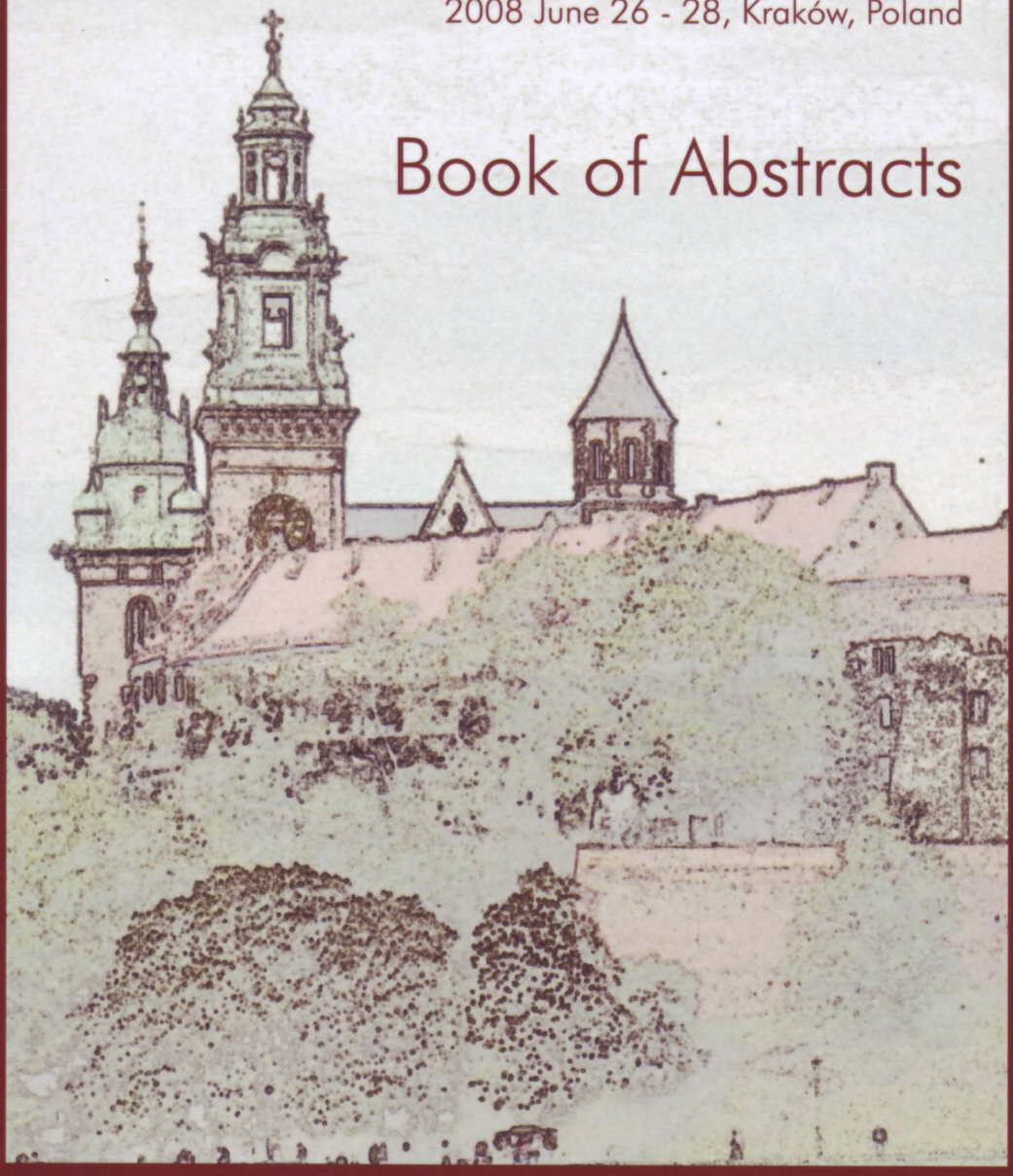
Pedagogical University of Kraków

IIIrd International Conference

Research in Didactics of the Sciences

2008 June 26 - 28, Kraków, Poland

Book of Abstracts



III INTERNATIONAL CONFERENCE

UNDER HONORARY PATRONAGE OF
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RESEARCH IN DIDACTICS OF THE SCIENCES

BOOK OF ABSTRACTS

PEDAGOGICAL UNIVERSITY OF KRAKÓW
KRAKÓW, 2008 JUNE 26 - 28

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(3) conduct consistent with dictates and bans of the law instituted. In such a setting the amicable resolving of moral dilemmas, which occur in the course of studies, proves unavoidable. It is yet possible to alleviate those dilemmas by, for instance, (1) observing methodological correctness and subjecting diagnoses to the standards of psychological and educational studies, (2) bearing responsibility for long-term effects of diagnoses, (3) working out a code of the researcher-diagnostician's ethics, (4) preventing the examined persons and the researcher from cheating, consistent abidance by the adopted principle of the fairness of assessment, maintaining veracity in communicating research outcomes. Those measures, delineated more extensively in this paper, are conducive to the increase in the validity of diagnostic studies.

Keywords: educational diagnosis, fairness of assessment, dignity, responsibility

GEOMETRIC, NONCALCULUS APPROACH TO SCHROEDINGER EQUATION

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In contribution we introduce how to conceptually teach and understand Schroedinger equation from viewpoint of teachers and students without elementary calculus, without complicated postulates, without wave formalism. Our high school and university students, not specialized as majors in physics, are able to derive heuristically Schroedinger equation only on the basis of high school mathematics, particularly using only vector addition and Pythagorean theorem. Then they study, explore, predict, describe, behavior of many important systems of which desciption can be reduced to one degree freedom description by PC in Excel and Easy Java simulation environment one of the most modern free tools in modeling for teaching phenomena describable in principle by differential equations.