

GENEALOGY DATABASE ENTRY

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Klein, Oscar Benjamin

1894 - 1977

DEGREE: PhD

DATE: 1921

PLACE: Stockholm Univ.

TEACHER/RESEARCH ADVISOR: Arrhenius

studied the statistical theory of suspensions and solutions; investigated the collisions of electrons with atoms, introducing the concept of "collisions of the second kind", in which the colliding electron gains energy instead of losing it and the interacting atomic system undergoes a transition to a lower stationary state; independently postulated a five-dimensional generalization of Einstein's general relativity theory that included electromagnetism; studied molecular interactions in terms of perturbation methods used by Bohr, revealing a fundamental difficulty of the older quantum theory; discovered (with others) the Klein-Gordon equation (the relativistic wave equation); with Bohr, offered a unified conception of the particle and wave character of microparticles.

FOOTNOTE: Collaborated closely with Niels Bohr at the Niels Bohr Institute from 1921 -1930.

1. *Dictionary of Scientific Biography*; Charles Scribner's Sons: 1970-1990; vol. 17, p480-484.
2. Klein, Oscar *From A Life of Physics*; IAEA: June 1968; p59-68.
3. Robertson, P. *The Early Years. The Niels Bohr Institute 1921 - 1930*; Akademisk Forlog: 1979.
4. *Physics Today* **1977**, 30(Jun.), 67-68.