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Integrative Research Institute

Pre-proposal for the Institute of Venture Sciences
A consistent solution of Maxwell equations

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A consistent solution of Maxwell equations

What hypothesis do you propose and why do you propose it?

Until now hadn't been found any effect that would require a change in Maxwell equations which are basical for electrodynamics, quantum mechanics, relativity theory. Nevertheless, recently the criticism of Maxwell equations validity is heard from all sides. It is caused mainly by the fact that the known analytical solution of Maxwell equations (wave equation of electrodynamics) contradicts the Law of energy conservation (more strictly, from it follows that this law is valid in average, and full energy is changing with time). Such violation is explained by the fact that the said solution is unique (so, that's that). But the uniqueness of the solution is proved based on the use of the Law of energy conservation, it means – based on the same law which is violated in this solution!

There are also other properties of the known solution that are contradicting the observations. A number of observations remains cannot be explained using the known solution.

The author has found another solution of Maxwell equations

Why is your proposal of earth-shaking significance?

Evidently an incorrect solution inhibits the development of electrodynamics. The proposed solution even now permits to explain some phenomena and experiments:

- energy transmission by wire (the existing theory was call "crazy" by famous physicist Feynman)
- single-wire energy transmission (this method was demonstrated by Tesla, is realized practically in our time, but is not implemented due to inexplicability);
- the existence of potential energy of a condenser (postulate, but not explicable);
- the existence of stationary and longitudinal waves in antennas (observed, but "not acknowledged");
- some experiments of Tesla;
- known but not "acknowledged" experiments with fuel-free generators.

It can be expected that real description of electromagnetic waves permits to find new laws of interaction of such waves with various environments, their influence on the processes in animate and inanimate nature.

Briefly, how will you test your hypothesis?

The resulting solution has been checked by simple substitution of this solution unto Maxwell equation for various cases (wave in vacuum, wave in wire, wave in condenser, wave in magnetic circuit of electromagnet, wave in ball lightning, wave in electric tornado). The environment options can be varied. We also need to develop experimental devices demonstrating the predicted effects: the appearance of additional forces in sophisticated electromechanical devices; the detection of stationary electromagnetic waves in electromagnetic designs; single-wire energy transmission.

Which field of science or group of scientists does your proposal challenge?

The known solution of Maxwell equations is treated in hundreds of textbooks of general physics and electrodynamics. It is used for explanation of various phenomena and observations in thousands of papers. The new solution certainly will be a challenge for the authors of these works. The new solution is a challenge for critics of Maxwell's equations, as it shows that it is not necessary to criticize the Maxwell equations, and necessary to criticize inept solution of these equations.

Furthermore the conclusions made from it refute a lot of restrictive expert assessments of papers and inventions, which (assessments) are made based on the existing known solution. So, certainly the new solution is a challenge for the authors of these expertizes.

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About author



Solomon I. Khmelnik, PhD

I have lived and have been working in Moscow.

I have a Ph.D. in computer hardware design.

In Russia I worked for several years developing computers for missile systems. Next, I worked at the state's scientific research institute for electric power engineering.

In Israel I worked for several companies, including the Israel Electric Corporation. Next, I started my own company which developed a special purpose processor. All the while I was engaged in independent research.

My focus was the mathematical aspects of electrical, electrodynamics and electromechanical systems.

During this time I have published over 300 hundred articles, patents and books.

I am over 10 years publishes international periodic multiple-discipline scientific and technical printing magazine in English and Russian "The Papers of Independent Authors", ISSN 2225-6717, in Russian and English.

To date published 35 volumes , where the 443 articles published by 144 authors from 13 countries. Among the authors of 54 professors, doctors and candidates of sciences.

This is the first printed UNrefereed magazine. Lack of refereed (and justification for this on the first page of the magazine) is often considered a drawback of the magazine. Institute for Venture Science is a bright and convincing proof of this.