

## **SUMMARY**

Puerto Rican space pioneer with lifetime commitment to educating public on exploration of space. Contributor to space history, first-hand eyewitness to major aerospace events, and author of book on living through the Space Age.

## **HIGHLIGHTS**

Private & Drone Pilot	Astronomy & Astrophysics	Geology of the Moon & Planets
Technology Assessment	Research Methods	Systems Analysis & Design
Strategic Planning	Human Factors & Workplace Design	Space Flight Resource Management
Theories of Society	Ethics & Technology	Organizational Development

## **SPACE OPERATIONS**

Consultant to Principal and Guest Investigators for Orbiting Astronomical Observatory (OAO-3) satellite project:

- Assisted with satellite observation program design, computer utilization, and data acquisition
- Managed a VAX 11/750 computer system and graphics peripherals for astrophysics research.

Developed and maintained shuttle and failure analysis expert systems tools for flight controllers:

- Worked side by side with the flight controllers on console to observe engineering procedures
- Responsible for near real-time software support during space shuttle missions.

Executed the various duties for the operational support of the International Space Station (ISS):

- Coordinated the flow of information between Operations Planner and Flight Control Room teams
- Maintained Mission Control Center – Houston (MCC-H) ISS crew task web page.

Participated in Shuttle Amateur Radio Experiment (SAREX) – first two-way video between Earth & shuttle:

- Operated SAREX video and TV equipment at NASA-JSC support station
- Assisted crew family members with SAREX equipment.

Developed exercise software Space Station Health Maintenance Facility linking exercycle with personal computer:

- Designed dynamic graphics display of exercise status, workload and heart rate data
- Created foundational software set for interactive animation scenes for crew motivation.

## **PROJECT MANAGEMENT**

Managed multiple teams at Children’s Museum of Houston:

- Responsible for efficient use of museum resources and determining budget usage
- Oversaw indoor exhibits, outdoor activities, educational programs, workshops, supplies, and entertainment contracts
- Trained staff on diverse workshop activities and coordinated with exhibits design team.

Responsible for the management and design of the NASA Human Factors Operational Experience database:

- Collected research papers and data from past space missions on long-term space habitability issues
- Organized real-time Space Shuttle mission data collection procedures for Habitability & Crew Support team
- Trained engineers in Mission Control Center operations including the NASA-JSC Mission Evaluation Room.

Provided research support to NASA-JSC Space and Life Science Directorate:

- Initiated, researched, organized, and wrote framework for NASA *Human Factors Program Plan*
- Wrote document to demonstrate the technical contributions and cost savings of Human Factors Engineering
- Managed the subcontract for the revision of *NASA Contributions to Human Factors Research* document.

Member of Steering Committee for NASA-JSC “The Manned System – A Human Factors Symposium & Workshop”:

- Designed workshop format and organized psychology session
- Managed organizational, logistical, and budgetary tasks.

## **TEACHER & EDUCATOR**

Utilized best practices of informal science education and Next Generation Science Standards:

- Paper accepted for presentations at Space Center Houston’s Space Exploration Educators Conference
- Presented introduction to 3D printing during live stream for Space Center Houston competition.

Consultant to Montessori school in Yabucoa, Puerto Rico on ultraviolet STEAM project:

- Purchased educational materials: lenses, prisms, telescopes, ultraviolet (UV) detectors, DIY projector
- Produced UV activity visual guidelines in English and Spanish.

Conducted STEAM workshops for latino organizations, museums, and public libraries:

- Assisted with classes on 3D printers, Arduino, squishy circuits, laser cutter, and windmill construction
- Conducted teacher and staff workshops with hands-on activities combining art, science and technology.

Instructor at aerospace education facilities:

- Lead school groups in STEM curriculum on purpose, design, and uses of wind tunnels at skydiving facility
- Supervised volunteers in aircraft basics, pre-flight check, flight planning, and operation of flight simulators.

## WORK EXPERIENCE

**Technorican** – self-employed, 2006 - present

Public Speaker, writer, aerospace educator, online retail business owner

**Barrios Technology, Ltd.** – Houston, TX, 2001 - 2005

Staff Engineer, Space Flight Operations Contract for International Space Station

**Ron Croston, Ph.D. & Associates, Inc.** – Houston, TX, 1998 - 2001

Technical Writer & Software Developer for International Space Station

**Exhibitech**, Houston, TX, 1998

Exhibit Specialist on Space Center Houston Race to the Red Planet exhibit

**Writers in the Schools**, Houston, TX, 1998 – 1999

Teacher

**International Resources Unlimited**, Houston, TX, 1997 - 1998

ESL Instructor for German & Italian foreign nationals

**Wonder Zone - Computer & Science Activity Center**, Houston, TX, 1997 - 1998

Director of Education

**Children's Museum of Houston**, Houston, TX, 1995 - 1997

Visitor Programs Educator

**George I. Sánchez Alternative High School**, Houston, TX, 1994 - 1995

Teacher

**Bay Area Tutoring and Reading Clinic**, Houston, TX, 1993 – 1994

Tutor

**School of Natural and Applied Sciences/UH-CL** – Houston, TX, 1992 - 1993

Research Assistant

**Lockheed Engineering & Sciences Company** – Houston, TX, 1988 - 1991

Engineer, Human Factors Department for Space Shuttle operations

**Space Business Information Center/UH-CL** – Houston, TX, 1986 - 1987

Information Manager

**Technology, Inc.** – Houston, TX, 1986

Programming Consultant

**Systems Development Corporation** – Houston, TX, 1986

Systems Analyst III, Space Shuttle operations

**McDonnell-Douglas** – Houston, TX, 1984 - 1986

Software Engineer, Space Shuttle operations

**Princeton University, Astrophysics Department** – Princeton, NJ, 1976 - 1984

System Manager & Scientific Programmer, Orbiting Astronomical Observatory (OAO-3C) satellite

## EDUCATION

**Graduate credit** – El Instituto Tecnológico y de Estudios Superiores de Monterrey - Querétaro, Mexico 1997

**M.A.**, Humanities – University of Houston - Clear Lake 1994

**M.S.**, Studies of the Future – University of Houston - Clear Lake 1988

**B.A.**, Individual Major in space science – Douglass College - Rutgers University 1976

## TRAINING

**Lone Star Flight Museum** – flight simulator supervisor

**United Space Alliance Training Academy** – Space Shuttle and International Space Station

**Risk Assessment** – NASA-JSC course

**Space Flight Resource Management** – NASA-JSC course

**NASA-JSC Language Education Center** – Russian and Japanese classes

## LICENSES AND CERTIFICATIONS

<b>FAA 107 Commerical Pilot's license</b>	2021
<b>NASA Space Systems Engineering</b> — Saylor MOOC	2014
<b>Certified Real-time Planning Engineer Support</b> – International Space Station	2002
<b>Private Pilot's license</b> – single engine aircraft, Visual Flight Rules	1979

## ACHIEVEMENTS

<b>HIPGiver</b> – Hispanics in Philanthropy	2017
<b>Douglass Society</b> – honor society for distinguished alumnae of Rutgers University – Douglass College	2005
<b>Veterans World Championship</b> – earned place on U.S. fencing team in Krems, Austria	2004
<b>Emy Award</b> – Barrios Technology, Inc. for community service	2004
<b>Wall of Fame</b> – alumni recognition at South River High School	2003
<b>NASA-JSC Group Achievement Award</b> – support for first ISS construction increments	2001
<b>Two Letters and Certificate of Commendation</b> – NASA Human Factors Symposium & Workshop	1990
<b>Letter of Appreciation</b> – Mission Evaluation Room support at NASA-JSC	1990
<b>U.S Women's Army Officer College Program</b> – Fort McClellan, AL	1974

## PUBLICATIONS

“Born on the Moon - Living in the Space Age” – self-published non-fiction book on Amazon	2020
“Providing for the Common Good: A Survey of Trends for Creating a Civilized Species Ready for Interstellar Travel” – 100 Year Starship Public Symposium, Houston, TX	2013
“Where in the World is Carlos Torres?” – Hispanic Genealogy Journal	2010
“Fencing and the Space Program” – American Fencing magazine	2005
“Visions of the Future” – Equal Opportunity magazine	1993
“Born on the Moon” – Bayousphere literary magazine, Editor's Choice	1994
“The Games” – Bayousphere literary magazine, Editor's Choice	1993

## PRESENTATIONS

“Satellite History Firsts - OAO and HST” Space Exploration Educators Conference – Houston, TX	2018
“Da Vinci & You: New Renaissance” at Space Exploration Educators Conference – Houston, TX	2017
“Star Trek: The Power of a Vision” at Starfleet International Conference – New Orleans, LA	2017
“Star Trek: The Reality” at Starfleet International Conference – New Orleans, LA	2017
“Our Future in Space” at University of Houston – Houston, TX	2016
“Overcoming Obstacles” Association of Relocation Agents Conference – Houston, TX	2015
“STEMversations With Candy Torres” at Miami Dade College – Miami, FL	2015
“Introduction to 3D Printing” Space Center Houston 3D printing competition – Houston, TX	2014
“Taking Action - Achieving Your Dream” – Princeton, New Jersey	2014
“Hispanic Innovators in Aviation & Space” at National Air & Space Museum – Washington, D.C.	2014
“Providing for the Common Good: A Survey of Trends for Creating a Civilized Species Ready for Interstellar Travel” at 100 Year Starship Public Symposium – Houston, TX	2013
“International Space Station Operations Planning - Past, Present and Future” at World Space Congress – Houston, TX	2002
“Planning for the Future of Space Exploration - the Human Factor” – Budapest, Hungary	1990
“Visions, Issues, and Strategies in the U.S. Space Program” – Salzburg, Austria	1990
“Creativity and Space Exploration” – Atlanta, Georgia	1988
“Public Opinion and the Space Program” – Houston, Texas	1988

## VIDEO, TELEVISION AND RADIO

“Supernova with Lotería, featuring Candy Torres” at Station Theater – Houston, TX	2017
“Latinos in Space!” NPR's Latino USA program about influence of science fiction in creating the future	2014
“Kirk to Enterprise: the Piece of Star Trek in Your Pocket” NPR's Studio 360	2014
“Barefoot on the Moon” Produced video of Puerto Rican heritage & work in space program Featured in First International Puerto Rican Heritage Film Festival in New York City, NY	2011
“Compañeras - Una Exposición Cultural Latina” Radio interviewer – National Public Radio talk show on exhibition of Latina art; Houston, TX	1995
“Wings in Space” Produced a set of 9 shows for a local cable TV series on space exploration; South River, NJ	1983