




TEACHING & CONSULTING STAFF

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- Adriano V. Autino, ASE Ltd, UK, Space Renaissance International President
- Gianni De Rose, ASE Ltd, UK
- Patrick Q. Collins, Ph.D, chair of Economics at Azabu University, Tokyo, JP
- Susan Singer, BA in advanced project management, Stanford University, USA
- Feng Hsu, Ph.D, former NASA project manager, USA
- Kenneth Ford, Ph.D, former NASA project manager (36 years), USA
- Marco C. Bernasconi, Ph.D, MCBC Consultants, Zurich, CH
- Rino Russo, Ing., Aerospace Science Technology and Research Consulting, AIDAA Board

Teacher	Bio and main publications
<p>Adriano V. Autino</p> 	<p>Adriano Vittorio Autino is CEO at Andromeda Systems Engineering Ltd, UK; and President of the Space Renaissance International.</p> <p>He got his diplome in Industrial Electronics in 1969, studied Computer Science at University of Turin, and begun his career in 1971, designing diagnostic and test engineering software at Honeywell Information Systems Italia. In 1984 he joined Sysdata CAP Gemini, serving as a project manager. From 1992 to 1999 Adriano was a free lance software consultant. In 2000 he created Andromeda s.r.l., dealing industrial automation and systems engineering. Since 2012 he is CEO of Andromeda Systems Engineering Ltd, UK.</p> <p>Since 1997, he started his philosophical reflection on the subject of human expansion over the frontiers of our world, and gave birth to the web magazine Technologies of the Frontier, publishing articles and papers, mainly on the subject of Astronautics, collaborating with many space activists world wide. In 2008 he initiated the Space Renaissance Initiative, and in 2010 the Space Renaissance International, as a non profit association.</p>
<p><u>Professional history</u></p> <p>In 1984 Adriano Autino joined Sysdata Cap Gemini, where he served as a project leader and then project manager for industrial automation projects; main projects: Waters treatment system, with Philips Eindhoven (NL) for the Municipality of Berna (CH); Control and monitoring system for a research optical fibres production machine for Pirelli FOS (Italy); Software for control and supervision of the sperimental nuclear fusion central "TOKMAK" for Gavazzi, ENEA (Frascati - Italy); Batching system for a biscuit factory for Philips, Buehler, Nabisco-Saiwa (Alessandria - Italy); Control and supervision system for an Oil refinery marine terminal for Philips S.&.I., Snamprogetti , Adnoc RUWAIS (United Arab Emirates); Automated assembling of freezers and refrigerators system for Philips S.&.I., DKK (Niederschmiedeberg - ex D.D.R.); Weighing system for a gasoil coast deposit for Philips S.&.I., Agip-Liquipibigas (Livorno - Italy); Automated system for Tanneries of Gatovo (Minsk - Bielorussia) and Riazan (Russia) for Cogolo, Sojuznestroyimport; Automated system for Tannery of Voznesensk (Ucraina), Promotan, Sojuznestroyimport; Siderurgic Owen Control System for Philips S&I (Monza – Italy).</p> <p>Since 1992 to 1999, as a freelance consultant, he participated to several projects in the aerospace and defense industries, working on system integration and system engineering, as well as software engineering. Main projects: PWT AIS Dynamic Real Time Simulator, PWT AIS (Plasma Wind Tunnel Automation and Instrumentation System) – Supervision of the Commissioning, System Integration, System Testing and Integrated Testing for LABEN / ESA - Vimodrone Milano, Italy; Tornado Aircraft Flight Simulator, reverse design from TI980 ('70 years machine) to DEC Alpha station for METEOR (Alenia – Finmeccanica) - Ronchi dei Legionari (GO); Analytical Marketing Study for Technology Transfer, Technical competences analysis and processing versus new market segments for LABEN</p>	

(Alenia -Finmeccanica) - Vimodrone Milano, Italy; MMI level 2 system for metallurgical plant integration, for CEDA, SIDOR - Venezuela.

He started Andromeda s.r.l. in 2000, and there he worked on systems engineering for industrial and infrastructural automation projects such as tunnels, highways, railways, bridges, for industries such as oil & gas, energy, automotive, and textiles. Over time, he developed the PTESY (now STEPS) suite of tools for project life cycle management based on his own experience. In addition to being an expert in systems engineering and project lifecycle management, Adriano also brings to the table his extensive background in project management, system integration/test engineering, and reverse engineering. He is an author of several books on best practices in the engineering domain. He also lectures about systems engineering and project management. Adriano held classes of project management during '90s, systems engineering and space renaissance philosophies since 2000 and onward. Andromeda s.r.l. developed several projects and supplied high profile personnel:

Navy: INTERMARINE RODRIQUEZ - Sarzana, Italy - Project Life Cycle Engineering for the project of three ships for the Finnish Navy.
Aerospace: OERLIKON CONTRAVES ITALIA - Rome, Italy, Project & Test Engineering System, for the quality management of defense systems; IACSA - FI, Italy - Development of a workshop on "Commercial Astronautics and Space Tourism", a proposal to Space and non-Space Entrepreneurs; EADS-LV - Bordeaux, France - ESA TRP Structural Design of Advanced Solar Array; THE OURS FOUNDATION - CH - Study for Orbital Inflatable Rings Demonstrator; EADS-LV - Bordeaux, France - Comparative trade-off on different rigidization processes for inflatable space structures.

Robotics and automation: SMYTH, Casale Monferrato, Italy - Automation Software for books sewing machines; SAINT-GOBAIN EMBALLAGE Vauxrot, France, GLAXO SMITH KLINE Coleford, UK - Software Maintenance on Palletizer Robotic Lines; DAIMLER/CHRYSLER - COMAU - Bremen, Sindelfingen, DE, FIAT - COMAU - Tychy, Poland - Automation Software for Robotic Welding Industrial Lines; SCHNEIDER / TECHINT - PHA LAI (Vietnam) - THERMAL POWER PLANT COAL HANDLING PLANT Supervision of the commissioning; SAINT-GOBAIN EMBALLAGE Vauxrot, France, GLAXO SMITH KLINE Coleford, UK - Software Maintenance on Palletizer Robotic Lines; S. AGATA / NEUMAG OERLIKON - Camden, South Carolina (US), Xiaoshan Hangzhou, China, Sonzhou, China - Carding Plants commissioning and startup; LANIFICIO F.LLI CERRUTI, BI, Italy - Project & Test Engineering System, for the quality management of internal software systems development.

Methodology software: GALILEO AVIONICA-NICE, Italy - Design and development of a Corporate CMMi Metrics System.

Infrastructures: STE Engineering - Rome, Italy - Preliminary conceptual design and systems design for the Integrated Safety System of the Bridge over the Strait of Messina; GEMMO IMPIANTI / STE Engineering - Rome, Italy - Preliminary conceptual design and systems design for the Integrated Safety System of the Gran Sasso Highway Tunnel, Preliminary conceptual design and systems design for the Integrated Safety System of the Gran Sasso Highway Tunnel; GEMMO IMPIANTI - Venice, Italy - Definitive project of the 33 kms highway bypass of Mestre, full automation, supervision, all the special systems; MI, Italy - Feasibility study and pre-design of four tunnels on the Ljubljana-Maribor highway, integrated automation and supervision, all the special systems; Hungary - Feasibility study and pre-design of the Urban Subway of Budapest, automation and supervision of the electric systems; Mestre, VE, Italy - Supervision and Telecontrol Real-Time System of the Fire-Fighting plant of the Mestre West Ring; SCHNEIDER ELECTRIC / PSA / SOGI-PIZZAROTTI / ANAS BOLZANO. - NATURNO BZ, Italy - Tunnel Automation and Supervision Real Time System; MI, Italy - Feasibility Study and Pre-Design of a 30 km. highway segment, including six double barrel-vault tunnels, and all the technologic systems; GEMMO / ALSTOM. - AO, Italy - MONTE BIANCO TUNNEL - Test engineering, supervision of the field test activities; ALSTOM - MONTE BIANCO TUNNEL Training of the Tunnel Automation and Control System Operators; SITAF - TURIN-FREJUS HIGHWAY - Supervision and monitoring system enhancement engineering and supervision; Milano, Italy - Milano SubRailway Feasibility Study.

Telecommunication: PIRELLI LABS, MI, Italy - Multilaser Amplifier for optical fibre transmission. Project Quality Coordination and Management; SIT / ALCATEL - Milano, Italy - HDSL FRONT-END SYSTEM Design and development of embedded software to control the transmission on the HDSL line, on both sides (provider and user); SIT / PIRELLI SUBMARINE - Sesto S.G., Italy - SUBMARINE OPTICAL FIBRE CABLES TRANSMISSION CONTROL, DIGITAL SIGNAL PROCESSING High Power Laser Control firmware systems design and development.

Student of the space age philosophy

Since late 1980' Adriano developed a critical reflection about the growth of our civilization in a closed system. In opposition to the boring green movement he analyzed the incoming economical, cultural and environmental crisis as a growth crisis, and rejected the psychotic paradigm that sees man as a virus of Earth. Consequentially, he begun to develop his new humanistic theory, having its main guideline in the crossing of the world boundaries, first of all the space frontier. After several tentatives to found a paper magazine, in 1997 he decided to create a web magazine, called Technologies of the Frontier. During late 90's and early 2000's, several space philosophers and activists reach the editorial staff: Michael Martin Smith (UK), Marco C. Bernasconi (CH), Patrick Collins (UK/Japan), and others. The magazine publishes several excellent articles and papers, on the them of space tourism, astronautic humanism, ethics. In the same time Adriano participates to IAF congress: 1997, in Torino, 1998, in Melbourne, 2001, in Toulouse and, later, presenting several papers in the space and society symposium (see the papers list, hereafter). Technologies of the Frontier, together with SpaceFuture (the web journal managed by Patrick Collins and Peter Wainwright) hold two conventions, in 2006 "The global importance of the incoming Space Economy", at the medieval castle of Moncrivello, in Italy, and in 2008 "A new renaissance: colonizing the Moon and the Near Earth Asteroids!", in Belgirate, Lago Maggiore in Italy. During the convention the seed of the Space Renaissance was sewed, by Adriano and patrick. At the end of 2008, the Space Renaissance Initiative web site was created, and begun to call space enthusiasts world wide to join their efforts, with the goal to speak louder, and reach the public opinion. The guidelines were, from the very beginning: human expansion into space as the sole alternative to the global crisis, great value of the big number of human

intelligences vs. the bureaucratic vision of “mouths to feed” (Simon vs. Malthus). In 2010 the Space Renaissance International was founded, and in 2011 it held its first congress, online. In 2012 SRI entered a more mature phase, and is now in the stage of creation of local chapters, in the US, in Italy, and other countries.

Adriano wrote several books, the two of them on the themes of astronautic humanism: “Earth is not sick: she’s pregnant!”, published in Italy in 2008 (“La Terra non e’ malata: e’ incinta!”, by Arduino Sacco Editore), and “Three Theses for the Space Renaissance”, co-authored by Patrick Collins and Alberto Cavallo, in 2011.

Some of the papers and books authored or coauthored by A. V. Autino:

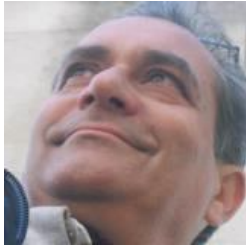
- A. Autino, P. Collins, A. Cavallo - Three Theses for the Space Renaissance (book)
- A. Autino - La Terra non é malata: é incinta! (book, italian language)
- A. Autino - Il Marketing Funzionale (book, italian language)
- A. Autino - Dalla Qualità alla Maturità (book, italian language)
- P. Collins, A. Autino, “What the Growth of a Space Tourism Industry could contribute to Employment, Economic Growth, Environmental Protection, Education, Culture and World Peace”, paper presented at the International Astronautic Academy Symposium on Private Human Spaceflight, May 28-30, 2008, Arcachon, Bordeaux, France.
- A. Autino - The Solar System: a living organism, 2009
- A. Autino - Founding a new renaissance - toward a Space Renaissance Academy (paper presented at the 2nd International Convention of Technologies of the Frontier – Belgirate 2008)
- A. Autino - A needed change of paradigm in the space systems project processes and methodologies, (paper presented at 56th International Astronautical Congress 2005 Fukuoka - Japan)
- A. Autino - An essential Project & Test Engineering Methodology - (paper presented at IAF 54th Congress, Bremen 29/09 - 03/10 2003)
- A. Autino - A Plan for the Mercantile Astronautics (paper presented at the International Symposium on Space Travel Bremen, Germany, April 21 - 23, 1999)
- A. Autino - Il metodo del Reiterative System Life Cycle per la Maturità dei Processi di Progettazione (Italian language)
- A. Autino - The value of human life, or: Technology as a promoter of moral evolution, 2005
- A. Autino - The Copernican Evidence - Requirements for a Space Age Philosophy” - (paper presented at the 53rd IAF Congress- Houston 2002)
- A. Autino - The fifth season - the space ‘bingo’ surprises: very profitable and not obvious gifts of space (paper presented at 56th International Astronautical Congress - 2005 Fukuoka - Japan)
- A. Autino - Concepts for a world space program based in the society (paper presented at 49th International Astronautical Congress, 1998/Melbourne, Australia)
- A. Autino - New credit tools and tax concepts for the opening of the space frontier (paper presented at 51th International Astronautical Congress, 2000/Rio de Janeiro, Brasil)
- A. Autino - The methodology of questionnaires to develop a world wide space education plan (paper presented at 52th International Astronautical Congress, 2001/Toulouse, France)

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Twitter: <https://twitter.com/AdrianoAutino>

Gianni De Rose, Ing.



Gianni got his Engineering Degree in Industrial Technology, at University of Calabria, in 1984.

Since July 2012 to date, **Ing. De Rose** is Chief Operation Officer in [Andromeda Systems Engineering Ltd](#) - London UK. ASE Ltd deals industrial and infrastructural automation, robotics, systems engineering and management methods of the life cycle of the product. His specialties: management consulting, management systems and organization, production, technological innovation, projects planning and development, industrial reconversion. Certificates management systems ISO 9001, ISO 14001, OHSAS 18001 and SA 8000. organizational development and training for the improvement of processes. Analysis and process mapping. Development of the personnel skills for operational processes.

Professional history

For Ferrari SpA, in 2010 and 2011, Gianni was coordinator/supervisor of the electric commissioning of the Tribune of Mugello Circuit, Scarperia (FI).

For United States Embassy in Rome, since 2009 to 2011, Ing. De Rose was project manager for the development of Electrical Systems, Fire Protection and Surveillance System. He also collaborated with the Quality Control & Safety Manager SKE (VINCI Group), on the restructuring activities of the Property OBO Sembler Building (6000 square meters) including the renewal of the Marine Security Guard Quarters - MSGQ.

Since 2003 to 2010, he collaborated with PICO & FORM srl - Rome (training and consulting), providing criteria, coaching and operating procedures to create and manage the Integrated Project Team (IPT), a management responsible model, for implementing the requirements of the Finmeccanica Guideline "Life Cycle Management & Project Control". Gianni participated directly to the operations and application of the Phase Review concepts (SELEX SI - AERMACCHI - AGUSTA WESTLAND - OTO MELARA - GALILEO AVIONICS).

In 2010 and 2011, with DALKIA Solar SpA (Group Siram / Veolia), Gianni helped in planning and installing Photovoltaic Systems. He also organized the management system for quality, defining the procedures and taking care of the certification by ICIM SpA

In 2010 and 2011, Ing. De Rose performed an operational advice for the extension of the ISO 9001: 2008 to the Energy sector, RINA certification, setting the Integrated Quality, Environment and Safety, for Simav SpA (Group Siram, Maintenance Engineering Logistics operating companies of the Finmeccanica Group).

Since 1999 to 2005, Gianni served at RG SpA - Milano / Roman Administration Real Estate - Rome, as manager of real estate assets, plant maintenance and structural behalf of large organizations, design, implementation and management of the Quality System certified by SGS.

In RITEL SpA, since 2006 to 2009, Gianni served as manager for industrial activities. RITEL produces electronic equipment for telecommunications. During this period, RITEL acquired the plant Alcatel Italia SpA of Cittaducale (RI), (ALCATEL LUCENT and Thales Alenia Space participate in the share capital of Ritel). Among his duties: responsibility of the business operational management: sales management, planning, production activities management, warehouse management and collateral structures and service, as well as the responsibility for the safety and efficiency of production areas, the quality of the product / system; preparation of the production budget forecast and its control, coordination of computer facilities.

Since 2002 to 2006 he supplied management consultancy to SMEs on issues related to Quality, Environment, Production and Technological Innovation. With regard to the Quality / Environment, more than 600 companies have been certified by accredited bodies in the main sectors: Manufacturing (Electronic, Mechanical, Plastic, Glass - Automotive - production and repair shops - AVSQ - QS 9000 - EAQF), Construction, Safety, Metallica, Sandblasting and Industrial Painting, Real Estate Asset Management, Technical University of Design, University Commercialistici, Cleaning Services, Application Software, Dairy, Bakery, Transportation, Engineering Services Clinic, Hospital Supplies, Services Perfusion (extracorporeal circulation during surgical procedures in cardiology), Schools, Hospitals facilities.

With TQM Consult SpA (Altran Group), Gianni was head of Center-South department Chief since 1995 to 2002. TQM is a training and consulting company. He covered the roles of commercial technical coordinator and manager of the operating sites of Rome, Pescara, Perugia, Italy, Bari, Crotone. He also served as project manager for activities on large customers. OSL SpA (Melfi), Delfosud SpA - Aprilia (LT), New Holland - Lecce, Dayco - Chieti, Installation Equipment SpA (Rome).

Since 1985 to 1995 Gianni operated in several industrial companies, mainly in the electronic domain, as a consultant for technological and methodological issues: SMT technology introduction; analysis of machinery / materials, design, implementation and optimization Lay Out, programming and production activities; production start-up, quality assurance. Main collaborations with: Selenia - Alcatel Dial Face - ICET - Olivetti - Texas Instruments - Ericsson Fatme - Siemens - Executed (CH) - Labtech (UK) - Hilme SpA - Zanussi - Flexible Tech (UK) - ECL. With Alenia in Rome, since 1991 to 1997, he was in staff to the direction of management information systems and technological development unit, in order to define the operational guidelines for technological innovation in industrial processes and to support the development of new products at Alenia Defence. He took care of setting-up and initial operation of the assembly line

prototypes.

Whit Sit ITALTEL L'Aquila - Transmissions Division - Process Engineering, since 1985 to 1991, he had the operational responsibility for the introduction of SMT technology at the L' Aquila plant; he also acted as interface between ITALTEL AQ and other entities of the Group in the same domain (Selenia - Olivetti - Marconi - Telettra - Texas Instruments - Ericsson - Marconi). He also represented ITALTEL in inter-company seminars / conferences / meetings. He was appointed member of the working group by the General Director for the Corporatization of New Technology. He also participated in working groups set up to curb problems of quality of critical components and materials. He also collaborated with the Central Authorities "Quality Management" and "Management Processes" by: industrial feasibility studies, guidelines definition for design and manufacturing, processes defining (technical requirements process), development of approval process requirements. Ing. De Rose also was manager for the transfer of the 45 MB ITALTEL radio-mobile line from Milano to L'Aquila: analysis of machines and equipment, development process, activities with the office education / training, selection of staff to be transferred to new work, defining training programs, teaching the following courses, supervision and start-up the release of the Entity Production Line. Design of production lines and manufacturing products developed by Italtel in conjunction with Telettra, Ericsson, AT & T, IBM. Qualification activities of the Line Technology ITALTEL / IBM.

During his career Gianni often dealt education activities, besides the ones embedded in his mentioned collaborations, e.g.: organization and teaching in the master of quality management coordinated by the QUALITAL Consortium of the University of Pisa; organization and teaching in the Marketing Management, coordinated by the Academy of Communications in Milan. He also managed technical sales activities with companies such as: EXEC ZEVATECH (CH) JUKI (J) ENG VISION. (UK); DUPONT (F); SIEMENS AG (D) (1992 - 1998). He was also accredited to give advice on quality, environment and technological innovation near Italy Calabria Development and Chamber of Commerce of Italy with various tasks and participation in the SEPRI Project.

Facebook: <http://www.facebook.com/gderose1>

**Patrick Q. Collins,
Ph.D**



Dr. **Patrick Collins** is a well-known and respected authority on space economics, space tourism, reusable launch vehicles, and space solar power. He is a professor of economics at Azabu University in Japan and adviser to a number of companies and organisations. The focus of Dr. Collins' research for the past 25 years has been how to stimulate growth of commercial space activities, the two main opportunities being tourism and energy supply. Dr. Collins performed the first market research on space tourism in Japan in 1993, and collaboratively in the USA in 1995, and it has been very satisfactory for him to see his results confirmed by Nasa-funded studies performed in recent years. He is co-founder of Space Future Consulting, which maintains the Spacefuture.com archive.

Dr Collins is closely involved with Japanese work on space tourism and space solar power, subjects which are gradually getting more and more attention, and is Chairman of the Society for Space Tourism of Japan (SSTJ).

Dr. Collins is widely published, including an editorial in Aviation Week, and an invited speech at the AIAA Wright Brothers Centenary Celebration in Dayton.

Patrick is co-founder of the Space Renaissance International, where he holds the position of Vice-President.

The following are some of the papers and books authored or co-authored by Dr. Collins, many of which are downloadable at: www.spacefuture.com/cgi/glossary.cgi?gl=who&term=Patrick%20Collins

- A. Autino, P. Collins, A. Cavallo - "Three Theses for the Space Renaissance", 2011, (book), Lulu.com.
- P. Collins & Adriano Autino, "What the Growth of a Space Tourism Industry could contribute to Employment, Economic Growth, Environmental Protection, Education, Culture and World Peace", paper presented at International Astronautical Academy Symposium on Private Human Spaceflight, May 2008, Arcachon, Bordeaux, reprinted in 2010, Acta Astronautica, Vol 66, pp 1553-1562.
- P. Collins - "Economic Benefits of Space Tourism to Europe", 2006, Presented at BIS "European Development in Space Tourism" Symposium.
- P. Collins - "The Economic Benefits of Space Tourism", 2006, JBIS, Vol 59, pp 400-411.
- P. Collins - "Synergies Between Solar Power Supply from Space and Passenger Space Travel", 2004, Proceedings of 4th International Conference on Solar Power from Space, Granada, ESA SP-567, pp 59-64.
- P. Collins - "Space Tourism Market Demand and the Transportation Infrastructure", 2003, Invited speech to the AIAA/ICAS Symposium 'The Next 100 Years' in honour of the Wright Brothers' first flight.
- P. Collins - "Growing Popular Interest in Space Tourism: Challenge and Opportunity for Space Agencies", 2003, IAF paper no. IAC-03-LBN.1.08.
- P. Collins - "The Future of Lunar Tourism", 2003, Invited speech, International Lunar Conference, Waikoloa, Hawaii, 2003, November 20.
- P. Collins - "The Potential Importance of Passenger Space Travel Services", 2003, Journal of Space Technology and Science, Vol 19, No 1, pp 17-26.
- P. Collins - "Space Hotels: Civil Engineering's New Frontier", 2002, Journal of Aerospace Engineering, ASCE, Vol 15, no 1, pp 10-19.
- P. Collins - "Meeting the Needs of the New Millennium: Passenger Space Travel and World Economic Growth", 2002, Space Policy, Vol 18, No 3, pp 183-97.
- P. Collins - "The Cost of Governments' Monopolisation of Space Travel", 2002, Proceedings of Public Choice Society Annual Meeting.
- P. Collins - "Space Tourism: A Remedy for 'Crisis in Aerospace'", 2001, Editorial, Aviation Week & Space Technology, December 10, Vol 155, no 24, p 98.
- P. Collins, O. Thornton - "On the Practical and Sporting Aspects of Football in Zero-Gravity", 2001, Presented at BIS Symposium on The Popular Commercialisation of Space.
- P. Collins - "The Prospects for Passenger Space Travel", 2001, Invited speech to 4th Annual FAA Commercial Space Transportation Forecasting Conference, Arlington, Virginia. - P. Collins - "Space Policy, Space Tourism and Economic Policy", 2000, 22nd International Symposium on Space Technology and Science, Morioka, Japan
- P. Collins - "Public Choice Economics and Space Policy: Realising Space Tourism", 2000, Acta Astronautica, Vol 48, No. 5-12, pp 921-950.
- P. Collins - "The Space Tourism Industry in 2030", 2000, Proceedings of Space 2000, Albuquerque, ASCE, pp 594-603.
- Peter Diamandis & P. Collins, "Creation of an Accredited Passenger Regulatory Category for Space Tourism Services", 1999, 1st STA Conference on Space Tourism.
- P. Collins & Yoshiyuki Funatsu - "Collaboration with Aviation: The Key to Commercialisation of Space Activities", 1999, IAF Congress paper No. IAA-99-IAA.1.3.03.
- Hideo Matsuoka*, Makoto Nagatomo, P. Collins, "An Equatorial SPS Pilot Plant", 1999, presented at 50th IAF Congress, Amsterdam, Paper IAF-99-R.3.06.
- P. Collins, Sunao Kuwahara, Tsuyoshi Nishimura, Takashi Fukuoka - "Artificial-Gravity Swimming-Pool", 1998, Proceedings of Space 98, ASCE, pp 744-751.
- P. Collins, Makoto Nagatomo, Takumi Hanada & Yoshihiro Naruo - "Study on airport services for space tourism", 1995, presented at 6th International Space Conference of Pacific Societies, Marina del Rey, CA. USA.

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- P. Collins, R. Stockmans, M. Maita - "Demand for Space Tourism in America and Japan, and its Implications for Future Space Activities", 1995, AAS paper no. AAS 95-605, AAS Vol 91, pp 601-610.
- P Collins & David Ashford, "Your Spaceflight Manual", 1990, (book, Headline (UK), Crescent (USA)), 120pp.
- P. Collins - "The Coming Space Industry Revolution and its Potential Global Impact", 1990, Journal of Space Technology and Science, Vol 6, No 2, pp 21-33.
- P. Collins, "European launch vehicle development: a commercial approach", 1989, European Business Journal, Vol.1, No.2.
- P. Collins - "Stages in the development of low Earth orbit tourism", 1989 Space Technology, Vol 9, No 3, pp 315-23.
- P. Collins & David Ashford - "An alternative to Hermes: A solution for the European space industry", 1988, Space Policy, Vol. 4, No. 4.
- P Collins & David Ashford, "Potential Economic Implications of the Development of Space Tourism", presented at 37th IAF Congress, Innsbruck, Paper no. IAA-86-446, and reprinted in 1988, Acta Astronautica, Vol 17, No 4, pp 421-31.

SpaceFuture: <http://www.spacefuture.com/cgi/glossary.cgi?gl=who&term=Collins>

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Susan Singer, B.A.



Susan Singer dedicated her early career to project management in environments specializing in cutting-edge research and technologies. These have ranged from a biotech start-up to CAD/CAM, optical, survey research, STEM education, medical and nanoscience fields of endeavor. She's been engaged in all three business sectors (public, private and not-for-profit), working her way to the executive suite in the process. Susan developed expertise in operations management, strategic planning and aligning organizations' execution to strategic goals. She is facile in organizational governance, and collaborates with Chief Executives and Boards of Directors. She holds a B.A. from San Diego State University and is a Stanford University certificant in Advanced Project Management. She is currently a consultant who partners with subject matter experts to achieve organizational visions compatible with institutions' unique cultural, strategic and governance mechanisms, and executing initiatives through to the operationalization level.

Susan is among the fewer than 3,500 Stanford-certified project, program and portfolio management professionals world-wide. She possesses a demonstrated record of leadership and achievement in organizational engineering, process improvement, strategic planning, change management and corporate governance in environments focused on taking emerging and cutting-edge innovations vertical from concept through delivery. Her specialties: Project Management (PM III); Program and Portfolio Management; Organizational Governance and Policy; Process and Operational Improvement Initiatives; Strategic Planning and Alignment to Strategic Objectives; Distributed Teams; Research and Writing.

Professional history:

2011-Present - Susan Singer Consulting - Delivers fact-based, customized solutions through the employment of Advanced Project Management principles that are consistent with clients' organizational structure and culture with the following emphases: Continuous Improvement Initiatives, Effective Distributed Teams, Governance at the Organizational, Business Unit or Program and Project Levels, Healthy Workplace Initiatives, "Operationalization" of Projects, Organizational Change Management, Policy Development, Articulation, and Adoption, Project Management. Process Improvement and Streamlining, Strategic Plan Development, Implementation and Alignment.

2007-2010 - American Society of Anesthesiologists - Outside Consultant (2007-2008) and Manager of Governance: Project Manager III (2008-2010) - Successfully implemented the governance component of the three-year Organizational Improvement Initiative and oversaw a budget area of \$900,000+. Reduced meetings handbook costs from \$11,000 in February 2008 to \$633 in October 2010 by instituting a "green initiative" that eliminated nearly all paper publications. Streamlined operational, labor and process structures to serve a 44,000-member organization with a total force of three staff. Employed advanced project management (APM) techniques to align policy-related activities with strategic objectives. Monitored, guided and supported the activities of 107 committees, subcommittees, ad hoc committees, editorial boards and distributed teams through objective project tracking, data collection, and the creation and maintenance of an organization-wide "audit trail". Collaborated with nine internal departments, interconnecting the matrices and eliminating duplication of efforts; served as liaison to several committees as well as ASA's three major governing bodies: the Administrative Council, Board of Directors and House of Delegates.

2006-2007 - National Center for Learning and Teaching in Nanoscale Science and Engineering (NCLT) - Renamed (2011) Nanotechnology Center for Learning and Teaching. Research Associate: Project Manager - Project managed eight distributed teams comprised of members from ten universities and Argonne National Laboratory over one-year contract period. Researched and prepared proprietary white papers on nanoscience, STEM (science, technology, engineering and mathematics) education, and wrote press releases and contributed website content. Collaborated with the International Virtual Institute (IVI) toward the NSF-mandated launch of the NanoEd Resource Portal, which was completed in advance of the required date. Tracked and analyzed server data to determine impact on the scientific community of the Center's websites.

2006 - Youth Job Center of Evanston - Outside Consultant: Process Improvement - Adapted, without sacrificing state-required elements, a technology education module by reducing the course duration 25% to counter an unacceptable student attrition rate. Taught the first class of 18- to-25-year-old, at-risk youth exposed to the redesigned content. 87.5% of the students enrolled – 62.5% of whom had felony convictions – were graduated and hired by community partners.

2004-2006 - Richard Day Research - Field Director: Project Manager - Assembled and prepared project teams to conduct as many as seven concurrent, industry-specific studies for clients in the financial, pharmaceutical, non-profit, education, government and legal arenas. With team of six shift supervisors, instructed and guided a staff of 64 data collection researchers in bias-free interview techniques consistent with CASRO standards.

Other Affiliations:

- Harvard Business Review Advisory Council (2012 – present) Opt-in research community
- McKinsey Quarterly Executive Panel (2012 – present) Opt-in research community
- AWIS Education Task Force (2012) Member
- Lifeboat Foundation (2011-Present) Advisory Board Member - Futurist
- Space Renaissance International (2011-Present) Member, Executive Committee
- Taproot Foundation (2011-Present) Pro Bono Consultant and Project Manager

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Published Pieces, Press Releases and Presentations:

- Governance As An Extension of Culture, Stanford University Corporate Governance Wire, May 2012
- AWIS / Genentech STEMiNAR Series:
 - Research Project Management, January 2012
 - Should the Subject Matter Expert Be The Project Manager?, February 2012
 - Building The Research Team, March 2012
 - Effective Decision-Making, April 2012
- Space Renaissance International. Presentation delivered by Chetan Shetty (Coordinator and Chief at SRI-India); slide deck by Susan Singer (Executive Committee, SRI) and narrative by Walter Putnam (Chair, Communications Committee), February 2012
- Do We Need Specialization?, Projects@Work, May 18, 2011
- Should Non-Profits Be Managed Like Their For-Profit Counterparts?, Best Thinking, February 2011
- Made in America: An Idea Whose Time Has Returned, Best Thinking, December 2010
- EEOC Sues Omnicare, eBoss Watch, July 2010
- Maronda Homes Settles Suit, eBoss Watch, July 2010
- Suit Filed Against Colorado House Minority Leader, eBoss Watch, July 2010
- Greyhound Boss Accused, eBoss Watch, July 2010
- Doing Well by Doing Good, Best Thinking, May 2010
- Project Management in the Research Environment, Best Thinking, April 2010
- Governance - Making it All Work! (co-authored with Gerald A. Maccioli, M.D., FCCM) ASA NEWSLETTER, Volume 74, Number 4, April 2010

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Feng Hsu, Ph.D



Dr. **Feng Hsu** is a renowned US expert with over 20 years of experiences in the field of Risk and Safety assessment and mission assurance management for complex engineering systems, such as nuclear power plant system, space launch vehicle systems, solid rocket booster & interplanetary exploration spacecrafts as well as air or ground traffic control systems for civil aviation.

As a restless space activist, Feng is a member of the Space Renaissance International Executive Committee.

Formerly an engineering researcher at world renowned Brookhaven National Laboratory (BNL), Dept. of Advanced Technology, he has worked extensively on reliability, Probabilistic Risk Assessment (PRA) and management theory and methodology research for nuclear reactor system and space launch vehicle systems since the 1980s.

He then became Sr. Staff Engineer/Scientist and joined NASA's SAIC team in the Space Shuttle and Exploration Analysis Department at Johnson Space Center in Houston Texas since 2000. He has been a lead engineering analyst and project manager working as technical authority in the Space Center on NASA's key program areas, such as Probabilistic Risk Assessment (PRA), Safety and Mission Assurance (SMA) for the Space Shuttle Program (SSP), International Space Station (ISS) as well as the Risk-based design assessment for the new generation space launch & crew exploration vehicle (CEV/CLV) systems etc. Feng was a leading NASA engineer working on frontier space missions at NASA GSFC, and he has over 70 publications, including Journal articles, NUREG/CRs, BNL and NASA technical reports as documented for US NRC (Nuclear Regulatory Commission), US DOE (Department of Energy), US FAA (Federal Aviation Administration) and NASA (National Aeronautics and Space Administration) etc. Besides being referee for several international journals, Feng is a member of the technical committee of IEEE SMC, co-chair of the technical committee on system safety and security, and has regularly chaired technical sessions in various professional and international academic conferences.

His major professional strengths, technical capabilities and interest of academic research include: (1) Advanced methodologies for Risk Assessment and Management applications for large & complex engineering systems, i.e., nuclear, space, off-shore oil exploration, chemical and mining industry, aviation and high speed railroad traffic safety & risk-based regulatory technologies. (2) Aging & life-extension and degradation modeling for safety risk and governmental regulatory analysis of industrial facilities and hardware equipments of any paramount financial and national importance, using dynamic/living PRA models, system reliability allocation & optimization techniques and failure data statistics. (3) Development of innovative techniques & methods for hazard assessment and risk management for prevention of industrial, financial and national catastrophes and minimization of consequences in lieu of occurrences of such severe accidents and natural disasters. (4) Risk-benefit modeling for strategic planning and decision making of high-valued national projects (energy, defense, public security, social-economical and industrial investment etc.) based on Monte Carlo simulation, risk based performance monitoring, risk-informed multi-objective & multi-criteria decision making and cost-benefit trade-off studies as well as Markov modeling approaches.

Feng earned his undergraduate degree in Applied math at Chungking University in Sichuan and left China over 20 years ago for graduate studies at MSU in the USA and earned MS in Operations Research and Statistics, Ph.D. in Engineering Science. He has won numerous research and service awards from BNL, SAIC and NASA during many years of his outstanding contribution and accomplishment in many fields. His major professional and academic honors include: Senior member of Aerospace Technology Working Group (ATWG). Sr. Advisory of the SEDA (Space & Earth Development Alliance) Institute. Member of ANS (American Nuclear Society), AIAA (American Institute of Aeronautics and Astronautics), IEEE, ISSAT (International Society of Science & Applied Technologies) and SRA (International Society for Risk Analysis). Board of director member (96-98) of ISSAT (International Society of Science & Applied Technologies). Referees (Peer Reviewer) for International Journal of Reliability and Quality Control; International Journal of Reliability Engineering & System Safety; International Journal of Risk Analysis. Coauthor of the book Beyond Earth - The Future of Humans in Space, Apogee Books, 2006. Principle author of major reports of the NASA PRA study for the Space Shuttle STS systems. NASA/SAIC SR&QA recognition award, July 2002, significant contribution for Shuttle PRA. NASA/SAIC SR&QA peer recognition award, March 2001, key contribution for SPRA MLD. Brookhaven National Laboratory service award, August 1999 for outstanding work performance. US DOE honor for NIAS technique & software development, US National Energy Software Center. Argon National Laboratory, Chicago, Jan., 1994. Brookhaven National Laboratory, ETD seminar award, April, 1992 (Risk-based Display indicator Technology). Brookhaven National Laboratory, ETD seminar award, Oct., 1990 (Degradation modeling & Applications).

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**Kenneth Ford, BS,
MS, MBA**



Soon after graduating from the University of Rhode Island, **Ken** began his career with NASA as an Electronics Engineer at the Kennedy Space Center (KSC) in Florida. He went on to spend 36 rewarding years with NASA in progressively responsible System Engineering and Project Management positions.

At KSC, Ken was responsible for the design and development of communications and telemetry systems in for Space Shuttle and Spacelab. In 1987, Ken accepted a management assignment at the Space Station Program Office (SSPO) in Reston, VA. In his six years at SSPO, Ken managed Section, Branch, and Division offices for International Element Integration, Concurrent Engineering, and Risk Assessments. In 1994 Ken was appointed Earth Probes Program Manager in NASA Headquarters, managing several projects national and international. Ken received a Certificate of Appreciation from NASDA for ADEOS, Certificate of Appreciation from NOAA, and the NASA Exceptional Service Medal. In 1996 Ken continued moved to the Goddard Space Flight Center, MD. This would include as the Special Assistant for Program Integration for the Earth Observation System (EOS) and the Program Manager for Solar Terrestrial Probes. Ken returned to NASA Headquarters in 2005 as the Space Network Program Executive. Ken retired from NASA in January 2009 after achieving a solid record of System Engineering and Project Management with the Space Shuttle, Space Station, Tracking and Data Relay Satellite System (TDRSS), and space science programs. He is now an associated partner of Andromeda Systems Engineering.

Professional history:

July 2009 – Present - Manager and Consultant - Andromeda Systems Engineering LLC (US) - Managing Partner advising the Andromeda System Engineering Executive Council on business strategies, product development, and marketing. Plan and manage start-up activities for the Consulting Services Division. Available for contract positions as a Program Management Consultant. Also available for education activities, on the matters of project management and project risks management. Consulting services may include tasks such as: strategic planning, proposal preparation, project development, requirements definition, technical & management studies, independent/red team analysis, field office initiation, risk management, compliance, recruiting, and training. I have strong project experience and I'm a team leader who effectively meets goals through strong leadership, interpersonal communication, and analytical abilities.

2005 –2008 - Space Network Program Executive - NASA Headquarters; Washington, DC - Management of technical, programmatic, and budgetary aspects for the ground and flight segments of NASA's Space Network. This includes the nine operational Tracking and Data Relay Satellites (TDRS) in geosynchronous orbit. Manage a \$90M budget, including \$80M of reimbursable revenue. Establish guidance and priorities to the Space Network Project at GSFC for needed system modifications and upgrades to maintain a high operational proficiency. Managed the start-up activities for acquisition of two new satellites to the TDRS fleet (TDRS-K & TDRS-L). Developed programmatic requirements and waivers to NASA agency requirements to enable acquisition on a fast-track schedule. Security Clearance: Top Secret

2003 –2005 - Deputy Program Manager - Solar Terrestrial Probes - NASA Goddard Space Flight Center - Deputy Program Manager for Solar Terrestrial Probes (STP) Program in the Space Science Enterprise. Manager of the technical, programmatic, and budgetary aspects of STP Projects. These projects include Solar Terrestrial Relations Observatory (STEREO), Solar-B, Magnetospheric MultiScale (MMS), Geospace Electrodynamics Connections (GEC), and Magnetospheric Constellation (MagCON). Chaired the STEREO/SECCHI Task Team to recommend technical, programmatic, and management changes to correct deficiencies. All recommendations accepted and implemented. COTR of the general aerospace contract with the JHU/Applied Physics Laboratory (APL). Formulation Manager for Concept Study for Optical Communications experiment on the Mars 2009 Telesat mission. Phase A Study was completed and presented to Office of Space Science in May 2003. Proposal Manager for Microlensing Planet Finder (MPF), in response to a Discovery AO. The proposal was submitted to the Office of Space Science in July 2004.

1999 –2003 - Special Assistant for Program Integration - NASA Goddard Space Flight Center - Special Assistant for Program Integration for the Earth Observation System (EOS) at Goddard Space Flight Center (EOS). Integration Manager for EOS projects including Landsat-7, Terra, Aqua, Aura, ICESAT, and SORCE. Developed the EOS Program Plan which included the process for EOS Program Integration and overall risk mitigation management. I was co-chair of a Goddard Study to evaluate technical, scientific, and budget impacts for the follow-on series of EOS missions. Ten candidate future mission concepts were presented to the Office of Earth Science at NASA Headquarters. This study resulted in definition of follow-on EOS and Earth Probes missions by the Earth Science Enterprise. I was also Team Lead of the Code 400 Formulation Transition Team. This team was chartered by the Code 400 Director to recommend how the Flight Programs & Projects Directorate (FPPD) would manage Formulation Projects transitioning from the STAAC Directorate. All recommendations were accepted and implemented.

1993 –1996 Program Manager - NASA Headquarters; Washington, DC - Earth Probes Program Manager in the Office of Mission to Planet Earth (MTPE). The function of this position is to serve as manager of the technical, programmatic, and budgetary aspects of Earth Probes Programs. These programs include the Total Ozone Mapping Spectrometers (TOMS) instrument, NASA Scatterometer (NSCAT) instrument, SeaWinds Scatterometer instrument, and the Japanese Advanced Earth Observing Satellites (ADEOS). My involvement in these programs culminated in the successful launches of the TOMS-EP in July 1996 and ADEOS in August 1996. In addition to the above MTPE responsibilities, I accepted a voluntary assignment as the technical chairman of the Gravity Probe B (GP-B) Independent Annual Review (IAR). I managed a team of individuals to review the technical and programmatic progress of the GP-B

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Program. The results of this review were briefed to the Program Management Council (PMC) in July 1995.

1991 – 1993 - Deputy Division Manager - NASA Space Station Program Office; Reston, VA - Management of Integrated Risk Assessment Reports (IRARs) for safety and reliability, availability analyses, support equipment management, PRACA process management, and interface/payload rack requirements. Represents the office chief as required in external meetings such as the Space Station Control Board (SSCB), the Integration Management Review (IMR), and Space Shuttle Safety Reviews. Assumed chairmanship of the Ground Support Equipment (GSE) Working Group (GSEWG) for integration of GSE design requirements, GSE interfaces, intersite deliverables, and technical issues. Defined a process of using the existing SIMSYLS and GO models at MSFC for performing a cost-effective availability analysis. Established the Problem Review Board (PRB) as a subgroup to the Integration Management Review (IMR) for disposition of system-level PRACA problems. Managed IRARs for the Program Incremental Design Review (PIDR), and was Team Lead of the Product Assurance Team for the PIDR in June 1993.

1990 – 1991 - Branch Manager - NASA Space Station Program Office; Reston, VA - Branch manager responsible for a new organization dealing with development of the Integrated Failure Modes and Effects Analysis (IFMEA), Integrated Hazards Analysis (IHA), and the Space Station Operations Data Book (SSODB). Branch responsibility also included requirements definition for the International Standard Payload Rack (ISPR) and Interface Configuration Documents (ICDs). IHAs and IFMEAs were developed and presented at the Integrated System Preliminary Design Review (ISPDR) in December 1990 and the MTC Preliminary Design Review (PDR) in October 1991. Chaired the Product Assurance Team for the ISPDR. The initial set of technical requirements for the ISPR was developed and baselined in conjunction with Space Station laboratory module developers at MSFC, ESA, and NASDA. The outline and plan for developing the SSODB was completed and forwarded to JSC for development.

1987 – 1990 - Manager, International Elements Section - NASA Space Station Program Office; Reston, VA - Section management responsibility for interfacing and integrating each of the Space Station international partner hardware elements into the integrated Space Station. These elements include the Canadian Mobile Servicing Center (MSC), the Japanese Experiment Module (JEM), and the ESA Attached Pressurized Module (APM). Managed development of joint technical requirements documents with each international partner in which the applicability of program requirements were baselined. Technical Interchange Meetings (TIMs) were conducted with each of the international partners to identify technical issues with interfacing international hardware elements with the Space Station. Managed the resolution of technical issues identified from the TIMs. This included integration of several technical discipline areas including: interface definition & control, electrical power, data, berthing mechanisms, and verification.

1985 – 1987 - Logistics Manager - NASA Kennedy Space Center; Florida - Logistics planning of Space Station facilities, systems, and Ground Support Equipment (GSE) at the Kennedy Space Center (KSC). Study manager of Space Station Program Integrated Logistics System (ILS) development in which supportability of Space Station hardware was assessed and a prototype automated system for Logistics Support Analysis (LSA) developed. Study manager for Space Station Maintenance Technology Development Mission (TDM) in which conceptual definition of on-orbit maintenance technologies and an on-orbit maintenance test bed were evaluated. In addition to the above, I accepted a 90-day detail in 1987 to NASA Headquarters in Washington, D.C. I was directly involved in the start-up activities for the new Space Station Program Office. In this capacity I was responsible for organizing concurrent engineering activities and for developing the initial Engineering Master Schedule (EMS) for the program.

1982 – 1985 - Project Engineer - NASA Kennedy Space Center; Florida - Project Engineering responsibility for integrating the planning, budgeting, and scheduling of design and construction/installation of facilities and equipment for Space Shuttle and Space Shuttle Payloads at the Kennedy Space Center (KSC). Representative projects included: Pad-A, OPF, Mobile Launchers, Landing Sites, DOD Security, electronics systems, Spacelab, and Spacelab payloads. Managed both R&D and Coff budgets for all assigned projects. Participated in defining facilities and equipment for the design & implementation of the Thermal Protection System (TPS) Facility, Orbiter Modification and Refurb Facility (OMRF), and second set of checkout equipment for Spacelab Payload Processing. Coordinated with MSFC, JSC, & GSFC personnel in study for relocating of the Spacelab POCC to KSC.

1974 – 1982 - Systems Engineer - NASA Kennedy Space Center; Florida - System Engineering for communications and telemetry systems. Responsible for the design and development of operational communications systems in preparation for Space Shuttle and Spacelab. Also responsible for design, integration, testing, and acceptance of the Microwave Scanning Beam Landing System-Ground Stations (MSBLS-GS) and the Precision Laser Tracking System (PLTS). "On-site" management responsibility for MSBLS-GS flight testing and commissioning at Kennedy Space Center, FL.; Edwards Air Force Base, CA.; and White Sands Missile Range, NM. Implementation of the MSBLS and PLTS at the various Shuttle Landing sites. Monitor and evaluate overall project performance. In addition to the above, I developed a series of Transition Agreements for the Design Engineering organization. These Transition Agreements detailed the criteria, cost, and schedule for transitioning sustaining engineering responsibility of operational systems from the design organization to operations organizations.

Education

1985 – 1987 - Florida Institute of Technology - MS Space Science, Program Management, Space Technology

1982 – 1984 - Florida Institute of Technology - MBA Management, Economics, Finance, Behavioral Science, Computer Science

1967 – 1971 - University of Rhode Island - BSEE Electrical Engineering, Mathematics, Physics

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Twitter: <https://twitter.com/ncram>

**Marco C. Bernasconi,
Ph.D**



Marco obtained a Dr Sc Techn ETH and a Dipl Masch Ing ETH from the Swiss Federal Institute of Technology at Zurich in 1979 and 1974, respectively. At Contraves Space (in their different corporate forms) since 1978, has is Principal Engineer for mechanical systems studies since 1989. In addition, he was Vice-President for The OURS Foundation between 1990 and 1998 and, since April 1998, Scientific Director for Technologies of the Frontier. He has consulted for the Orbiting Unification Ring Satellite (OURS) Project (1986-89) and ESA/ESTEC (1995-97), and has acted in different consultative groups on space in Switzerland and Europe. At Contraves he has originated the effort on chemically-rigidized, inflatable space structures (ISRS) that in the 1980s brought to the Division international recognition in the field of large space structures. Since 2002 to 2003 he was associated partner in Andromeda S.r.l., where he covered the position of Head of Space Technologies Dept.

Between 1979 and 1986, the ISRS effort grew out of a 150-kAU "rate-of-return" study, via a 1-MAU basic-technology bridge, to a set of development contracts for 4.65 MAU placed by ESTEC after 1983.

Dr Bernasconi is a Full Member of the International Academy of Astronautics (IAA) and has organized and chaired sessions for the Symposia on Space Activities & Society between 1994-1999. In addition he is a Professional Member of the World Futures Society and a Member of AIAA, of IEEE, & of its Society for the Societal Implications of Technology. He has lectured on large space structures at the International Space University.

Dr Bernasconi speaks Italian, English, French, and German and has published or co-authored more than fifty papers, primarily on large space structures, planetary surface locomotion, and the relation of Astronautics to society. His doctoral thesis -- Thermally-Driven Acoustic Oscillations: Influence of Finite Temperature Gradients -- was presented as paper IAF-89-449 at the 40th International Astronautical Congress at Torremolinos.

Marco authored and coauthored hundreds of papers, both on scientific and philosophical subjects. Hereafter a not exhaustive list:

Space Option and Ethics

- Marco C Bernasconi and Cristina Bernasconi, Why Implementing the Space Option Is Necessary for Society, presented at the 48th International Astronautical Congress, Turin (Italy) 1997; also: Acta Astronautica 54[05] (2004), 371-384
- Marco C Bernasconi, How the 21st-Century Society Can Sustain the Implementation of the Space Option, Technologies of the Frontier, 1997
- Marco C Bernasconi (1994). The Space Option & Our Future: Some Considerations on the Thermal Burden. Paper presented the BIS Symposium on "Space Industrialization as a Response to Global Threats," London (England), 23 June.
- Marco C Bernasconi (1995b). Ethics and the Astronautical Endeavour - Introductory Considerations. Paper IAA-95-IAA.8.1.01.
- Marco C Bernasconi (1997a). Broadening Space Utilization through Space Resources Exploitation: The Survival Mode - Why Extraterrestrial Resources Are Necessary. A position paper for the International Workshop on "Innovations for Competitiveness," ESTEC, 19-21 March.
- Marco C Bernasconi and Arthur R. Woods (1993a). Implementing the Space Option: Elaboration and Dissemination of a New Rationale for Space / Part I: . Paper IAA.8.1-93-764a.
- Marco C Bernasconi and Arthur R. Woods (1993b). Implementing the Space Option: Elaboration and Dissemination of a New Rationale for Space / Part II: The Space Option. Paper IAA.8.1-93-764b.
- Marco C Bernasconi, Astronautics: The Only Ethical Future, Technologies of the Frontier, 1997
- Donald Wesby, Unsustainable civilization?, Technologies of the Frontier, 1997
- Marco C Bernasconi, Three Levels for Astronautics, Technologies of the Frontier, 1997

Microwave transmission and solar-thermal capture

- M.C. Bernasconi (1984) - Large Spaceborne Antenna Reflectors Using Inflatable Space Rigidized Structures. - Paper presented at the 1st Workshop on Mechanical Technology for Antennas, ESTEC, 26-28 June; also: ESA SP-225, 31-36.
- G.G. Reibaldi and M.C. Bernasconi (1985- QUASAT Programme: The ESA Reflector. - Paper IAF-85-400 presented at the 36th International Astronautical Congress, Stockholm, 7-12 October; also: Acta Astronautica 15[], (1987), 181 - 187.
- MC Bernasconi, E Pagana, & GG Reibaldi (1985) - Inflatable, Space-Rigidized Reflectors for Mobile Missions. - Paper presented at the Globecom 1985 Conference, New Orleans (LA), December; reprinted in: CSELT Technical Reports 13[07], 437-441.
- GG Reibaldi, J Hammer, MC Bernasconi, & E Pagana (1986) - Inflatable Space Rigidized Reflector Development for Land Mobile Missions. - Paper AIAA-86-0692-CP presented at the AIAA 11th Communications Satellite Conference, San Diego (Calif), 17-20 March.
- M.C. Bernasconi (1986) - Development of a 2.8-m Offset Antenna Reflector Using Inflatable Space Rigidized Structure Technology. - Paper presented at the 2nd Workshop on Mechanical Technology for Antennas, ESTEC, 20-22 May; also: ESA SP-261, 31-39.
- E Pagana & MC Bernasconi (1986) - Prediction of the Electrical Performance of ISRS Offset Antenna Reflectors & Correlation with RF Measurements. - Paper presented at the 2nd Workshop on Mechanical Technology for Antennas, ESTEC, 20-22 May; also: ESA SP-261, 171-177; reprinted in: CSELT Technical Reports 16[01] (1988), 41-47.
- E Pagana & MC Bernasconi (1986) - Satellite Antenna with Inflatable Reflector (in Italian).
- MC Bernasconi, JA Hammer & E Pagana (1986) - RF Performance of the First 2.8-m Offset Inflatable Rigidized Reflector. - Paper presented at the JINA '86 Conference, Nice (France), 4-6 November.

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- M.C. Bernasconi, E. Pagana, & G.G. Reibaldi (1987) - Large Inflatable, Space-Rigidized Antenna Reflectors: Land Mobile Services Development. - Paper IAF-87-315 presented at the 38th International Astronautical Congress, Brighton (UK), October 10-17.
- MC Bernasconi (1988) - Inflatable, Space-Rigidized Structures for Antenna Applications. - Paper prepared for the MM'88 Military Microwave Conference.
- M.C. Bernasconi (1988) - Inflatable, Space-Rigidized Antenna Reflectors: Flight Experiment Definition. - Paper IAF-88-049 presented at the 39th International Astronautical Congress, Bangalore (India), October 8-15.
- MC Bernasconi, DTG Gloster & WJ Rits (1989) - The L-Band ISRS Reflector for SAT2: A Summary of the Initial System Study. - Paper presented at the ESA Workshop on Antenna Technology, ESTEC, November 1-3; ESA WPP-12.
- K. van't Klooster, W.J. Rits, E. Pagana, P. Mantica & M.C. Bernasconi (1990) - An Inflatable Parabolic Reflector Antenna - Realization and Electrical Predictions. - Paper presented at the International Mirror Antenna Conference, Riga (Latvia), September 6-8; also: ESA Journal 14[02], 211-216.

Lightweight supports for power, propulsion, and scientific applications

- M.C. Bernasconi, W. Seiz, and G.G. Reibaldi (1984). - Inflatable, Space-Rigidized Structures: Recent Development of the Material Technology. - Paper IAF-84-384; also: Aerotecnica Missili & Spazio 64[02] (1985), 71-85.
- G.G. Reibaldi and M.C. Bernasconi (1985). - QUASAT Programme: The ESA Reflector. - Paper IAF-85-400 presented at the 36th International Astronautical Congress, Stockholm, 7-12 October; also: Acta Astronautica 15[], (1987), 181 - 187.
- M.C. Bernasconi and G.G. Reibaldi (1985). - Inflatable, Space-Rigidized Structures: Overview of Applications & Their Technology Impact. - Paper IAF-85-210 presented at the 36th International Astronautical Congress, Stockholm, 7-12 October; also: Acta Astronautica 14 (1986), 455 - 465.
- MC Bernasconi and W Seiz (1988). - Inflatable, Space-Rigidized Structures: Ageing and Thermal Cycling Impact. - Proceedings of the 4th International Symposium on Spacecraft Materials in Space Environment, Toulouse (F), September 6 - 9, Cépaduès Editions, 555-561.
- M.C. Bernasconi & S. Köse (1988). - The Space-Rigidized Thermal Shield for the ESA Far-Infrared Space Telescope (FIRST).
- C Arduini, U Ponzi, & MC Bernasconi (1988). - A Contribution to the Study of the Precise Pressurized Structures. - Paper IAF-88-268 presented at the 39th International Astronautical Congress, Bangalore (India), October 8-15.
- M.C. Bernasconi & W.J. Rits (1989). - Inflatable Space Rigidized Support Structures for Large Spaceborne Optical Interferometer Systems. - Paper IAF-89-338 presented at the 40th International Astronautical Congress, Torremolinos (Spain), October 7-13; also: Acta Astronautica 22.
- MC Bernasconi, S Köse & WJ Rits (1989). - Optical Interferometers in Space: Configuration and Structural Concepts Using Space Rigidized Elements. Paper IAF-89-465 presented at the 40th International Astronautical Congress, Torremolinos (Spain), October 7-13; also: ESA SP-303, 47-56.
- Marco C. Bernasconi (1991). - Inflatable, Space-Rigidized Structures: Progress in Design, Technology and Verification. - Paper presented at the International Conference on Spacecraft Structures & Mechanical Testing, ESTEC, 24-26 April; also: ESA SP-321, 697-701. [URL: SP-321_697.pdf]
- P. Y. Bely, C. J. Burrows, F. J. Roddier, G. Weigelt & M. C. Bernasconi (1992). - SISTERS: A Space Interferometer for the Search for Terrestrial Exo-Planets by Rotation Shearing. - Paper presented at the ESA Colloquium on Targets for Space Based Interferometry, Beaulieu (France), October 13-16; also: ESA SP-354, 99-; also SPIE Proceedings 1947 (1993), 73-81. [URL: SPIE_1947_73.pdf]
- A.R. Woods & M.C. Bernasconi (1992). - Debris Removal & Protection Through the Use of Simple Expandable Structures. - Paper TOF PPH-92-007 accepted for presentation at the First European Space Debris Conference, Darmstadt (Germany). -
- Marco C Bernasconi (1993). - Expandable Support Structures for Large-Area Applications: The Solar Sail Case. - Presentation at the DLR Solar Sail Workshop, Cologne-Porz (Germany), May 5.
- Marco C Bernasconi (1994) - Design Rules for Expandable Support Structures for Near-Term, Large-Area Applications. Paper 94-F3-098 presented at the Deutscher Luft- & Raumfahrtkongress/ 1994 DGLR Annual Meeting, Erlangen (Germany), October 4-7, published in DGLR Jahrbuch 1994- I, 581-590. URL: DGLR_94-F3-098.pdf
- Marco C. Bernasconi & Thomas Zurbuchen (1994). - Lobed Solar Sails for a Small Mission to the Asteroids. - Paper IAA-L-0709 presented at the IAA International Conference on Low-Cost Planetary Missions, Laurel (MD), April 12-15; also: Acta Astronautica 35, 645-655.
- M.C. Bernasconi (1994) - A Small Solar Sailing Mission to Asteroids. - Paper presented at the meeting with University of Bern, 11 March 1994
- Marco C Bernasconi (1998) - Propulsive Uses of Inflatable Structures. Presentation at the Working Meeting on Low Cost Spacecraft Propulsion Technologies for Small Satellites, ESTEC (The Netherlands), 19-20 March. Contraves Space document ID-PRP/171-297/FPP.
- Marco C Bernasconi (1999) - Space-Habitat Uses of Expandable Flexible Structures. Paper presented at the ISST'99 - International Symposium on Space Travel, Bremen (Germany), 21-23 April. [URL: PRP_010-299_FPP.pdf]
- Marco C Bernasconi (2000) - Materials Aspects for Flexible-Wall Expandable Space Structures. Paper presented at the CEAS Conference on Materials for Aerospace Applications, Munich (Germany), 6-8 December; in: M Peters & WA Kaysser, Eds (2001). Advanced Aerospace Materials. DGLR, Bonn (Germany), 231-242. [URL: CEAS_2000.pdf]

Final Reports Series

- MC Bernasconi (1979). - Study on Large, Ultra-Light, Long-Life Structures in Space - Final Report / Phase I. ESA CR(P)-1258.

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- MC Bernasconi (1982). - Study on Large, Ultra-Light, Long-Life Structures in Space - Final Report / Phase II. ESA CR(P)-1664 ; Contraves document TM-EKR3 82.07.01.
- M.C. Bernasconi (1983). - Study on Large, Ultra-Light, Long-Life Structures in Space / Final Report - Phase IIc. ESA CR(P)-1796 ; Contraves document TM-EKR3 83.07.02.
- MC Bernasconi, W. Seiz, & E. Pagana (1988). - Study of Inflatable Space Rigidized Antenna Reflector Structure Technology / Final Report - Phase III. ESA CR(X)-2769 ; Contraves document SR/IRS/110(88)CZ. -
- MC Bernasconi (1983). - An ISRS Solar Shield for FIRST / A Preliminary Feasibility Assessment. Contraves document TM-EKR3_83.07.15.
- MC Bernasconi (1984). - An ISRS Reflector for QUASAT / Final Report - Feasibility Study. ESA CR(P)-9996; Contraves document SR/QSR/001(84)CZ.
- CE Jebens & MC Bernasconi (1988). - An ISRS Reflector for QUASAT / Final Report - Phase 2. ESA CR(P)-2913; Contraves document SR/QSR/108(88)CZ.
- MC Bernasconi (1989). - An Inflatable, Space-Rigidized Reflector for QUASAT / Executive Summary - Phase 2. SR/QSR/109(88)CZ, 4 pp.
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ASK US FOR A SYLLABUS & QUOTATION

Please specify:

- seminar code(s):
- number of participants to the class(es):
- skill and experience of the participants:
- goals and expected benefits:
- where do you want the class(es) to be held:
- tell us your preferred planning:

Send the above information via email to: info@ase-ltd.co.uk

NOTE: while it was urgent to publish this page, we are still working to complete the information related to the skills and publications of our teaching staff.

Please ask us for detailed cvs when interested to some of our teachers: info@ase-ltd.co.uk