

and important problems in probability itself, and then on to statistics in general and to the statistical problems of theoretical physics or mechanics. Some section headings in the latter topics are the following: Linked events, Lexis theory and the laws of large numbers, Mendel's theory of heredity, Industrial statistics, Galton's board, The second law of thermodynamics, Machines dependent on chance, Small causes and large consequences, Kinetic theory of gases, Brownian motion, Entropy theory and Markoff chains, Radio-active radiations, Quantum theory, The renunciation of causality, Heisenberg's uncertainty principle.

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La Notion de Point Irrégulier dans le Problème de Dirichlet. By Florin Vasilescu. (Actualités Scientifiques et Industrielles, no. 660.) Paris, Hermann, 1938. 61 pp.

This is the twelfth of the booklets containing "Exposés sur la Théorie des Fonctions" published under the direction of Paul Montel as a part of the series named above. This number contains an interesting compilation of the results of some recent researches on the Dirichlet problem. The discussion makes frequent use of material treated in another booklet by the same author: *La Notion de Capacité* (Actualités Scientifiques et Industrielles, no. 571, 1937).

The first chapter is devoted to a brief discussion of artificial (that is, removable) singularities of harmonic functions of three variables. The author takes as his starting point a theorem to the effect that a function continuous at a point P and bounded and harmonic elsewhere in the neighborhood of P is harmonic at P . As this theorem is attributed to Picard (1923) the author is evidently unfamiliar with an earlier paper by Bôcher in which the same result is established (this Bulletin, vol. 9 (1903), p. 455 ff.; the priority of Bôcher's theorem has already been noted by Raynor, *ibid.*, vol. 32 (1926), p. 537 ff. and by Kellogg, *ibid.*, vol. 32 (1926), p. 664 ff.).

The second chapter, which is the longest of the pamphlet, is devoted to the study of the solution of the generalized Dirichlet problem. The author discusses such topics as conditions for regularity and irregularity of boundary points (especially those expressed in terms of capacity or the conductor potential) barriers, the generalized Green's function, Lebesgue's example of an irregular point, and Kellogg's lemma and some of its corollaries.

Chapter III is devoted mainly to a discussion of the results concerning balayage published by Frostman in 1935.

Chapter IV contains a brief summary of the contents of a booklet by de la Vallée Poussin, *Les Nouvelles Méthodes de la Théorie du Potentiel et le Problème de Dirichlet Généralisé* (Actualités Scientifiques et Industrielles, no. 578, Paris, 1937). One of the topics discussed is the lightening of the requirement of continuity at a multiple boundary point of a spatial domain. Apparently both de la Vallée Poussin and Vasilescu have overlooked an earlier discussion of the Dirichlet problem for three dimensional domains with multiple boundary points (Perkins, Transactions of this Society, vol. 38 (1935), p. 106 ff.).

The remaining chapters of the booklet contain brief sketches of some of the most recent work on topics connected with the Dirichlet problem. Much of this exposition is based on researches published in 1938. Chapter V is concerned principally with Marcel Riesz's notion of generalized potentials of order α (an extension of earlier work by Frostman); Chapter VI is devoted primarily to an account of recent work on balayage by Brelot. Chapter VII is unique in that it makes use of logarithmic capacity; it contains some results (due mainly to Frostman) concerning functions of a complex variable.