

Jose Andres De la Cruz

EDUCATION

PhD in Physical Science, Universidad de la Habana, Cuba, 1990
Master in Mathematical Sciences, West Florida University, USA, 2016
Bachelor degree in Physics, University of Oriente, Cuba, 1976

EVALUATION REPORT OF ACADEMIC RECORDS

International Academic Credentials Assessment
P.O. Box 85, Hopewell junction, New York 12533
www.evaluationservice.net phone 845 223 6455
by Erika I. Popovych, Evaluation Service Inc.
Jose de la Cruz has the academic equivalent of

- A **High School Diploma** from a college preparatory program
- A **Master's Degree** with a major in Physics
- An earned **Doctorate (Ph.D.) degree in Physical Sciences** from a regionally accredited institution. Doctor of Philosophy in Physics

LANGUAGES: English, Spanish, and some elements of Germany, Russian and Portuguese

EMPLOYMENT:

-Universidad de Oriente, Santiago de Cuba, Cuba. Full Time (July 1976 - October 1976)
- Instituto Superior Pedagógico "Frank País García". Santiago de Cuba, Cuba. Full Time (November 1976 - December 1992).
- Instituto Superior Politécnico "José Antonio Echeverría" (ISPJAE o CUJAE). Ciudad Habana, Cuba. Full Time (March 1993- Oct. 2000).
- Universidad Autónoma de Zacatecas, Zac. **Mexico**, Full Time (October 2000-December 2002)
- Miami Dade Community College "Wolfson Campus", Miami, Florida, US. Part Time (May 2003- -July 2007)
-Miami Jackson Adult Education Center, Miami, FL, Part-Time (Sept 2004- August 2008)
-Barry University. Miami Shores, FL, Part Time Math Professor (August 2006-2007)
-Barry University. Miami Shores, FL, Part Time Math & Physics Tutor (Dec 2006-....)
- Barry University. Miami Shores, FL, Part Time Physics Professor (May 2008- 2017)
-Florida International University, FL, Part Time Physics Professor (July 2008-2012)
-Barry University, Miami Shores, FL, Full Time Math Visitor Professor (August 2008- July 2011)
-Barry University, Miami Shores, FL, Full Time Math Professor (August 2009- ...)

GRADUATE COURSES TAKEN:

Group Theory.(50 hours) Lic. E. Roca, Lic J. Parera, Univ. de Oriente 1977
Electronics in the Detection of Nuclear Radiation.(96 hours) Lic Luis Bolero, Univ. de Oriente, 1977.
Didactics of Physics. Dr Nina ISP Frank País, 1998.
Classical Mechanics, Lic A. Ruiz, Acadmy of Sciences, 1998
Electrodynamics Jan.-July 1980, Lic. R Riera, ISP "Frank País", Cuba.
Equations in Partial Derivatives. Dr. Francisco Castillo. ISP Jose Marti, 1983
Methods of Quantum Statistics.(30 h) Dr.C. Rodriguez Feb. 1985. Univ. de la Habana

Programming in BASIC. Lic Alejandro, Havana University, 1985.

Philosophical Problems in Physics. Lic Hugo ISP "Jose Marti" 1983

Physics and Astronomy, Posgraduate Course 2/15/1983-7/4/1983, Ministry of High Education Cuba:
Astronomy (72 hours)

Quantum Mechanics (126 hours) Lic J Lamas

Thermodynamics and Statistical Physics (85 hours) Lic A. Pardo

Philosophical Problems in Physics (24 hours) Lic Hugo

Topics in Actual Physics, (34 hours) A. Cabo 1/7/85- 1/18/85, Univ. of Havana

Nuclear Physics Dr Anatoli Krosilov, 12/1/82-6/30/83 Ministry of Higher Education.

Problems in Quantum Mechanics, (36 hours), Dr Rolando Perez, Havana Univ, 1986

Integral Equations. Dr Marin Antuña, Univ of Havana.

Turbo-Pascal. (1 month) Dec. 1993 Centro Nac de Capacitacion Az.C. Habana

Elements of Fractal and Dynamics Systems.(20 hours) Prof Amelia Martin Dec. 1994 ISPJAE

Exciters in Semiconductor Structures, (20 h) Dr M de Dios, UnivHabana, 6/ 1998.

Tool Book. Lic. Goar ISPJAE, 1994, Ciudad Havana.

Derive, ISPJAE, 1994, Ciudad Habana

Innovative Educational Methods in Physics Education, (10 hours) Dr A Garcia, ISPJAE Fac Engineering, June 2000.

How to Encourage Individual Thinking in Physics Education, (30 hours) Dr R Tambutti, Autonomous University of Zacatecas, Mexico 2001

Tacticas Docentes para el Desarrollo de Estrategias de Aprendizaje. Universidad Autonoma de Zacatecas, Mexico Abril, 2002.

Innovative Educational Methods for Teaching and Learning Physics(Mexico)

REVEST PROGRAM High Level English, Courses: 3A, 3B, 4A, 4B MDC..Miami

Introduction to Education (EDF1005), MDC, Wolfson Campus, Summer 2005.

Human Growth and Development (DEP2000), MDC, Wolfson Campus, Spring 2005.

MUS-123-06 Applied Guitar (Spring 2011)

MAP 5326 Partial Differential Equations. FIU Summer B 2011 Dr Laura De Carli

MAS 5145 Applied Linear Algebra. FIU Fall 2011 Dr Tedi Draghici

MAP 5415 Fourier Analysis. FIU Summer B 2012 Dr Laura De Carli

MAP 5407 - Methods of Applied Analysis. FIU Spring 2013 Dr Laura De Carli

MAP 5471 - 1320/1321 Advanced Probability. Univ. West Florida Spring 2014

Dr. Subhash C. Bagui,

MAS 5145 Matrix Theory. Univ. West Florida Summer 2014 Dr. Jaromy S. Kuhl.

STA 5326 Mathematical Statistics II. Univ. West Florida Summer 2014 Dr. Subhash C. Bagui.

MAD4401 Numerical Analysis. Univ. West Florida Fall 2014. Dr. Rohan Hemasinha

MAD 6990 Theory Design. Univ. West Florida. Spring 2015. Dr. Jaromy S. Kuhl.

MAA 6426. Complex Analysis. Univ. West Florida. Summer 2015. Dr. Jia Liu.

MAD 6405. Numerical Analysis. Univ. West Florida. Summer 2015. Dr. Jia liu.

MAP 6990 Numerical Partial Differential Equations. Universidad of West Florida . Fall 2015. Dr. Jia Liu.

MAP 6106. Math Methods Operation Research I. University of West Florida. Fall 2015. Dr. Anthony Okafor.

MAP 6108 Mathematical Modeling and Initial and Boundary Value Problems. University of West Florida. Spring 2016. Dr. Josaphat Uvah

UNDERGRADUATE COURSES TAUGHT:

Universidad de Oriente. Santiago de Cuba, Cuba.

Year 1976: "Optics and Modern Physics"

Instituto Superior Pedagógico “Frank País García” . Santiago de Cuba, Cuba.

Year 1977: “Mechanics” and “Electromagnetism”

Year 1978: “Optics” and “Modern Physics”

Year 1979: “Electromagnetism”

Year 1980: “Modern Physics”, “Atomic Physics” and “Nuclear Physics”

Year 1982: “Quantum Mechanics”

Year 1989: “Quantum Mechanics” and “Classical Mechanic”

Year 1990: “Classical Electrodynamics”, “Thermodynamics and Statistical Physics”

Year 1991: “Quantum Mechanics”, “Classical Mechanics”

Instituto Superior Politecnico “José Antonio Echeverría” . Ciudad Habana, Cuba.

Year 1993: “Mechanics and Thermodynamics”, “Electromagnetism, Optics and Modern Physics”

Year 1994: “Mechanics and Thermodynamics”, “Electromagnetism, Optics and Modern Physics”

Year 1995: “Mechanics and Thermodynamics”, “Electromagnetism, Optics and Modern Physics”

Year 1996: “Mechanics and Thermodynamics”

Year 1997: “Mechanics and Thermodynamics”, “Electromagnetism, Optics and Modern Physics”

Year 1998: “Applied Physics”, “Mechanics and Thermodynamics”, “Electromagnetism, Optics and Modern Physics”

Year 1999: “Applied Physics”, “Mechanics and Thermodynamics”, “Electromagnetism, Optics and Modern Physics”

Year 2000: “Applied Physics”, “Mechanics and Thermodynamics”

Universidad Autónoma de Zacatecas, Zacatecas, México.

Year 2000: Assistant Professor “Calculo I” of I Semester.

Year 2001: “Calculo II” al III Semester.

Year 2002: “Electromagnetismo” 2nd Semester.

Year 2002: “Probabilidad y Estadística” 6to. Semester.

Year 2002: Conferences of “Solid State” to one Selected Group of Students.

Year 2002: “ Matemáticas Generales”. Course Propedéutico de Licenciatura.

Year 2002: “Thermodynamics I” III Semester undergraduate.

Year 2002: “Termodinámica II”. V Semester undergraduate.

Miami Dade Community College “Wolfson Campus” Florida,U.S.

Year 2003 Summer PHY1025

Year 2003 Summer Science Tutor (Physics, Chemistry and Biology).

Year 2003 Fall Science Tutor (Physics, Chemistry).

Year 2004 Spring Science Tutor (Physics, Chemistry and Biology). Physics Laboratory Assistant

Year 2005 Spring Taught PHY 1004L and PHY 2048L, Science Tutor (Physics, Chemistry).

Physics Laboratory Assistant

Year 2005 Summer PHY 2049L, Science Tutor (Physics, Chemistry). Physics Laboratory Assistant

Year 2006 Spring PHY 1004L. Science Tutor (Physics, Chemistry). Physics Laboratory Assistant

Year 2006 Science Tutor (Physics, Chemistry).

Year 2007 Science Tutor (Physics, Chemistry).

Miami Jackson Adult Education Center Florida,U.S

Year 2004 ESOL Teacher

Year 2005 ESOL and Workforce Teacher

Year 2006 ESOL and Workforce Teacher

Year 2007 ESOL and Citizenship Teacher

Year 2008 ESOL and Citizenship Teacher

Barry University. Miami Shores Campus

Year 2006 Fall MAT107-03(General Education Mathematics), MAT 107-2(General Education Mathematics), MAT093-03(Preparatory Math II).

Year 2006 Math Physic Tutor
 Year 2007 Spring MAT 107-03(**General Education Mathematics**).
 Year 2007 Fall MAT 091-05(Preparatory Math I), MAT 091-06(Preparatory Math I).
 Year 2007 Math Physic Tutor
 Year 2008 Spring Mat 091-05(Preparatory Math I), MAT-210-01 (Calculus with Applications).
 Year 2008 Math Physic Tutor
 Year 2008 Summer I PHY 201/211 L(General College Physics I Lab, University Physics I Lab)
 Year 2008 Fall, Mat 091-05(Preparatory Math I), Mat 091-07(Preparatory Math I), Mat 093-04(Preparatory Math II), Mat 093-06(Preparatory Math II), PHY 201/211L(General College Physics II Lab and University Physics I Lab).
 Year 2009 Math Physic Tutor
 Year 2009 Spring, Mat 091-02(Preparatory Math I), Mat 091-04(Preparatory Math I), Mat 108-04(**Pre-Calculus Math**), MAT-210-01 (Calculus with Applications).
 Year 2009 Summer I, Mat 110-01(**Pre-Calculus Math II**).
 Year 2009 Fall Mat 108-02(**Pre-Calculus Math**), Mat 093-07(Preparatory Math II), Mat 093-08(Preparatory Math II).
 Year 2010 Spring, Mat 091-04(Preparatory Math I), Mat 091-05(Preparatory Math I), Mat 110-03(**Pre-Calculus Math II**)
 Year 2010 Summer I, Mat110-01(**Pre-Calculus Math II**)
 Year 2010 Fall Mat 093-08 (Preparatory Math II), Mat 095-04 (Preparatory Math III), Mat 108-02(**Pre-Calculus Math for Business**), Mat 152-11 (Elements of Probability and Statistics), Phy 095-01 (**Preparatory Physics**), Phy211L-L5(University Physics I Lab), Phy201L-L5(General College Physics I Lab).
 Year 2010 Math Physic Tutor
 Year 2011 Spring Phy201L-L2(General College Physics I Lab), Phy202L/Phy212L-L4(General College Physics II Lab and University Physics II Lab).
 Year 2011 Spring Mat 091-01(Preparatory Math I), Mat 091-02(Preparatory Math I), Mat 091-04(Preparatory Math I), Mat 093-04(Preparatory Math II), Mat 107-04(**General Education Mathematics**)
 Year 2011 Fall Mat 091-01(Preparatory Math I), Mat 093-08(Preparatory Math II), Mat 095-04(Preparatory Math III), Mat 107-03(**General Education Mathematics**), Mat 108-02(**Pre-Calculus Math for Business**).
 Year 2011 Fall Phy Phy 095-01(**Preparatory Physics**), Phy211L-L5(University Physics I Lab)
 Year 2011 Math Physic Tutor
 Year 2012 Spring 2012 Mat 091-01(Preparatory Math I), Mat 107-02(**General Education Mathematics**), Mat 107-03(**General Education Mathematics**), Mat 110-04, Phy201L-L1(General College Physics I Lab).
 Year 2012 Fall Mat 091-01(Preparatory Math I), Mat 091-02(Preparatory Math I), Mat 093-08, Mat 095-04(Preparatory Math III), Mat 107-03(**General Education Mathematics**), Phy211L-L5(University Physics I Lab)
 Year 2012 Math Physic Tutor
 Year 2013 Spring Mat 107-02(**General Education Mathematics**), Mat 107-03(**General Education Mathematics**), Mat 108-01, Mat 110-04, Phy151-01(Introductory Physics), Phy151-L1(Introductory Physics Lab), Phy151-L2(Introductory Physics Lab), Phy201L-L1(General College Physics I Lab).
 Year 2013 Fall Mat 091-02(Preparatory Math I), Mat 095-03(Preparatory Math III), Mat 107-03(**General Education Mathematics**), Mat 108-01(**Pre-Calculus Math for Business**), Phy151(Introductory Physics), Phy151-L1(Introductory Physics Lab), Phy151-L2(Introductory Physics Lab), Phy 201/212 L3 (General College Physics I Lab and University Physics I Lab).
 Year 2013 Math Physic Tutor

Year 2014 Spring Mat 107-03(**General Education Mathematics**), Mat 108-01, Mat 110-02, Mat 110-04(**Pre-Calculus Math II**), Phy 202/212 L (General College Physics II Lab and University Physics II Lab)

Year 2014 Math Physic Chemistry Tutor

Year 2014 Fall Mat 091-02(Preparatory Math I), Mat 095-03(Preparatory Math III), Mat 107-03(**General Education Mathematics**), Mat 108-01, Phy 095-01(Introductory Physics).

Year 2014 Fall Mat 107-01(**General Education Mathematics**), Mat 107-03(**General Education Mathematics**), Mat 108-01(**Pre-Calculus Math for Business**).

Year 2015 Spring Mat 091-04(Preparatory Math I), Mat 095-05(Preparatory Math III), Mat 107-03(**General Education Mathematics**), Mat 108-01(**Pre-Calculus Math for Business**).

Year 2015 Math Physic Chemistry Tutor

Year 2015 Summer 1 MAT 110-01(**Pre-Calculus Math II**)

Year 2015 Math Physic Chemistry Tutor

Year 2015 Fall Mat 091-02(Preparatory Math I), Mat 091-06(Preparatory Math I), Mat 095-03(Preparatory Math III), Mat 107-02(**General Education Mathematics**), Phy 151-01(Introductory Physics).

Year 2016 Math Physic Chemistry Tutor

Year 2016 Spring Mat 095-03 (Preparatory Math III), Mat 107-01(**General Education Mathematics**), Mat 107-02(**General Education Mathematics**), Mat 107-03(**General Education Mathematics**), Phy 151-01(Introductory Physics).

Year 2016 Summer 1 MAT 110-01(**Pre-Calculus Math II**).

Year 2016 Fall Mat 091-01, Mat 091-12(Preparatory Math I), Mat 095-03, Mat 107-01(**General Education Mathematics**), Phy 151-01(Introductory Physics).

Year 2016 Fall 2017 Math 212-01 (Calculus II) Prof Sanja Zivanovic and Prof Jose De la Cruz

Year 2017 Spring Mat 152-07(**Elements of Probability and Statistics-SPSS**), Mat 108-02(**Pre-Calculus Math for Business**), Mat 107-01(**General Education Mathematics**), Mat 107-02(**General Education Mathematics**), Phy 151-01(Introductory Physics).

Year 2017 Math Physic Chemistry Tutor

Year 2017 Summer I **MAT 152-01 (Elements of Probability and Statistics-SPSS)**

Year 2017 Summer II MAT 095-03 (Preparatory Math III).

Year 2017 Fall Mat 107-01(**General Education Mathematics**), Mat 107-02(**General Education Mathematics**), Mat 108-03(**Pre-Calculus Math**), Mat 252-01(**Statistics with Applications I-SPSS**), Mat 252-02(**Statistics with Applications I-SPSS**)

Year 2017 Math Physic Chemistry Tutor

Year 2018 Spring Mat 095-03(Preparatory Math III), Mat 107-01, Mat 107-03 (**General Education Mathematics**), Mat 109-03(Pre-Calculus Math I), Mat 152-12(**Elements of Probability and Statistics-SPSS**)

Year 2018 Fall Mat 091-21(Preparatory Math I), Mat 095-03(Preparatory Math III), Mat 107-01, Mat 107-02 (**General Education Mathematics**), Mat 152-09, Mat 152-11(**Elements of Probability and Statistics-SPSS**)

Year 2018 Math Physic Chemistry Tutor

Year 2019 Spring Mat 107-01(**General Education Mathematics**), Mat 107-02(**General Education Mathematics**), Mat 152-05(**Elements of Probability and Statistics-SPSS**), Mat 152-08(**Elements of Probability and Statistics-SPSS**), Mat 152-09(**Elements of Probability and Statistics-SPSS**)

Year 2019 Summer I Mat 095-01(Preparatory Math III), Mat 109-01(Pre-Calculus Math I)

Year 2019 Summer II Mat 095-01(Preparatory Math III)

Year 2019 Math Physic Chemistry Tutor

Year 2019 Fall Mat 107-01, Mat 107-02 (**General Education Mathematics**), Mat 152-09, Mat 152-10, Mat 152-11(**Elements of Probability and Statistics-SPSS**)

Year 2020 Spring Mat 107-01, Mat 107-02 (**General Education Mathematics**), Mat 109-01, Mat 152-07, Mat 152-08(**Elements of Probability and Statistics-SPSS**)

Year 2020 Math Physic Chemistry Tutor

Year 2020 Summer I Mat 095-01(Preparatory Math III), Mat 109-01(Pre-Calculus Math I)

Year 2020 Summer II Mat 091-01(Preparatory Math I)

Year 2020 Fall Mat 107-01, Mat 107-02 (**General Education Mathematics**), Mat 109-01, Mat 109-04(Pre-Calculus Math I), Mat 152-09, Mat 152-10(**Elements of Probability and Statistics-SPSS**)

Year 2021 Spring Mat 107-01, Mat 107-02 (**General Education Mathematics**), Mat 109-01(Pre-Calculus Math I), Mat 110-03 (**Pre-Calculus Math II**), Mat 152-07, Mat 152-08 (**Elements of Probability and Statistics-SPSS**)

Year 2021 Math Physic Chemistry Tutor

Year 2021 Summer I Mat 095-01(Preparatory Math III), Mat 109-01(Pre-Calculus Math I)

Year 2021 Summer II Mat 091-01(Preparatory Math I)

Year 2021 Fall Mat 090-06(Pre-entry-Math), Mat 107-01, Mat 107-02 (**General Education Mathematics**), Mat 152-09, Mat 152-10, Mat 152-13 (**Elements of Probability and Statistics-SPSS**)

Year 2022 Spring Mat 107-01, Mat 107-02 (**General Education Mathematics**), Mat 109-01(Pre-Calculus Math I), Mat 152-07, Mat 152-08 (**Elements of Probability and Statistics-SPSS**)

Year 2022 Math Physic Chemistry Tutor

Year 2022 Summer II Mat 109-01(Pre-Calculus Math I)

Year 2022 Fall Mat 091-22(Preparatory Math I), Mat 107-01, Mat 107-02 (**General Education Mathematics**), Mat 152-07, Mat 152-08, Mat 152-10 (**Elements of Probability and Statistics-SPSS**)

Year 2023 Spring Mat 107-01, Mat 107-02 (**General Education Mathematics**), Mat 108-02(Pre-Calculus Math For Business), Mat 152-07, Mat 152-08 (**Elements of Probability and Statistics-SPSS**)

Year 2023 Math Physic Chemistry Tutor

Year 2023 Summer II Mat 095-01(Preparatory Math III)

Year 2023 Fall Mat 091-21(Preparatory Math I), Mat 107-01, Mat 107-02 (**General Education Mathematics**), Mat 152-07, Mat 152-08 (**Elements of Probability and Statistics-SPSS**)

Year 2024 Math Physic Chemistry Tutor

Year 2024 Spring Mat 107-01, Mat 107-02 (**General Education Mathematics**), Mat 108-02(Pre-Calculus Math For Business), Mat 152-07, Mat 152-08 (**Elements of Probability and Statistics-SPSS**)

Year 2024 Fall Mat 091-12, Mat 091-15 (Preparatory Math I), Mat 107-01, Mat 107-02 (**General Education Mathematics**), Mat 152-07, Mat 152-08 (**Elements of Probability and Statistics-SPSS**)

Florida International University.Miami, Fl.

Year 2008 Summer B, PHY 2053-U04B(57924)

Year 2009 Spring, PHY 2053 -U03 (12495)

Year 2009 Summer B, PHY 2048-U04B(60026), PHY 2053-U03B(55725)

Year 2009 Summer C, Phy2053-RVCC(60003) Online

Year 2010 Summer A, Phy2053-RVAA(52427) Online Dr Darici(1 credits)
&Dr De la Cruz(2credits)

Year 2010 Summer C, Phy2048-U03C (50941)Dr De la Cruz (2.52credits)
& Dr Sargsian(1.48 credits)

Year 2010 Summer B, Phy2048-U02B (52447)Dr De la Cruz (1.93 credits)
& Dr Chapagain (2.07 credits)

Year 2010 Summer B, Phy2054-RVBB(56909) Dr Darici(1 credits)
&Dr De la Cruz(2 credits)

Year 2010 Summer B, Phy2053-U03B(52245) Dr De la Cruz (4 credits)

Year 2011 Summer C, Phy2048-U03C(50461) Dr De la Cruz (2credits)
&Dr Sargsian(2 credits)

Year 2012 Summer C, Phy2048-U03C(50287) Dr De la Cruz (2credits)
&Dr Sargsian(1 credit)

Year 2012 Summer B, Phy2053-U03B (50617)Dr De la Cruz (1.5 credits)
& Dr Chapagain (1.5 credits)

GRADUATE COURSES TAUGHT:

Instituto Superior Pedagogico "Frank País García". Santiago de Cuba, Cuba.
Física del Solid State I. *Course de Posgrade Selected.*

Física del Solid State II. *Course de Posgrade Selected.*

Adsorption Physic. *Course de Posgrade Selected.*

Instituto Superior Politecnico “José Antonio Echeverría” . Ciudad Habana, Cuba.

Year 1994: General Ideas about Computational Programation. *Graduate Course Selected.*

Year 1995: Quantum Statistical. *Graduate Course Selected.*

Year 1996: Elements of Quantum Mechanics.

Year 1997: Quantum Statistical Applied to Adsorption in Zeolites

Year 1998: Introduction to Quantum Mechanics.

Year 2000: Methods of Computational Simulation of Crystalline Structures

Universidad Autonoma de Zacatecas, Zac. Mexico.

Year 2001: Electromagnetism. Introductory Physics Graduate Course.

Year 2001: Mathematical Methods, Introductory Physics Graduate Course.

Year 2001: Mathematical Methods , First Semester of Physics Graduate Course.

Year 2002: “Classical Mechanic “ Propaedeutic Master Course.

Year 2002: “Thermodynamycs”. Introductory Physics Graduate Course.

Year 2002: “Aspects of Actualization In Physics”. Spring School.

Year 2002: “Calculus II” Physic Graduate Course.

SUPERVISION OF DISSERTATION:

Dissertation in the Physics Department of the Universidad de la Habana (Theory Physics Department):
“Adsorption in Zeolites”.

SUPERVISION THESIS:

Masters’ at the Department of Theoretical Physics, University of Havana and in the National Centre of Scientific Research , PhD, IMRE. 1999.

Member of the Thesis Tribunal in Cuba and Authonomy University of Zacatecas

PAPERS PRESENTED AT PEDAGOGICAL SCIENTIFIC EVENTS:

1. *Mounting of a flashing INa (Tl) crystal in a photo multiplier FEU56.* 1976 Scientific Conference at the School of Physics, Universidad de Oriente
2. *The spin of the electron as a physical model” (“El espín del electrón como modelo físico”).*1979 – Scientific Forum at the *Instituto Superior Pedagógico “Frank País García”*
3. *A study of the description of the atomic nucleus by means of models ,* 1980 - Scientific Forum at the *Instituto Superior Pedagógico “Frank País García”*
4. *Special Relativity; a New Methodological Approach.* 1981 - Scientific Forum at the Instituto Superior Pedagógico “Frank País García”
5. *Determination of Gravity by means of the Physics pendulum..* 1981- Pedagogical Scientific Conference in the People’s Republic of Angola.
6. *Methods of Teaching Physics ,*1982- Pedagogical Scientific Conference in the People’s Republic of Angola
7. *Characteristics of Perspective Physics Interactions..* 1982 - Scientific Forum at the Instituto Superior Pedagógico “Frank País García”
8. *Different interpretations in the description of Quantum systems..* 1983 - Scientific Forum at the Instituto Superior Pedagógico “Frank País García”
9. *Pulsar studies ,* 1984 Pedagogical Scientific Conference, Instituto Superior Pedagógico “José Martí
10. *Methods of determining the concentration of radioactive elements in mineral samples ,* 11. 1986 Methodological Scientific Meeting, Instituto Superior Pedagógico “Frank País”
12. *Zeolites, Models and Applications.* 1987 Physics Colloquium, Villa Clara, Cuba.
1988 – Workshop on the teaching of Physics, University of Havana.
13. *Teaching Physics in Industrial Engineering. A Systemic Approach.* 1998 III International Workshop on the teaching of Physics in Engineering. Habana
14. *Master’s in Physics Applied to Engineering.* 1998 III International Workshop on the teaching of Physics in Engineering. Havana.

15. *The teaching of Physics in Industrial Engineering*. 1999 Pedagogía 99 . Havana.
- *Conception and analysis of the assimilation of Physics II in Industrial Engineering*. 2000- II International Workshop on the teaching of Physics in Universities. University of Havana

SCIENTIFIC PUBLICATIONS

1. **Thesis of Bachelor Degree: “Determinacion Cuantitativa de Uranio, Radio, Torio y Potasio por los Metodos Beta, Gamma, BetaGamma y Gamma Espectrometrico de Muestras Naturales Cubanas” Universidad de Oriente. Santiago de Cuba, Cuba 1976.**
2. **“Model Description of Molecular Adsorption in Zeolites”**, J. De la Cruz, C. Rodríguez, R. Roque. Comunicación del Instituto Unificado de Investigaciones Nucleares, Dubna, Russia. E17-85-12 (1985)
3. **“Modelo para describir la adsorption molecular en zeolitas”**, J. De la Cruz, C. Rodríguez, R. Roque. Revista Cubana de Física, 39-45, Vol. VIII, No. 1. 1988.
4. **“Model description of Molecular adsorption in Zeolites”**, J. De la Cruz, C. Rodríguez, R. Roque. Surface Science, 215-228, Vol. 209, 1989.
5. **“Descripción Microscópica de la Adsorption y Propiedades dieléctricas en Zeolitas”**, José Andrés de la Cruz Alcaz. PhD thesis, July 1989, University of Havana.
6. **Adsorption de mezclas binarias de gases en Zeolitas**, Zeolitas’91. Memories of the 3rd International Conference on Occurrences, Properties and uses of natural Zeolites, Volumen II, pág. 159-163. Havana, Cuba, 1991.
7. **“Una Teoría Microscópica de la Respuesta Dieléctrica de Zeolitas Deshidratada. I. Teoría General y Aproximación Monocatómica”**, C. Rodríguez, J. De la Cruz, M.T. Pérez. Revista Cubana de Física, Vol. 14, 41-44, 1996.
8. **“Ionic Conductivity and Dielectric Response of Dehydrated Zeolites”**, C. Rodriguez, M.T. Perez-Maldonado, Jose A De la Cruz Alcaz. Solid State Ionic, 95 (1997), 231-239.
9. **“La Enseñanza de la Física en la Ingeniería Industrial. Enfoque Sistémico”**. José de la Cruz, Aurea D. Rodríguez, Pedro Milanés, Isidro Rivera. Memorias EFING’98, 92-95, June 1998, Habana, Cuba.
10. **“Maestría en Física General Aplicada”**. Andrés García, Sergio Reyes, José de la Cruz Alcaz, Juan José Lloveras, Lázaro Benavides Leonard. Memorias EFING’98, June 1998, La Havana, Cuba.
11. **“Estudio de la sustitución de Al³⁺ por V³⁺ y P⁵⁺ por V⁵⁺ en el enrejado del ALPO₄-5 por simulación computacional”**, J. Gulín Gonzalez, José de la Cruz Alcaz, Rabdel A. Ruiz Salvador, Carlos de las Pozas del Río. Libro del III Course Iberoamericano de Tamises Moleculares. Editor Francisco J. Machado. Caracas, Venezuela. March 1998, page 148-152.
12. **“Estudio de las zeolitas naturales cubanas como adsorbentes”**, Carlos de las Pozas del Rio, Miguel Ayutie Lopez, Carlos Lopez Castellanos, Jorge Balmaseda EraMarisol carreras Gracial , Jorge Gulín Gonzalez, Edel Gonzalez, Jose Andres de la Cruz Alcaz, Jesus HernandeZ Ruiz, *Libro del Subprograma V. Catalisis y Adsorbentes , Proyecto V. 3. Desarrollo y Evaluacion para separacion de gases, CYTED pp. 198-202 (1998)*
13. **“ Cinética de la Adsorption de Oxígeno y Nitrógeno en Zeolitas Naturales Cubanas**. CYTED. Programa Iberoamericano de Ciencia y Tecnología para el Desarrollo. Catálisis y Adsorbentes”, C. De las Pozas, C. Lopez, M. Autie, J. Gulín, E. González, H. Cañizares, C. González y José de la Cruz. 1998.
14. **“Isotermas de Adsorption Teóricas de mezclas binarias de gases en zeolitas”**. J. A, De la Cruz Alcaz, C. De J. Rodríguez Castellanos. Revista Cubana de Física Vol.15 No. 1, 1998. P.87.
15. **“Estudio energeticode la sustitucion de dos Fe³⁺ en sitios del Al en el enrejado del AIPO₄-5”**, Jorge Gulín Gonzalez, Jose de la Cruz Alcaz, Ariel Gomez, A. Rabdel Ruiz Salvador, Carlos de las Pozas del Rio, *Libro de la IV Conferencia Nacional de Zeolitas*, Eds. Gerardo Rodriguez Fuentes, F. Machado, Beatriz Recio, pp. 98 (1998).
16. **“Sustitución de Al y P por elementos metálicos en el enrejado del ALPO₄-5**. CYTED. Catálisis y Adsorbentes. Desarrollo de Catalizadores para la Química Fina. Spain, 1999.

17. **"Computational Study about substitution of Al³⁺ by Fe³⁺ in ALPO₄-5 Framework"**. Jorge Gulín González, José de la Cruz Alcaz A. Rabdel-Ruiz, Ariel Gomez, Angel Dago, Carlos de las Pozas. *Microporous and Mesoporous Materials*, 29(3), 361-367 (1999).
18. **"Substitucion of Fe en las posiciones del aluminio de la celda elemental del ALPO₄-5 "**, Jorge Gonzalez, Jose de la Cruz Alcaz, A. Rabdel Ruiz Salvador, Ariel Gomez, Angel Dago, Carlos de las Pozas. *Revista CENIC de Ciencias Químicas*, 30,44 (1999).
19. **"A computer simulation study of vanadium substitution in the ALPO₄-5 framework"**, **Jorge Gulin Gonzalez, Jose de la Cruz Alcaz, J. M. Lopez Nieto, Carloas de las Pozas**, *Journal of Materials Chemistry*, 10 (11), 2597-2602 (2000).
20. **" Sistema de Ecuaciones Lineales en Campos Gravitatorios Débiles"**. Amoroso Rodríguez, José Andrés de la Cruz Alcaz, Joaquín Argilagos Alvarez. *Revista Cubana de Física*. Vol. 17 No. 1-2, pages 50 to 53. 2000.
21. **"Experiencia de la Enseñanza de la Física a través de Juegos"**, José Andrés de la Cruz Alcaz, Aurea D. Rodríguez Llerena, Ariel Quesada García, Ariel Racet. EFING 2000. IV International School on the teaching of Physics, Havana, Cuba. 2000.
22. **"Main properties of the coherent states. Superconductivity description in terms of Coherent States"**, A. Contreras Solorio, J. De la Cruz Alcaz, S. T. Pavlov. June 2001, U.A.Z. Preprint FFUAZ 19101935-05, 2001.
23. **"The Quantum Theory of Conductivity of Spatially-unhomogeneous systems"** I.G. Lang, L.I. Korovin, J. A. De la Cruz Alcaz, S. T. Pavlov. *Journal Experimental and Theoretical Physics*, vol 96, issue 2, pp. 268-285.
24. **"Squeezed and Correlated Coherent States in Josephson Junctions"**
J.A. de la Cruz Alcaz, S.T. Pavlov, Preprint FFUAZ 19101935-06, 2001
25. **"The cooper pairs and the Nature of the Superconductivity Currents"**,
J. A. de la Cruz Alcaz, S.T. Pavlov, Preprint FFUAZ 19101935-07, (2002).
- 25 **"Physical Properties of Josephson Junctions"**, J. A. de la Cruz Alcaz, S.T. Pavlov Preprint FFUAZ 19101935-08, (2002)
- 26 **"Current and charge densities at final temperatures"**I. G. Lang, L. I. Korovin, J. A. de la Cruz-Alcaz, S. T. Pavlov *Journal Experimental and Theoretical Physics(JETP)* Vol 96 No 02, pp 268-285 (2003). <http://xxx.lanl.gov/cond-mat/0212549>
- 27 **"One dimensional Coherent States and Oscillation Effects in Metals in a Magnetic Field"**. A. Contreras Solorio, J. De la Cruz, S. T. Pavlov . V.49, #5, pp. 407-410 *Revista Mexicana de Fisica*, 2003.

28. **" Explicit Solutions for Transcendental Equations: A Technical Note"**J. A. De la Cruz, Prabhat Kumar and J. N. Singh. *Mathematical Sciences and Mathematics Education*, MSME, February 2012.
29. **"The Median of a Generalized Pearson Distribution and its Relation with a Ramanujan Equation"** J.A. Dela CruzPhD., J.N.Singh PhD, M. Shakil. *Journal Of Mathematical Sciences & Mathematical Education*. Vol 9 Number 2 Septer 2014.
30. Writing a paper **" Circular current and magnetic field"**. J.A. De la Cruz PhD., Dr John Goehl Jr.
31. **"A Note on the Convexity of a Generalized Pearson Distribution"** J.A. De la Cruz, J. N. Singh, and M. Shakil. *International Journal of Computational and Theoretical Statistics* 4, No. 2 (Nov-2017), pp 117-126 ISSN 2210-1519 <http://journals.uob.edu.bh/IJCTS/contents/volume-1089/articles/article-5398>
32. **"Two Interesting Integer Parameters of Integer-sided Triangles"**, J.A. De la Cruz, and J. Goehl Jr. *Forum Geometricorum* Volume 17 (2017). <http://forumgeom.fau.edu/>

33. “ **Some Remarks on Generating Pythagorean Triples**”, J.A. De la Cruz, and J. N. Singh. (2018) Journal of Mathematical Sciences & Mathematics Education Vol. 12 No. 2

34. “**A Note on Positive Integer Triples (a, b, c) Generated by the Equation $a^{-1} + b^{-1} = c^{-1}$** ”, J.A. De la Cruz, J. N. Singh and M. Shakil. *Jñānābha*, Vol 52 (2) (2022), 202-208
www.vijnanaparishadofindia.org/jnanabha.

PARTICIPATION IN SCIENTIFIC EVENTS.

1984 – Scientific Event, University of Havana.

1985 – III Symposium of the Cuban Physics Society.

1986 – Scientific Event, University of Havana.

1986 – *Applications of the Hopping Model*, International Workshop on Physics of the Solid State.

1987 – International School on the Growth and Characterization of Material for Electronics.

1988 – *Model of Adsorption in Zeolites*, X Latin-American Symposium on Physics of the Solid State,

1988 – *Cationic States in Zeolites*, X Scientific Seminar of the Centro Nacional de Investigaciones Científicas,

1989 – *The Dynamics of Cations and Dielectric Properties in Zeolites*, IV Symposium of the Sociedad Cubana de Física

1989 *Some considerations of the possible role of the mosquito in Human Immunology*, IV Scientific Conference. Policlínico Docente “26 de Julio”

1990 *The Creation of a Multidisciplinary Laboratory on Zeolites*, 1st. Provincial Conference on Zeolites, Santiago de Cuba.

1990 – I National Workshop on Natural Zeolites. Havana.

1991- *Adsorption of binary mixes of Gases in Zeolites*, 3rd International Conference on Occurrences, Properties and uses of Natural Zeolites. Havana.

1991 – *Conductivity in Zeolites*, I National Meeting on Dielectrics.

1992 – *Powdered Toothpaste*, VII Forum del Período Especial. Santiago de Cuba.

1992 - *A Theoretical Model in the binary Mix of adsorbed Gases in Zeolites*, 1st Provincial Workshop on Zeolites. Santiago de Cuba.

1992- *Obtaining Powdered Toothpaste*, 1st Provincial Workshop on Zeolites. Santiago de Cuba.

1992- *The Influence of Zeolites in the Dynamics of the growth in the “Floradel” variety of Tomato*. 1st Provincial Workshop on Zeolites. Santiago de Cuba

1994 – *Emulsion Mixtures*, VIII Conference of Engineering and Architecture. Havana.

1994 – *System of Linear Equations in the case of Weak Gravitational Fields*. VI Symposium of the Cuban Physics Society, Havana.

1995 - *Model for Adsorption in Zeolites with two different types of place of Adsorption*. XII Scientific Seminar of the CNIC, II National Symposium on Zeolites. Havana.

1996 - *A Study of the Substitution of Al 3+ by V3+ y P5+ by V5+ in the AlPO4-5 grid by Computer Simulation*. V Symposium of the Cuban Physics Society. C. Havana.

1997- *Substitution of Al 3+ by V3+ and P5+ by V5+ in the AlPO4-5*. The Electron’s 100th Anniversary. Universidad de la Habana.

1997- *Zeolites in the Separation of Oxygen- Nitrogen*, Bogotá, Colombia, (April).

1997 *Cationic Substitutions by means of computer simulation in Zeolitoide Material*. Meeting of the Coordination of the CYTED. Subprogram “Catalysis and Adsorbents”, Havana, Cuba, (September).”

2000 National Workshop on Radiostecia-Geociencias. Havana. Cuba.

2000 *Study of Isomorphic Substitution of 2 Al by 2 Fe in the red of the Zeolite MFI*. XIII Scientific Seminar of the CNIC. National Conference on Zeolites.

2001 “*Oscillation effects in metals in a Magnetic Field*”. 5 Research Conferences at the UAZ. Zacatecas. Mexico.

2001 *One-dimensional Coherent States and Oscillatory Effects in Metals in a magnetic field*. “Estados Coherentes Unidimensionales y Efectos Oscilatorios en Metales en un campo

magnético”. XLIV National Convention of Physics (Morelia, Michoacán, Mexico), 15-19 octubre of 2001..

2002 ”Squeezed Coherent States in Parameterized Josephson Junctions” D.A. Contreras-Solorio, J. A. de la Cruz Alcaz, S.T. Pavlov, XLV Congreso Nacional de Física(Leon, Guanajuato), 28-31 octubre de 2002.

2010 “Explicit Solutions for Transcendental Equations: A Technical Note”. 1065th AMS MEETING. University of Richmond, Virginia. November 2010. 2016.

2016 “Some Remarks on the Convexity of the Shakil-Kibria-Singh Distribution” by Jose A de la Cruz, Jay N. Singh, and Mohamed Shakil. Reference 1124-62-156 Meeting # 1124 Fall Southeastern Sectional Meeting. Raleigh, North Carolina. AMS contributed Paper Section, IV. 2016.

PERIODS SPENT IN OTHER INSTITUTIONS.

- Methodological Consultancy to the *Delegación de Educación*, People’s Republic of Angola (February/1981 - July/1982)
- Training and PhD at the Universidad of Havana. (September/1984 - July 1987)
- Scientific Exchange. Universidad Autónoma de Zacatecas. México (October 2nd 2000 to August 31st 2001)

CONFERENCES ON INVESTIGATION IN OTHER INSTITUTIONS.

Instituto Superior Pedagógico “José Martí”, Camagüey, Cuba.

Instituto Superior Pedagógico “Felix Varela”, Villa Clara, Cuba.

Universidad Of. Havana, Habana, Cuba.

Universidad Nacional de Bogotá, Colombia.

Universidad Autónoma de Zacatecas. Zacatecas. Mexico.

OTHER ASPECTS OF INTEREST.

Group Formation

Instituto Superior Pedagógico “Frank País García”. Santiago de Cuba, Cuba

01/1990 over 2 años. José Andrés de la Cruz Alcaz, Renan Riveron, Juan Antonio Olivares Infante, Magda Rosell, Juan Riego.

Objective: Interdisciplinary Group Research Work of Physics, Chemical and Biology about Natural Zeolites and their Applications to resolve territorial problems in Santiago de Cuba.

Results: Some Industrials problems as eliminate humidity in gases, air enriched in oxygen useful in places of difficult access, better results in the productivity of Tomatoes “Floradel” in hydroponics, more grade of alcohol, biopotentials measurements, synthesis of Zeolites and Theoretical Adsorption Works in Zeolites.

Creation and assembly of Equipments to Nuclear Research

System of Gamma Radiation Measurements.

Construction and assembly of an system INa(Tl) 70x70 mm with photomultiplier FEU 56 for nuclear Gamma radiation from minerals of low activities concentrations. 1976. Dpto de Fisica Nuclear. Universidad de Oriente. Cuba.

Generation of Research Unites

Assembly of a research laboratory about Zeolites.

Installation of high vacuum to gases adsorption research in Zeolites.
assembly of a Biopotentials Measurement System.
Design and Construction of little autoclaves for Zeolites synthesis.
Construction of a little Installation to gas dry and to obtain air enriched in oxygen.

Software Educative.

Authors: José Andrés de la Cruz Alcaz, Aurea Deysi Rodríguez Llerena, Ariel Quesada García, A Rocet.

About: **Mechanic Teaching by means of a domino play.**

For: First Year Engineer Students.

Objective: Obtain consolidated formulations of concepts related with Mechanic Course by means of an interesting way.

Content: It let to establish a play of Domino between two students in a Computer or between four students in connection of Computers. This play related analytical equations of the Mechanic Course. Fecha: 02/02/2000.

- I have worked with **VERNIER** and **PASCO** Microcomputer Physic Laboratory Equipment at Miami Dade Community College Wolfson Campus, Miami, Fl.
- I have worked on the establishment and coordination of a multidisciplinary laboratory for research on the applications of Zeolites in industry and agriculture. (1990-1992). I.S.P."Frank País García". Santiago de Cuba.
- Head of the Physics section in the degree of Industrial Engineering and main Professor of Physics I, Physics II and Applied Physics for this degree. (1996-2000). Instituto Superior Politécnico "José Antonio Echeverría". Ciudad Habana, Cuba.
- Head of Plan Curricular C' of Physics for Industrial Engineering, Cuba (2000) Instituto Superior Politecnico "José Antonio Echeverría" . Ciudad Habana, Cuba.
- Head of the *Colectivo Química Industrial Informática* (1998-2000). Instituto Superior Politecnico "José Antonio Echeverría". Ciudad Habana, Cuba.
- Deputy-Head of the Scientific Commission of the Department of Physics. (1998-2000) Instituto Superior Politécnico "José Antonio Echeverría". Ciudad Habana, Cuba.
- Deputy-Head of the Research Group on Theoretical Physics of the Department of Physics Instituto Superior Politecnico "José Antonio Echeverría" . Ciudad Habana, Cuba. (1998-2000).
- **Dean's List graduate Physics School Universidad de Oriente (1976)**
- **Annual Award of Scientific Technic Merito in 1990 by Education Minister.**
- **Cuban Education Award 1991**
- **Award Better Scientific Paper Published by Habana University in 1998.**
- **Award Distinction by the Cuban Education. 1996**
- **Premios de la Ciencia en Cuba . Ciencias Naturales y exactas. 2000 | Propiedades estructurales de materiales zeolíticos: estudios vía simulación computacional**
Entidad Ejecutora Principal: Instituto de Materiales y Reactivos (IMRE) (1) Otras entidades participantes: Centro de Investigaciones del Petróleo (CEINPET) (2) , Instituto Superior Politécnico "José Antonio Echevarría" (3) , Universidad de la Habana (UH) (4) Autoría principal: Del (1) Angel Rabel Ruíz Salvador, Ariel Gómez González, Anabel Lam Barandela. Otros autores: Del (1) Aramis Rivera Denis y Gerardo Rodríguez Fuentes; del (2) Ricardo Grau Crespo y Alejandro González Peral; del (3) **José Andrés de la Cruz Alcaz**; del (4) Luis Montero Cabrera
http://resultados.redciencia.cu/premios/n_acc/resumen.php?year=2000&idtrabajo=265&idpremio=9
- **Outstanding Contributions. Miami Jackson Adult Education Center, Miami, Fl, 2005.**

- At the Math Lab Barry University I have being a tutor that covers all subjects of math, physics and some chemistry subjects. I have prepared handouts and different materials for many subjects. I have developed some conferences about different topics of math. I have worked with Smart Board, PHStat and MINITAB.
- Certificate of Appreciation, Glen Hubert Learning Center, Barry University, December 15, 2011.
- Certificate of Appreciation, Glen Hubert Learning Center, Barry University, December, 2013.
- I was chosen for the Newspaper The Buccaneer (Winter 2017) Barry University as one of the six favorite professors.
<http://eguides.barry.edu/c.php?g=456648&p=3134640> page 29 (Buccaneer_2017-Winter)
- Certificate of Professional Development. Comunique . Professional Development Newsletter. No 84 Spring 2018. Barry University.
- Accuplacer Certificate of Test Administration 2019- 2021.
- I reviewed a manuscript, entitled "Inequality between the areas", submitted to International Journal of Mathematical Education. September 2020.