

Ernesto Zamora

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HIGHLIGHTS OF QUALIFICATIONS

- 5 years experience as Hardware Engineer developing Laser Systems for Industrial Applications
- Master's Degree in Physics, specializing in optoelectronics
- Excellent abilities with measurement and testing instruments for research as well as development of industrial equipment
- Proficient in MathCAD, OriginLab, HTML, Java Script, Visio, PHP, MySQL, Visual Basic, Flash and MS Office, including MS-Access. Working knowledge of ZEMAX, OrCAD, A/B PLC programming
- Quick learner with strong analytical and problem solving abilities. Detail-oriented, accurate and able to work under pressure
- Excellent ability to work independently and as part of a team
- Fluent in English, Spanish and Hungarian, familiar with French

PROFESSIONAL EXPERIENCE

Hardware Developer

2002 – 2006

Virtek Vision International Inc., Waterloo, Ontario

- Customized OEM FOBA Laser Engraving Systems according to the safety requirements in North America. (Installation of laser curtains, PLC controlled pneumatic doors, safety signals, etc)
- Developed Optical System for Laser Projection. Integration of inexpensive Green Laser to be used under harsh environment

Laser Applications Engineer

2002

Virtek Vision Corp., Waterloo, Ontario

- Developed Laser Marking Systems to improve productivity in the Glass Industry
- High Power Laser (Nd:YAG and CO₂) Calibration, Circuit Design, and documentation, MS Access Database creation and maintenance , design of LAZ marking files, "Prolase" software installation and calibration
- Mechanical and electrical assembly and cabling, Galvocalibration

Physicist Researcher / Graduate Teaching Assistant

1993-2001

Physics Faculty, University of Havana, Havana, Cuba

- Developed automation of physical experiments for optic and electric characterization of semiconductor lasers
- Designed and constructed electronic device for measurement of Voltamperic characteristic of semiconductor lasers
- Performed research on phonon frequency characteristic of Al_xGa_{1-x}P graded structures using micro-Raman techniques

- Performed scientific experiments in Raman spectroscopy and Photoluminescence in semiconductors
- Conducted research of photothermal properties of semiconductors using photoacoustic techniques
- Taught Quantum Physics Practical Lessons and Laboratory to undergraduate students at Faculty of Physics, Univ. of Havana

EDUCATION**Master of Science in Physics** **1999**

Faculty of Physics, University of Havana, Cuba

Thesis: "Study of $\text{Al}_x\text{Ga}_{1-x}\text{P}$ graded structures by means of micro-Raman technique"**Bachelor of Science in Nuclear Physics** **1993**

Institute of Nuclear Science and Technology, University of Havana, Cuba

Thesis: "Design and construction of an interface circuit for measuring Voltamperic characteristics in semiconductor lasers"

PROFESSIONAL TRAINING**Fibre Optics** **2003**

Virtek Vision International Inc. & Wilfrid Laurier Univ. (Prof. J.Lit)

Introduction to HTML, JavaScript and Java Language **2000****Optoelectronics in Semiconductors** **1999****Photothermal techniques: Principles and Applications** **1999****Physics of Semiconductors** **1997****Automation of physical experiments** **1994****Optics and Lasers** **1993**

Faculty of Physics, University of Havana

PUBLICATIONS

- K.Rueb, M. Matic, C.Balasa, **E. Zamora**: "Modulated Diode Pumped Microchip Laser Projector". Patent Pending. (2006)
- O. Delgado-Vasallo, E. Marín, **E. Zamora**: "Double Photoacoustic Cell for Simultaneous Measurement of Thermal Diffusivity and Effusivity in Solid Materials". Patent Number: 22 687.
- **E. Zamora**, P. Díaz, S. Jimenez-Sandoval, et al: "Micro-Raman Studies of $\text{Al}_x\text{Ga}_{1-x}\text{P}/\text{GaP}$ Graded Structures". Physica Status Solidi (b). 220 (1), p-141 (2000)
- **E. Zamora**, P. Díaz, S. Jimenez-Sandoval, et al: "Study of Micro-Raman Scattering Spectra in $\text{Al}_x\text{Ga}_{1-x}\text{P}/\text{GaP}$ Graded Structures". Proceedings of the II International Workshop on Optoelectronic Materials and their Applications (including Solar Cells)". Faculty of Physics, University of Havana, 1998

REFERENCES AVAILABLE UPON REQUEST