



**Alexander Severinsky, P.E., Ph.D.**  
**Chairman Emeritus, Paice LLC, Bonita Springs, FL**  
**President, Fuelcor LLC (Miami, FL)**  
**Recipient - 2009**

*For the invention of the hyper-drive system, using high-voltage power electronics and a turbo-charged internal combustion engine, to create a commercially viable hybrid car. Dr. Severinsky has created several inventions (including the one for which was recognized with Edison award) in the field of hybrid-electric automobiles with significant improvements in the performance vs. cost value. Such improvements emanated from the combination of mechanical components (engines and transmissions) with power electronics components (inverters and motors) and the use of high voltage to achieve high fuel economy and lower costs.*

Before emigrating to the United States in 1978, Dr. Severinsky was an engineer in the Soviet Union creating precision instrumentation to measure peak power of nanosecond pulses in the millimeter wave range, tied to the standard of current. His efforts included the design and fabrication of calorimetric heat absorbers, pyroelectric detectors, and picocurrent amplifiers with statistical noise filtering.

In the U.S., Severinsky worked for several companies in the Dallas area before founding his first company in 1984. Over the years, he created numerous inventions in power electronics, several of them resulting in high-volume products sold through computer retail chains.

As part of his quest to tackle the problem of gasoline consumption, Severinsky analyzed energy content in electro-chemical bonds of elements in Mendeleev's (periodic) table, and concluded that a commercial electric vehicle was impractical. He created several inventions in the field of hybrid-electric automobiles with significant improvements in the performance-vs.-cost value, and some of them are currently in production by Toyota. Such improvements emanated from the combination of mechanical components (engines and transmissions) with power electronics components (inverters and motors) and the use of high voltage to achieve high fuel economy and lower cost.

Currently, Severinsky is president of Fuelcor LLC (Miami, FL), an intellectual property business he co-founded in 2005 to do patent prosecution and licensing of his new inventions on energy efficient processes to recycle products of combustion-carbon dioxide and water-into gasoline, diesel, jet fuel, etc., using electric energy produced by nuclear fission. This is a carbon neutral process, versus carbon emitting processes using any fossil fuels, and the fuel production cost is lower than oil extraction anywhere in the world.

Since 2009, he is also a Visiting Professor at the University of Maryland, College Park, where he previously served as associate professor (1987-90).

An ASME member, Severinsky is a senior member of IEEE, and a member of the Society of Automotive Engineers, the New York Academy of Sciences and the Washington Academy of Sciences.

His USSR honors include the Mendeleev Medal for contributors to the field of precision instrumentation (1975) and the Central Technical Exhibition's Bronze Medal for Scientific Instrumentation (1976). He has been profiled in *Who's Who Worldwide* (1993) and *Who's Who in Finance and Industry* (1995); and he was inducted into the University of Maryland A. James Clark School of Engineering's Innovation Hall of Fame (2008).

Severinsky attended the Kharkov Institute of Radio-Electronics (HIRE), USSR, and earned the equivalent of a master's degree in electrical engineering in 1967. He earned his Ph.D. at the Moscow Institute of Precision Measurements in Physics and Radio-Electronics (VNIIFTRI) in 1975. He is a registered professional engineer in Maryland.