improperly posed problems [7], [38], function-theoretic methods [12], bifurcation [15], fundamental solutions [24], [43], scattering theory [29], the transposition method [33], non-autonomous evolution equations [5], [8], [9], [19], [27], [30], [34], [47], and singular problems [9].

Classical treatments of partial differential equations of elliptic and hyperbolic type are given in the treatise [13] and the canonical parabolic equation is discussed in [46]. These topics are similarly presented in [44] together with derivations of many initial and boundary value problems and their applications.

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