

NAME: Cesare DIONISIO

NATIONALITY: Italian

BORN: 1954

EDUCATION: Master degree in Electronic Engineering with specialisation in computer science

LANGUAGE: English, French

EXPERIENCE: Main courses, workshops and training activity:

- Seminario on International aerospace Contracts (AIAD 2015)
- ABM: Setting Objectives and Managing Priorities in Activity Based Management (EU-2002)
- Workshop for executive manager on distinctive competences
- Creative Marketing (Bocconi SDA – Milano 2000)
- Creazione del valore (EVA), Roma 2000
- Sistemi di navigazione satellitari, Roma 1999
- Miglioramento del processo di creazione del valore per l'impresa (for executive manager), Roma 1999
- Risk management Workshop, ESA 1998
- 8th NAME Aerospace Workshop (Joint Venture Creation, Marketing, Financing, Company Strategy), Nordwijck 1998
- Broad band services over satellite, London 1998
- Corso Quadri Finmeccanica, Roma 1994
- Preparing Winning Proposals, Roma 1993
- Preparing Professional Presentations, Roma 1992
- Corso per capi Programma /Capi Progetto (team building, Marketing, Contabilità Industriale, Gestione di Programma) , Roma 1990

Several Technical courses and Workshops on Technologies, Radar, Space Missions, Space Telecommunications

Author of more than 100 papers published on International magazines/proceedings or presented at International Workshops and Congress.

2020-2005

Senior Consultant and Advisor

Technical Director of SBS srl.

System designer for UAV OBU application in HELMET (EC-GSA) project, GNSS navigation safety, for Radiolabs srl.

System Engineer for Spatial Power Combiner Amplifier in Ka/Q bands ESA-ARTES.

Teacher of Space Mission Fundamentals and microsatellite missions at Tor Vergata University "Navigation, Telecommunication and Remote Sensing Master".

Senior Advisor for ARES-Consortium for space systems and payloads design.

System designer for ARAMIS (IMOD) cubesat constellation for defence

applications (ELINT, IoT)

Project Manager of M2P plasma/metamaterial lens for MW antennas, Regione Lazio/KETS for Alma Sistemi.

Project manager of CCD5: "Prototype for a Command and Control Data Link for UAVs in the 5 GHz Band", it includes preliminary design of integrated satellite and ground network and development of avionic terminal (ESA-ARTES contract).

Project manager of AVAT "Avionic Antenna for AMR (S) with integrated service" (ESA contract)

Technical Director of ITS srl.

Project manager of TESEI, EGNSS augmentation terminal based on active beam forming antenna and interference mitigation, (ASI contract). This project was finalist at Space Moves innovation prize Berlin 2017.

Project manager of POLIFEMO optical attitude multifunctional sensor for microsatellites, EC SME- innovation phase 1 contract.

Advisor for business and due diligence for SME Companies acquisition (Exprivia 2016).

Engineering consultant for AIT/AIV to Nemosat ELINT microsatellite and payload (Italian MOD) development for Progetti Speciali Italiani srl.

Organizer and teacher for training courses on space systems design and technology (main customer Sitael Spa).

Designer of integrated applications for space services in particular GRANDE project (distributed ground segment).

Space and Telecom Business Development Manager and consultant for Space Navigation activities in Intecs Spa.

Engineering support to Gavazzi/OHB for scientific proposal preparation (CHEOPS) for ESA.

Involved in the drafting of GDL (Gruppo Di Lavoro) report on microsatellite (CESMA/Italian MOD associate) to support ORS (Operational Response Space) initiative.

Involved as Principal Engineer in the design and development of : TT&C on board equipment, S-band satellite terminal, mobile ground stations for EO satellite, GNSS signal analysis tools, GNSS scatterometer, Railway location and navigation system, Optical/IR satellite mission (SHIRA), Albedosat mission (Earth albedo measurement).

Leader System Engineer for Prometeo study (microsatellite in LEO orbit with electrical propulsion). ESA study for Rheinmetall Italia.

Project Manager of Magia (Moon Altimetric Gravimetry Imaging Mission) study, W band radar/radiometer and telecommunication system design.

Project Manager MIOsat ASI Mission (optical microsatellite for EO) Rheinmetall Italia.

Project Manager of Galileo/GPS real time SW receiver (ESA and GTR-AAS); PossibliCom: mobile equipment for Blind people navigation & communication assistance. Galileo SW receiver for LTS IOV station.

Satellite formation measurement system based on GPS (Nanoform project, ASI).

Railway obstacle detection and speed measurement radar system for Trenitalia (Intecs Spa).

Multifunctional structures design for space systems conceptual study;
W band applications in radar and telecommunications.

2004

System Engineer of WAVE2/IKNOW ASI study project for system architecture and requirement definition of a nanosatellite with W band payload.

Project Manager of RapidEye space segment (constellation of five EO/LEO satellites) for RapidEye company.

Project Manager of Galileo/GPS real time SW receiver (ESA and GTR-AAS) for Intecs spa.

2003 –2002

National Detached Expert- EU RTD Space Policy Unit

Working for DG research (Space policy and coordination of research unit) as Coordinator of Telecommunication Space Policy.

Involved in the definition of new satcom program for digital divide, e-Europe, and crisis management.

Participation in the EC Space Policy Green/White paper drafting activity.

2002– 1997

Head of New Opportunities Department, Alenia Spazio (Finmeccanica Company) TLC/TLR Business Unit

Program Manager for G.Marconi Mission. ASI/NASA collaboration for a data relay service based on dedicated satellite between Mars Landers and the Earth.

Project leader for commercial service development based on innovative store & forward, Ka band, large BW satellite system

Program Leader and competition winner of RADARSAT-2 satellite bus project during MDA competition.

Assigned to Italian Space Agency as Expert to support GNSS – GALILEO development ('99-'00).

Involved in several studies concerning innovative market approaches, Project and Company Organizations (based on new concepts for: design, processes and quality), TBM Early Warning, Satellite Formation.

Participation in the development of innovative Multimedia services based on Satellite Communication infrastructure.

1997 –1994

Responsible of Marketing of Remote Sensing Division.

Coordinator at National level for WEU Euclid Ccpa 9 research program (low-cost lightweight SAR technology, Remote Sensing imagery processing, Optical Interferometry).

Coordinator of the conception of new Rain Radar based on Cassini

Radar technology.

Involved in the preliminary definition and design of new instruments, advanced technologies and small satellite missions.

Responsible for technology and mission definition in ESA study: "Future satellite concepts, architectures, technologies and services capabilities".

- 1994 – 1992** **Project Manager** of the following projects: WEU MSFS SAR sensor; Central Electronic S/A for ASAR (ENVISAT program); Euclid CEPA 9.1 System harmonisation; Euclid CEPA 9.4 (Processing); Euclid CEPA 9.5 (Post Processing).
Project manager for SAR Satellite in Post-Helios Study.
- 1992 – 1990** **Project Manager** of WEU MSFS SAR sensor Study. Project Manager of Cassini, Titan Radar Mapper for system and RF section.
Responsible for SAR 2nd Generation Development and Study.
Involved in proposals for GEOSAT follow-on, LIDAR for space application, altimeter for Huygens probe.
- 1990 – 1988** **Project Manager** of ERS-1 Radar Altimeter.
- 1988 – 1986** **Responsible of Microwave Subsystem** of ERS-1 Radar Altimeter (ku band) and Instrument Calibration.
- 1986 – 1983** **Designer of Microwave Subsystem** of ERS-1 Radar Altimeter. Participation at FT design by SAW technology.
- 1983 – 1982** **System Engineer** involved in Study on Advanced Satellite Telecommunication System and ITALSAT, participation to high speed D-QPSK modulator development for ESA.
- 1981 – 1980** **System Engineer** for local area network protocols study, contract under Alenia responsibility.
- 1980 – 1979** **System Engineer** at Selenia Central Laboratory, Study: "Synchronisation Methods for Multiprocessor Systems". Involved in the design of an asynchronous arbiter for multiprocessor system.

Autorizzo trattamento dati personali



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PUBLICATIONS

- "Survey sul trattamento del segnale vocale"
C. Dionisio, R. Vannini, Collana C-NET 1980.
- "Proposta di architettura del NIM C-NET"
C. Dionisio, R. Vannini, R. Bottalico, Collana C-NET 1980.
- "ERS-1 radar altimeter design and flight model performance"
C. Dionisio et alii XXXVIII Convegno Internazionale delle comunicazioni Genova 1990.
- "Sviluppi futuri negli aspetti sistemistici e tecnologici per i SAR di nuova generazione G. Picardi, R. Seu, C. Dionisio XXXVIII Convegno Internazionale delle comunicazioni Genova 1990.
- "ERS-1 RADAR ALTIMETER System Description"
C. Dionisio et alii proceed. of IGARSS 90.
- "CASSINI RADAR Radio Frequency Subsystem design description and performance analysis"
L. Borgarelli, Dionisio et alii proceed. of IGARSS 92.
- "The italian involvement in CASSINI Radar"
C. Dionisio, L. Borgarelli et alii, Proc. Symp on Radar on Earth and Planetary Sciences, Cannes 2-4 Sept. 91
- "A Digital chirp generator for Space application"
L. Borgarelli, R. Cartesini, C. Dionisio; "third International workshop on digital signal processing techniques applied to space communication" Sept. 92.
- "New generation of Italian SAR"
C. Dionisio, F. Buscaglione, A. Torre, R. Marzio, proceedings of IGARSS 92.
- "High resolution SAR applications and instrument design"
C. Dionisio, A. Torre Proceedings of third symposium an Spaceborne SAR, JPL PASADENA 18-21/1/93.
- "Dedicated SAR applications for Regional observation missions"
C. Dionisio, G. Perrotta, A. Torre; Proceedings of IGARSS 93.
- "Preliminary Noise Models for ERS-1 Satellite Altimeter Data"
C. Dionisio, C. Zelli, L. Borgarelli, R.V. Sailor, M.L. Driscoll
American Geophysical Union, Spring meeting- Montreal Canada
- "ERS-1 RA performance evaluation"
C. Dionisio, G. Levrini, C. Zelli; Proceedings of IGARSS 93.

- "Remote Sensing Microwave Instrument for deep space applications"
L. Borgarelli, C. Dionisio, G. Cascioli; IAF-93
 - "Digital Chirp Generator Suits Space Applications"
L. Borgarelli, R. Cartesini, C. Dionisio; Microwaves & RF, June 93.
 - "High Resolution Multifrequency SAR System for Spaceborne Applications"
C. Dionisio, A. Torre ; Proceedings of IGARSS 94.
 - "Frequency Selection and Multipolarity for Hard Target Detection"
C. Dionisio E. Zampolini
Proceedings of IGARSS 94.
 - "Remote sensing activities in Alenia Spazio"
C. Dionisio et alii
Proceedings of Euro Latin Symposium Buenos Aires 1994
 - " Development of an automatic target detection and recognition algorithm in multifrequency polarimetric SAR imagery"
Y. Yonglan, H. Shunij, C. Dionisio
Proceedings of the European Symposium on Satellite Remote Sensing II, Rome 94
 - " Prospects of high accuracy time dissemination & synchronization using coded radar pulses from a low earth orbiting spacecraft "
E. De Toma, C. Dionisio
PTII Congress 94
 - " The usefulness of microsattellites in the remote sensing market "
C. Berti, C. Dionisio
AAAF/ EARSC Symposium, Paris 95
 - " SAR payload design for small satellite"
C. Dionisio, G. Perrotta, L. Sbardella, A. Torre
INTERNATIONAL SYMPOSIUM ON SATELLITE COMMUNICATION AND REMOTE SENSING, sept .95, XIAN
 - "Detection and localisation of lost objects by SAR technique"
C. Dionisio.
AIT Congress 1995 Chieri (I) and IGARSS 96
- "Space constellation of high-resolution SARs for fast global access"
M. D'Errico, C. Dionisio, A. Moccia, F. Mura, S. Ponte
European Symposium on Satellite Remote Sensing III
- "Tactical reconnaissance by a constellation of small satellite"
C. Dionisio, G. Perrotta
AGARD, Mission Systems Panel 5th Symposium on Space systems as contribution to the NATO defence mission. Cannes 1996

- “Future Satellite Systems and Technologies for Multimedia Services”
C. Dionisio, S. Di Girolamo, IAF 97
- “Future Remote Sensing Systems”
Dionisio et alii, Earsel Symposium, 1997
- “Future Satellite Services Concepts, Architectures and Technologies” A. Martinez, F. Mura, C. Dionisio, S. Howes, R. Slim ; ESA Bulletin August 98
- “Measurement of meteo-climatic variables by space radar”; A.Speranza, C. Dionisio, L. Borgarelli; RADME 98- Rome, Italy
- “Remote Sensing for Environment”;
C.Dionisio, G. Perrotta, F. Rubertone; Vienna IST 98’
- “Osservazione della Terra ad alta risoluzione dall’orbita Geostazionaria” M. Cecconi, S. Cesare, C. Dionisio, M. Oricchio; 3a Conf. Naz. Informazioni e Rischi Territoriali 1999
- “High Resolution Imaging from Geostationary Orbit”
C. Dionisio et alii, SPACE BASED OBSERVATION TECHNOLOGY
NATO Symposium on Space Observation Techniques, Samos Oct 2000
- “Innovative Engineering Processes and Production Methodologies to
Reduce Development cost of Future Satellites”
C. Dionisio, A. Casola; 3rd Symposium on Small Satellites for EO April 2001
- “G. Marconi Orbiter and the Mars Relay Network”
20th AIAA International Communication Satellite Systems Conference and Exhibit
Montreal, Quebec, Canada from 12 to 15 May 2002
Gary Noreen, Tomas Komarek, Charles Edwards, Roger Diehl and Stuart Kerridge, JPL.;
Cesare Dionisio, Massimiliano Marozzi and Riccardo Collina, Alenia Spazio; and Enrico
Flamini, ASI
- “G. Marconi Orbiter: The first Interplanetary Communications Satellite”
Space Operations 2002.
Gary Noreen, Tomas Komarek, Charles Edwards, Roger Diehl, Philip Vhargese and Gene
Brower, Jet Propulsion Laboratory; Ramon DePaula, NASA; Cesare Dionisio, Massimiliano
Marozzi and Riccardo Collina, Alenia Spazio; and Enrico Flamini, ASI
- “Le applicazioni della tecnologie delle onde millimetriche per l’esplorazione spaziale” .
Simposio di Planetologia 2006 V. Dainelli, C. Dionisio, M.Ferri, E. Re. M.Ruggeri
- POSSYBLICOM, A COMMERCIALLY VIABLE PERSONAL NAVIGATOR FOR
BLIND PEOPLE. Navitec 2006 Estec. Michele Bavaro, Dario Citterico, Cesare Dionisio
Dave van Eijck
- NAVSTAR/GALILEO SINGLE FREQUENCY SOFTWARE RECEIVER. Navitec 2006
Estec
Cesare Dionisio, Michele Bavaro, Dario Citterico, Luca Cucchi, Riccardo Marracci

- SOFTREC G3, SOFTWARE RECEIVER FOR GALILEO BANDS. Dasia 2007
Cesare Dionisio, Michele Bavaro, Dario Citterico
- Software Defined Radio Signal Processing oriented to GNSS applications. C.Dionisio et alii , ATTI Giugno 2007
- AN INNOVATIVE SPACEBORNE P-BAND SAR MISSION BASED ON SMALL SATELLITES AND FORMATION FLYING TECHNOLOGIES
Giancarmine Fasano(1), Giovanni Alberti, Marco D'Errico, Stefano Cesare, Gianfranco Sechi, Leonardo, Mazzini, Patrizio Pavia, Andrea Torre, Maria Livia Esposti, Alberto Zin, Giovanni Matticari, Michele Bavaro, Cesare Dionisio, Mario Cosmo, Roberto Formaro, Quirino Rioli; 7th Symposium on Small Sats.
- MIOsat mission scenario and design
Cristina Agostara, Cesare Dionisio, Giuseppe Sgroi, Alessio di Salvo
7th Symposium on Small Sats, Rodi 2008
- "SOFTREC G3, Software Receiver and Signal Analysis for GNSS Bands". C. Dionisio et alii, ISSSTA2008
- "A MILLIMETER WAVE RADAR FOR PLANETARY MISSIONS" IEEE WORKSHOP EHF-AEROCOM 2008: EXPLOITATION OF HIGHER FREQUENCY BANDS IN BROADBAND AEROSPACE. COMMUNICATIONS. C. DIONISIO , M. N, V. DAINELLI, , M. LUCENTE
- GNSS SW receiver for space applications
Luca Cucchi, Cesare Dionisio, Riccardo Marracci, Gabriele Pirazzi, Navitec 2008
- MIOSAT mission: an Italian microsatellite for Earth Observation
Agostara, C., Bussolino, L., Dionisio, C., Di Salvo; A., Sgroi, G.
IAA 7th Symposium on Small Sats, Berlin 2009
- IKNOW Mission: Payload Design for In Orbit Test of W Band Technology
DOI: 10.1109/AERO.2008.4526275 Conference: Aerospace Conference, 2008 IEEE
M. Lucente, C. Dionisio, et alii
- The ALISEO payload for the small technological mission MIOSAT
Barducci, A., Castagnoli, F., Castellini, G., Guzzi, D., Lastri, C., Marcoionni, P., Pippi, I., Dionisio, C.IAA 7th Symposium on Small Sats, Berlin 2009
- GNSS software receiver for the MAGIA (Missione Altimetrica Geofisica Geochimica lunAre) mission. Gabriele Pirazzi, Nicola Dequattro, Cesare Dionisio, Fernando Martini.
Dasia 2009, ISTANBUL
- MAGIA, the Italian mission to the Moon
C. Agostara, C. Baldetti , L. Bussolino, A. Coradini, C. Dionisio, A. Di Salvo, M.C. Falvella, R. Orosei, C. Tuninetti
IX Congresso Nazionale di Planetologia Amalfi, 28/9 – 2/10/2009

- GIANO: Galileo Interferometer Scatterometer and Observer
G. Piazzzi, C. Dionisio, N. De Quattro, N. Perdicca
FOURTH EUROPEAN WORKSHOP ON GNSS SIGNALS AND SIGNAL PROCESSING
GNSS SIGNALS 2009
- "A Family of products for GNSS signals analysis"
C. Dionisio et alii
"Proc. of Workshop From SDR to Cognitive Networks, 2009. Pisa"
- PROMETEO: A small satellite with Electric Propulsion for IR / Optical High Resolution Images
L. Gagliardi, C. Tuninetti, C. Dionisio, M. Noce, C. Casaregola, G. Saccoccia, D. Di Cara. DASIA 2010
- "*gLAB – A fully software tool to generate, process and analyze GNSS signals*" C. Dionisio, D. Citterico, G. Pirazzi, N. De Quattro, R. Marracci, L. Cucchi, N. Valdanbrini, I. Formaioni , DASIA 2010, June 2010, Budapest.
- Navigation & guidance of small LEO satellite with electric propulsion
Cesare Dionisio, Giuseppe Rossi, Gabriele Pirazzi, Annalisa Mazzoleni, Michelle Lavagna
Ka conference Milan 2010
- Pedestrian navigation system for visually impaired people
Luca Cucchi, Angela Valvo, Nicola Valdambri , Cesare Dionisio, Fernando Martini
Toulouse spaceshow 2010
- Giano: Galileo Interferometer, scatterometer and observer
Gabriele Pirazzi, Cesare Dionisio, Nazareno Perdicca
RF conference Florence 2010
- "*gLABPLUS – A fully software tool to generate, process and analyze GNSS signals*" C. Dionisio, D. Citterico, G. Pirazzi, N. De Quattro, R. Marracci, L. Cucchi, N. Valdanbrini, I. Formaioni , Navitec, ESTEC 2010.
- GNSS software receiver for the MAGIA (Missione Altimetrica Geofisica Geochimica lunAre) mission; Gabriele Pirazzi , Nicola De Quattro, Cesare Dionisio. Springer issue Moon Exploration 2011.
- STAR – SDR SPACE TRANSPONDER (TT&C and HDR data dump)
Cesare Dionisio e alii, DASIA 2011.
- A GNSS Integrity Monitoring Station with Software Defined Radio and low-cost receivers.”
Gabriele Pirazzi, Luca Cucchi, Danilo Marigi, Cesare Dionisio. IEEE ESTEL Conference 2012.
- MUSTER (INTEGRATED MULTIFUNCTIONAL UNIT FOR SATELLITE AND UAV COMMUNICATIONS). Cesare Dionisio, Alessandro Rossi. AIRTEC 2013, Francoforte.

- SMASH (on board SDR integrated TT&C/PDHT Unit) Cesare Dionisio , Luca Cucchi, AIRTEC 2013, Francoforte.
- GDL on Small Satellites, multi authors CESMA- 2013
- A new star tracker concept for satellite attitude determination based on a multi-purpose panoramic camera. Giancarmine Fasano, Giancarlo Rufino, Michele Grassi, Claudio Pernechele, Cesare Dionisio. ACTA ASTRONAUTICA 2016.
- HYPER HEMISPHERIC LENS APPLICATIONS IN SMALL AND MICRO SATELLITES Claudio Pernechele, Cesare Dionisio , Matteo Munari, Roberto Opromolla, Giancarlo Rufino, Giancarmine Fasano , Michele Grassi, Serena Pastore. Aerospace journal 2017
- ARAMIS project -Teledife: Col. Gerardo Petrone, Ten.Col.Luigi Mauro, Cap. Gianluca Calistroni Italspazio: Paolo Vita, Giovanni Nicolai, Stefano Coltellacci SBS: Cesare Dionisio – SIA: Paolo Teofilatto, Stefano Carletta. for S4 Symposium – Cubesat Workshop 26-28 May 2020 – Vilamoura Portugal
- BIFOCAL STEREOSCOPIIC CAMERA FOR LUNAR EXPLORATION: Claudio Pernechele, Cesare Dionisio et alii; Europlanet Science Congress 2020