RODRIGO F.V. ROMO
CH E , MBA LEED AP

GOV. MSG. NO. 796

PROFESSIONAL EXPERIENCE

MAUNAKEA OBSERVATORIES SUPPORT SERVICES.
July 2021 – Present, **Hilo, HI**

Maunakea Visitor Information Station Manager

- Responsible for overall operations of the Visitor Station to include but not be limited to: Financial Management, staff management and Program Operations.
- Responsible for designing new interpretive guide exhibits and outreach and education programs .
- Establish partnerships with various observatories, state agencies, education institutions and others to develop new programs at the Visitor Station.
- Responsible for implementing, integrating and standardizing Project Management Programs and Procedures
- Work with local universities and community colleges to facilitate internships for students with the space center and associated companies.
- Establish new vendors and merchandise for the Visitor Station to meet the goals and objectives of the Station.

PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION SYSTEMS
April 2106 – June 2021 **Hilo, HI**

Program Director

- Responsible for overall operations of the Agency to include but not be limited to: Financial Management, staff management and Program Operations.
- Responsible for working with legislators in writing Bills related to the Program
- Establish partnerships with corporate, government, and UH entities that can promote and enhance the State's aerospace industry
- Responsible for implementing, integrating and standardizing Project Management Programs and Procedures
- Oversee and implement Long Term Economic Development and Workforce Development Efforts
- Oversee Applied Research Projects, Grant writing, and participation in technical conferences.
- Work with local universities and community colleges to facilitate internships for students with the space center and associated companies.
- Promote innovative educational and workforce development programs that will enhance public awareness of PISCES and enable residents to pursue employment in Hawaii's aerospace industry;

PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION SYSTEMS
January 2014 - April 2106 **Hilo, HI**

Project Manager

- Responsible for implementing, integrating and standardizing Project Management Programs and Procedures for project tracking and review to meet NASA standards.
- Supervise Projects across State, corporate/private sector, academia and Federal sector

interests.

- Design and coordinate annual Design Reference Missions (DRM's) based on the planetary rover's platform.
- Develop & Oversee Safety procedures for all projects. .
- Coordinate and manage multiple space exploration related projects involving multiple agencies (Education, State, Federal and Private)
- Coordinate and manage student interns and technicians in different robotics tasks.

ZETA CORPORATION.
July 1997 – Jan 2014, **Tucson, AZ**

Executive Vice President

- **Business Development & Key Account Management**: Responsible for establishing new markets, applications and corporate accounts in different industries and countries.
- **Project Management:** Responsible for designing, implementing and supervising major projects with Government Agencies, Military and Private Industry. Responsibilities included but were not limited to financial tracking & operations, budgeting, engineering design, installation supervision, planning, scheduling, staff and crew supervision, procurement, and reporting.
- **Research & Product Development**: Conducted and directed research projects using electrostatic dispersion of colloidal particles in industrial fluids focused in heat exchanger fouling mitigation, reverse osmosis fouling mechanisms and prevention, biofouling control in industrial fluids, flocculation enhancement, and composite fouling.
- **System Engineering & Technical Support**: Designed and/or reviewed Systems for field applications. Provided technical support to key customers as well as technical training to field representatives.

COLUMBIA UNIVERSITY'S BIOSPHERE 2 CTR.
Sep 1992 – July 1997 **Oracle, AZ**

Energy Center Manager **June 1995 – July 1997**

- Directed and managed a 5MW co-gen plant that provided the Biosphere with electricity, heating and cooling. Plant operated on a 24/7 basis with three shifts per day and two crews per shift. Responsibilities include managing the staff, scheduling shifts and over time, financial operations, managing of the budget and scheduling major maintenance operations on key equipment.

Atmospheric Research Specialist **Sep 1994 – June 1995**

- Designed and developed real time self-calibrated CO2 gas analyzers, and pCO2 analyzers. Maintained, monitored and validated data from different atmospheric analytical instruments for different research projects.

Crewmember **Sep 1992 – Sep 1994**

- Member of the second crew of biospherians. Responsible for the maintenance and calibration of all sensors & instrumentation (research, process & control) inside the Biosphere 2. Responsible to collect and validate the data generated. Acted as the safety officer of the crew. Designed and implemented improvements to the waste water treatment and recycling system.

EDUCATION

University of Arizona. (*www.arizona.edu*)
Tucson, AZ
Masters in Business Administration

Iteso University (*www.iteso.mx*)
Guadalajara, Mexico
B.Sc in Chemical Engineering

Fluent in spoken and written English and Spanish

PATENTS AND PUBLICATIONS

- Richardson, J., Whelley, N., Whelley, P., Milazzo, M., Knudson, C., Romo, R., et al, "Building Safer And More Inclusive Field Experiences In Support Of Planetary Science", A white paper in support of the 2023-2032 Planetary Science and Astrobiology Decadal Survey, 2020.
- Rogers, H. Musilova, M., Romo, R., Ponthieux, P., Foing, B., "How to Build Moon Bases", Europlanet Science Congress, Virtual Meeting, Sep 21 – Oct 9, 2020.
- Edison, K., Andersen, C., Harford, K., Higaki, K., Romo, R., "Hawaiian Basalt Characterization and the Effects of Chemical Composition Variances on the Sintering Process; Potential Implications for Lunar/Mars ISRU Applications", IAC-19, IP, 4, x 51376, Presented at the 70th International Astronautical Congress, Oct 21-25, 2019, Washington DC.
- Romo, R., Defore, K., "Basalt Characterization from Commercial Quarries on Hawai'i Island and Feasibility Study Results for a Continuous Basalt Fiber Manufacturing Operation", Bridge Engineering Institute Conference 2019 (BEI-2019), Honolulu, HI July 22-25, 2019.
- Romo, R., "Lessons Learned from Biosphere 2", National Space Society, International Space Development Conference, June 2019, Arlington, VA.
- Defore, K., Andersen, C., Romo, R., Harford, K., Higaki, K., "Characterization of Hawaiian Basalt Aggregate and the Effects of Chemical Composition on Sinterability: Implications for Future Lunar/Mars ISRU" , Space Resources Roundtable XX, Planetary & Terrestrial Mining Sciences Symposium, Golden, CO, June 11-14, 2019.
- Romo, R., Andersen, C., Defore, K., Zacny, K., Thangavelu, M., Lippitt, T., "Planetary Lego: Designing a construction block from a regolith derived feedstock for In-Situ Robotic Manufacturing", ASCE Earth & Space 2018 Conference, April 9-12, 2018, Cleveland, OH.
- Mueller, R.P, Fikes, J.C., Case, M.P, Khoshnevis, B, Fiske, M.R, Edmunson, J.E, Kelso, R, Romo, R, Andersen, C. "Additive Construction with Mobile Emplacement (ACME)", 68th International Astronautical Congress (IAC), Adelaide, Australia, 25-27 Sept. 2017. IAC-17-D3.2.1
- Romo, R., Andersen, C., Mueller, R.P., "ISRU: The Basalt Economy", New Worlds 2016, Austin, TX, Nov 4-5, 2016

- Kelso, R.M., Mueller, R.P., Romo, R., " Paving the Way to Planetary Basalt ISRU Construction: Results of Lunar Launch/Landing Pad with Robotic Field Demonstration, New Worlds 2016, Austin, TX, November 4-5, 2016
- Kelso, R.M., Romo, R., Andersen, C., Mueller R.P., "Planetary Basalt Construction Field Project of a Lunar Launch/Landing Pad – PISCES/NASA KSC Project Update", "Earth & Space 2016" Conference, April 11-15, 2016. Orlando, FL.
- Romo, R., Kelso, R.M., Hamilton, J.C., Andersen, C., "PISCES Robotic Village: Developing a World Class Test Site for In-Situ Resource Utilization System and Technology Integration.", Planetary & Terrestrial Mining Sciences Symposium, Colorado School of Mines, Golden, CO. June 10-11, 2014.
- Romo R., Williams S., Beitelman A., "Green Technologies: Electronic water treatment system successfully evaluated for water conservation and chemical reduction in cooling tower operations at four U.S. Military bases", Cooling Technology Institute Annual Conference, Feb 2012.
- Beitelman A., Pitts M., Romo R., Pitts C., "Demonstration of Electronic Capacitor-Based Water Treatment System for Application at Military Installations", US ARMY Corps of Engineers Engineer Research & Development Center, Doc ERDC/CERL TR-09-20, July 2009.
- Romo R., Pitts M., Handagama N B., "Biofouling Control in Heat Exchangers Using High Voltage Capacitance Based Technology" Presented at the Heat Exchanger Fouling and Cleaning International Conference, July 1st – 6th, Tomar Portugal.
- Romo, R, "Biofouling Prevention in Metalworking Fluids using High Voltage Capacitance Based Technology", Invited guest speaker at the Propulsion Environmental Working Group, Summer 2003 Meeting, June 2-6, 2003, New Orleans, LA.
- Romo, R, Pitts, M.M., Hector, M, "Composite Fouling Control in RO Membranes with High Voltage Capacitance Based Technology", Presented at the Executive Forum, Ultra Pure Water Conference, April 23-24, 2002, Orlando FL.
- Romo, R., Pitts, M.M., "Clean Membranes Produced from Electro-Dispersion in Conformity with Colloid Behavior Theory" , Presented at the American Desalting Association (ADA) Conference 2000, South Lake Tahoe, Nevada, Aug 6-9 2000.
- Romo, R., Pitts, M.M., Garcia-Cano, G., "Control del Ensuciamiento de los Sistemas de Osmosis Inversa Mediante la Modificacion Electronica de las Particulas y la Carga Superficial de sus Membranas", Paper presented at the Instituto Mexicano De Ingenieros Quimicos (IMIQ) Annual Conference, Leon Gto., Mexico Oct. 1999.
- Romo, R., Pitts, M.M., "Application of Electrotechnology for Removal and Prevention of Reverse Osmosis Biofouling", Environmental Progress Magazine, Vol 18, No.2, Summer 1999.
- Avena-Bustillos, R.J., Romo, R., Pitts, M.M., "Zeta Potential Applications for Electrostatic Particle Dispersion in Aqueous Systems in the Food Industry", Poster Presentation at the 1998 International Food Technology Conference, Atlanta 1998.
- Rosenthal, Y., Farnsworth, B., Romo, R., Lin, G., Marino, B., "High Quality Measurements of CO2 in Biosphere 2 to Assess Whole Mesocosm Carbon Cycles", Ecological Engineering Special Issue Vol 13 1-4, Pg 249-262, Elsevere 1999.
- Nelson, M., Finn, M., Romo, R., Wilson, C., Zabel, B., Van Thillo, M., Hawes, P., "Bioregenerative Recycling of Wastewater in Biosphere2 Using a Constructed Wetland; 2 Year Results", Ecological Engineering Special Issue Vol 13 1-4, Pg 249-262, Elsevere

1999.

- Pitts, M., M., Romo, R., "Capacitive electrostatic process for inhibiting the formation of biofilm deposits in membrane separation Systems" US Patent # US757891B2