

CURRICULUM VITAE.

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- Nationality.** Mexican.
- Date of Birth.** 28 - 12 - 49.
- Marital Status.** Married to Rosa Ma Montesinos Cisneros
- Children.** Gibrán born 08 - 10 - 77.
Héctor born 19 - 09 - 81.
- Education.** 1969-73 Universidad Autonoma de México,
1980-80 Training at Bechtel-CFE.
2002-04 Universidad de Sonora.
2004-07 Universidad de Sonora.
- Qualifications.** 1975 - B.Sc. Physics, UNAM.
1980 - Certificate in Nuclear Plant Design.
2004- Master in Science, Sonora.
2007 - Ph.D. for thesis entitled
"Estudio de Algunas Propiedades de la Molécula de Hidrógeno
Usando el Modelo de Tres-Cuerpos de Santilli-Sgillady modificado"
(Universidad de Sonora).
- Positions.** 1973 -1975 Assistant Researcher in Nuclear Medicine (ININ).
1977-1982 Professional in Nuclear Plant Design (ININ).
1983-1986 Energy Researcher (CIDESON, CIEDAC).
1983-1985 Manager of Systems Design (DICTSON)
1986-1996 Lecturer on Physics and Mathematics (UNISON).
1996-2002 Full Time Proffesor in Physics (UNISON)
2002-2007 Posgraduate Student in Physics (UNISON)
2007-2008 Reseracher in Physics (UNISON)
- Prizes.** 2008 Gold Medal of the Santilli-Galilei Association for Hadronic Chemistry.
2004 Diplomat for Best Distinguished Postgraduate Student awarded by University
of Sonora.

Research Interests.

The first field of interest on which I worked just after my bachelors degree, was Biophysics mainly involved in the physics processes on photosynthesis. Since those early times of my carrier, 1972 – 1976, I was concerned in the energy production field which has been there all along my professional life.

Working at the Instituto Nacional de Energía Nuclear (INEN now ININ) on interpretation of Nuclear Medicine studies, I began with computer based analysis of renographies and other studies with radioactive tracers. Later, I was transferred to the nuclear design division, where I got involved in activities related with evaluation of nuclear plants. In 1980, I was part of a training program organized by Bachtel and Comisión Federal de Electricidad (CFE) specialised on the nuclear power plant design and construction. I was part of the team that evaluate the technology transfer offers for the Mexican Nucleoelectric Plan. When I moved to Hermosillo, Sonora, I was working on the evaluation of the impact of nuclear development until 1983.

During three years, I got involved in energy research; exploring projects in solar energy conversion and hydrogen production, in addition to other computer programming and systems analysis. Those activities were done in CIDESON and CIEDAC. Also, I was responsible of the area of systems design in DICTSON.

In 1986, I began my collaboration at Universidad de Sonora (UNISON), as a lecturer in several fields: Mathematics, Computing, Physics and Industrial Engineering. At that time, I got involved in a research project on High Tc Superconductivity, where we have developed computer controlled experiments for some characterization studies of these compounds. It was 1990-91 when I began to introduce the Möbius strip topology to interpret superconducting Cooper pairs and other phenomena: quark confinement, Klein bottle in Black Holes. I was trying to use non-orientable surfaces in physics.

This work could not progress due to a lack of mathematical formalism. Instead, I look forward to the field of instrumentation and computer assisted experiments. And also, I began to write some of those ideas in an informal language: science fiction stories. Almost simultaneous to the publication of my first book (*Las Aventuras del Taquión por el Espacio – Tiempo*), I got a full time position at the university (UNISON).

The new position gave me some space and at the same time, centred my time on instrumentation. We developed then: a multi-chronometer, a talking metronome, a display control and other electronic systems; all oriented to laboratory teaching and experimental control. In 1999, I got support for a PhD in Electric Engineering at the University of Nottingham, which I have abandoned for health reasons.

The more formal presentation of the superconductivity Cooper pair interpretation was published on 2002, after several reviews and comments from Dr Riera and Dr Raven, under the title “A Structural Parameter for High Tc Superconductivity from an Octahedral Möbius Strip in R_{Ba}CuO:123 type Perovskites”. This article gave me the nerve to reinstate a PhD program, which I began on august 2002 at the Department of Research in Physics of UNISON (DIFUS).

My research program for the master in science degree was oriented by the old field of interest: energy storage and production. Motivated by the boom on carbon nanotube research and the hydrogen as a fuel (combustion or “fuel cell”), I have studied under the direction of Dr Riera and Dr Campoy, in the

hydrogen storage in SWNT. For august 2004, I got MSc degree. It was in the last few months of this year when I have obtained Prof. Santilli article introducing “the isochemical model of the hydrogen molecule”. When I decided to continue my studies and began the PhD, it was not difficult to convince my tutor and advisor, deceased Dr José Luis Marín, to look forward to study that model. He stimulated my inquiries and supported my initiatives.

When we introduced our approach to the isoelectronium, we found that we could reproduce the energy of the hydrogen molecule. This gave us a way to interpret and obtain the “Exact Solution of the Three-Body Santilli-Shillady Model of the Hydrogen Molecule”. It was as confirmation that electrons can be binding in a topological space. I returned again to the non-orientable surfaces and physics and at the same time continued to search for an energy source for the future. My interest on Hadronic Mechanics and Chamistry began in 2004 and it has followed those years. The Santilli – Galilei Gold Medal 2008 awarded to me by the TGA has introduced some new branches: perturbation theory; extension of our approach to isoelectronium to other simple molecules; and, other pairing of valence electrons.

As I have exposed the search for new forms of energy has been present ever. My interest in the “intermediate fusion” proposed by Santilli’s Hadronic Mechanics, seems to be a promise for a near future, in which I would like to be involved.