

Curriculum Curriculum Vitae

**Dr. José Ramón Coz
Fernández**

Apríl 2025

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PERSONAL DATA

Name Dr. D. JOSE RAMON COZ FERNANDEZ
Phone +31 71 565 57 57, +34 649 18 43 37
E-mail jose.ramon.coz@esa.int
Nationality SPANISH
Date of birth 16 – 06 – 1972
Web <http://www.cozweb.es/>
LinkedIn Profile es.linkedin.com/in/jrcoz
Researcher Profile www.researchgate.net/profile/Jose_Coz



SUMMARY

Dr. Jose Ramon Coz finished his **PhD degree in Economy** in Applied Economics at the Complutense University (Madrid) (summa cum laude). As well, he finished a second **PhD degree in Computer Engineering** from the UNED University (Madrid).

He holds a **M.S in Physics** (University of Cantabria), a **M.S. in Economics** (Complutense University) and several graduate degrees in Telecommunications and Public Management (Polytechnic University of Madrid).

In addition, he holds more than 20 international certifications in Information Technology. **He has more than 25 years of experience in the field of ICT, auditing and cybersecurity.**

Currently working as **Cyber Internal Audits Head for the European Space Agency**, he is a **researcher** in the Department of Applied Economics at the Complutense University of Madrid and **professor** at several institutions, universities, and business schools.

He collaborates as a reviewer and editorial member for several international journals, and he is member of several committees and IT associations.

PROFESSIONAL EXPERIENCE

More than 25 years of professional experience in the field of Information Technology, Security and Audit in various public and private institutions such as the European Space Agency, NATO, the Ministry of Justice, the Ministry of Defense, the National Police Corps, Fomento de Construcciones y Contratas and several banking entities.

Date	FROM OCTOBER 2018 - (TODAY)
Place and Organization	EUROPEAN SPACE AGENCY (ESA). ESTEC. NOORDWIJK. NETHERLANDS
Role	CYBER INTERNAL AUDITS HEAD
Main activity and responsibilities.	<ul style="list-style-type: none"> • The main role is established by the European Commission Cyber Policy. • Responsible for conducting audits of cyber security, including the evaluation of the level of compliance of the information security management system and implemented security measures with defined requirements, security policies in place and the appropriate safety standards, providing independent feedback on the effectiveness and efficiency of information security management system and security measures. • This role has direct reporting line to the ESA Navigation Director. The annual budget of the programs associated is more than one billion euros and It implies the coordination of the activities performed by more than forty (40) companies.

Date	FROM MARCH 2012 – SEPTEMBER 2018.
Place and Organization	NATO COMMUNICATIONS AND INFORMATION AGENCY (NCIA). BRUSSELS and THE HAGUE.
Role	Company: ISDEFE (Government's Company of the Department of Defence). SECURITY MANAGER AND AUDITOR
Main activity and responsibilities.	<ul style="list-style-type: none"> • Principal auditor of the portfolio of cybersecurity projects managed by the NATO Communications and Information Agency (NCIA). This portfolio includes projects with a budget of more than 400 M€, which are implemented in more than 30 countries and involve the development, design, implementation and management of the main cyber-capabilities of NATO. This work involves the monitoring of the implementation of all projects in their technical, quality assurance, financial and contracting areas. • Responsible for the Cybersecurity Support Service in the Program Management and Integration Office (PMIC) of the NATO Communications and Information Agency (NCIA). The PMIC supports various NATO technology programs through independent auditing, risk management, configuration, change, and requirements, architectures, contractual and cost management. • <u>NATO MERIT AWARD 2013</u> received in November-13 for the work done over 20 months for the deployment of the main NATO cyber-capabilities in more than twenty countries.

Date	FROM OCTOBER 2009 TO – MARCH 2012
Place and Organization	OFFICE OF THE SECRETARY OF STATE FOR DEFENCE.
Role	Company: ISDEFE (Government's Company of the Department of Defence) CONSULTANCY AND ADVICE ON INDUSTRIAL POLICY
Main activity and responsibilities.	<ul style="list-style-type: none"> • Development, Support and Disclosure of the industrial policy of the MoD. • Participation in Working Groups supporting the Secretary of State for Defence within the Cybersecurity and Auditing areas. • Economic and Strategic studies on the Defence Industry • Management of Researching's Projects about Defence and Economy with Universities and Industries.

Date FROM NOVEMBER 2008 TO – OCTOBER 2009

Place and Organization **GENERAL DIRECTION OF COURT RECORDS. MINISTRY OF JUSTICE.**
Company: **ISDEFE** (Government's Company of the Department of Defence)

Role **PROJECTS MANAGEMENT AND ADVISOR**

Main activity and responsibilities.

- Project management and strategic consulting for the management of the ministry of justice in the field of information technologies.
- Information systems normative and monitoring of IT best practices as COBIT, PRINCE2, NIST, ISO27 or ITIL. Service level agreements and service level management.
- Consultancy on the information systems acquisitions.
- Provider's management and technical management of projects.

Date FROM DECEMBER 2005 TO – NOVEMBER 2008

Place and Organization **POLICE DATACENTER HEADQUARTER.**
Company: **ISDEFE** (Government's Company of the Department of Defence)

Role **SECURITY CONSULTANT AND PROJECTS MANAGEMENT**

Main activity and responsibilities.

- Projects Management and Consultancy in several projects.
- Consultancy on the Information Systems acquisitions.
- Information systems normative and monitoring of IT best practices as COBIT, PRINCE2, NIST, ISO27 or ITIL
- Provider's management and technical management of Projects.
- Consultancy on security, risk analysis, certifications and accreditations.
- Security audits in collaboration with the CNI and CCN (cryptography national centre and intelligence national centre).
- Member of the Programme Board for the National Identification Electronic Card (DNIE Project) (200meur)
- Support for the agreements and SLAs with other organizations for the DNIE implementation.

Date FROM MARCH 2004 TO DECEMBER 2005

Place and Organization **AGENCY OF INFORMATION SYSTEMS AND TELECOMMUNICATIONS OF DEPARTMENT OF DEFENCE. (IGECIS, Inspección General CIS).**
Company: **ISDEFE** (Government's Company of the Department of Defence)

Role **PROJECTS MANAGEMENT**

Main activity and responsibilities.

- Technical Lead of the Continuity Plan of the CENTER OF OPERATION AND SUPPORT (CCEA, "Centro de Explotación y Apoyo") of the Department of Defence. This plan involved more than 400 information systems.
- Information systems normative and monitoring of IT best practices as COBIT, PRINCE2, NIST, ISO27 or ITIL
- Continuity Plans, Emergency Responses, Business Impact Analysis.

Date FROM MARCH 2003 TO MARCH 2004

Place and Organization **AGENCY OF INFORMATION SYSTEMS AND TELECOMMUNICATIONS OF DEPARTMENT OF DEFENCE. (IGECIS, Inspección General CIS).**
Company: **ISDEFE** (Government's Company of the Department of Defence)

Role **SECURITY, ARCHITECTURE CONSULTANT**

Main activity and responsibilities.

- Consultancy on the Information Systems acquisitions.
- Information systems normative and monitoring of IT best practices as COBIT, ISO27, PRINCE2 or ITIL
- Supervision of the entrance in operation of diverse information systems.
- Person in charge of the Elaboration and Diffusion of the Technical Architecture.
- Collaboration with NATO Groups in subjects related to Software Architecture.
- Collaboration with the Data Office of the Department of Defence: data policy, user's guides and Norms of Data.
- Committee Board of the Information System of the International mine-clearing Centre (CID, "Centro Internacional de Desminado").

Date	FROM MAY 2000 TO MARCH 2003
Place and Organization	PARTNERSHIP EUROFIGHTER. Company: GRUPO DE FOMENTO CONSTRUCCIONES Y CONTRATAS (FCC). DIVISION ESPELSA – STC.
Role	SECURITY AND SOFTWARE ANALYST
Main activity and responsibilities.	<ul style="list-style-type: none"> Analyst in MPB and MDB Projects (Planning systems, Debriefing and Briefing), led by ESPELSA and formed by the Eurofighter International Partnership (Thales - English, Galileo - Italian, Dornier - German, CASA - Spanish). Classified Projects. Analyst in the Projects: MPDS (Planning of Missions for the airplanes of the Army), Modules of Load of Data for the ORION P3 and Administration of the MACOM for the Army. Classified projects, in participation with other companies as INDRA or CASA. Person in charge of the Certifications of Security (ITSEC).
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Date	FROM NOVEMBER 1999 TO MAY 2000
Place and Organization	ARGENTARIA BANK. Company: ABS GROUP
Role	SENIOR CONSULTANCY OF INFORMATION SYSTEMS.
Main activity and responsibilities.	<ul style="list-style-type: none"> Analysis and development of Projects of Information Systems. O&M support for Information Systems. IT Security support. Multidimensional databases, programming, data mining, electronic cards and UML.
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Date	FROM MARCH 1998 TO NOVEMBER 1999
Place and Organization	CAJA ESPAÑA BANK. Company: IBV GROUP (CENTRISA), actually is INDRA.
Role	CONSULTANCY OF INFORMATION SYSTEMS.
Main activity and responsibilities.	<ul style="list-style-type: none"> Development of Projects of Information Systems (Java, C++, DB2 and Lotus Notes). O&M support for Information Systems (IBM Mainframes, OS2 and COBOL-CICS). Analysis and Design of the Migration Projects based on the new architecture (Java and Web applications)
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Date	FROM OCTOBER 1997 TO MARCH 1998
Place and Organization	IDEAL OBJECTS. S.A.
Role	CONSULTANCY OF INFORMATION SYSTEMS.
Main activity and responsibilities.	<ul style="list-style-type: none"> Support to big companies about Software Products: ROGUEWAVE Libraries of Java and C++. Support of CORBA/ORBIX and OBJECTSTORE.
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Date	FROM MARCH 1997 TO MARCH 1998
Place and Organization	SPANISH INSTITUTE OF INDUSTRIAL PROMOTION (IEFI, INSTITUTO ESPAÑOL DE FOMENTO INDUSTRIAL).
Role	SUPPORT ENGINEER.
Main activity and responsibilities.	Technical support. Databases, Operative Systems, Internet, Networks.
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EDUCATIONAL ACHIEVEMENTS

PhD in Economics, PhD in Computer Engineering, Master's Degree in Economics, Bachelor's Degree in Physical Sciences, various postgraduate degrees in Telecommunications, Specialist Degree in Public Administration Management, **more than 20 international professional certifications** such as CISA, CISM, CGEIT, CRISC, ITIL, COBIT, MSP, PRINCE2 or ISO20000.

DOCTORATES

Date	FROM SEPTEMBER 2006 TO MAY 2011
University or Centre	SCHOOL OF COMPUTERS ENGINEERS. UNED. MADRID.
Studies	PhD in Computer Systems Engineering ITIL, CMBD, Languages Programming, Software Product Lines, Economic Models in Software Engineering, IT Security. Dissertation: <i>"Development of a change notification service in a configuration management database using generative programming"</i> .
Certificate	PhD IN COMPUTER SYSTEMS ENGINEERING Summa Cum Laude.
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Date	FROM NOVEMBER 2012 TO APRIL 2016
University or Centre	COMPLUTENSE UNIVERSITY OF MADRID.
Studies	PhD in Economy. Researcher in the Department of Applied Economy. Input Output Framework. Efficiency in Public Economy. Advanced Software Programming applied to Public Economy. Dissertation: <i>"Knowledge Management Model for the Economic Impact of Public Programmes. Application to the Defense Sector"</i> .
Certificate	PhD IN ECONOMY. Summa Cum Laude.

MASTER 'S DEGREES AND POST-GRADES

Date	FROM SEPTEMBER 1990 TO SEPTEMBER 1995
University	UNIVERSITY OF CANTABRIA.
Studies	PHYSICS SCIENCES. ELECTRONIC AND COMPUTERS SPECIALITIES.
Certificate	MASTER'S DEGREE IN PHYSICS SCIENCES
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Date	FROM SEPTEMBER 2011 TO SEPTEMBER 2012
University or Centre	COMPLUTENSE UNIVERSITY (MADRID).
Studies	ECONOMY, LOGISTIC AND DEFENCE SPECIALITIES.
Certificate	MASTER'S DEGREE IN ECONOMICS NOTE: Top 20 World Ranking Masters in Economy and Logistics.
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Date	FROM SEPTEMBER 2003 TO JUNE 2005
University or Centre	CEPADE. POLYTECHNICAL UNIVERSITY OF MADRID
Studies	<ul style="list-style-type: none"> • Information Systems applied to the Public Administrations. • The model of Management of Total Quality in the Organizations • Methods of Planning and Control in the Public Administration • Design and Production of Projects in the Public Administration • Management of the Human Resources in the Administrations • Management of Technological Projects • Foundations of Quantitative Methods for the Economy
Certificate	UNIVERSITY SPECIALIST IN MANAGEMENT OF THE PUBLIC ADMINISTRATION

Date	FROM SEPTEMBER 2003 TO JUNE 2004
University or Centre	CEPADE. POLYTECHNICAL UNIVERSITY OF MADRID.
Studies	<ul style="list-style-type: none"> • Internet Advanced Services. • Design and Management of Databases • Management of Technological Projects. • The model of Management of Total Quality in the Organizations.
Certificate	UNIVERSITY EXPERT IN IT MANAGEMENT
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Date	FROM SEPTEMBER 2002 TO JUNE 2003
University or Centre	SCHOOL OF TELECOMMUNICATION ENGINEERS. POLYTECHNICAL UNIVERSITY OF MADRID
Studies	<ul style="list-style-type: none"> • Security in Networks of Telecommunications. • Systems and Communications networks TCP/IP. • Systems Distributed in Web.
Certificate	POSTGRADUATES IN SYSTEMS OF NETWORKS AND COMMUNICATIONS FOR THE SECURITY AND THE DEFENCE.
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Date	FROM SEPTEMBER 2001 TO SEPTEMBER 2003
School	IDE – CESEM. Instituto de Directivos de Empresa. (Institute of Company Managers).
	<ul style="list-style-type: none"> • 1. OO Software. 2. Systems of Aid to the Decision. 3. Computer science Security. 4. The Systems of the Information. 5. Executive Abilities. 6. Financial and Economic Management. 7. Management of Human Resources 8. Operation and Control. • 9. E-business. 10. Management of Projects. 11 Communications. • Project: “<i>Technological and Normative Model for a great Corporation</i>”.
Certificate	MASTER’S IN MANAGEMENT OF INFORMATION TECHNOLOGIES NOTE: Bests Master about Technology in Spain (analysis by EL MUNDO). Ranking:2

PROFESSIONAL CERTIFICATIONS

Date	OCTOBER 2021
University or Centre	Teaching Science and Technology, Inc. (USA)
Studies	<ul style="list-style-type: none"> • Space Systems Engineering • Satellite Hardware Laboratory Areas and Activities (EyasSAT) • Validating Requirements & Models of Satellites • Verifying Satellite Products • Verification of COTS/NDI • Satellite Software Verification & Validation • Validating Products and Flight Certification
Certificate	SPACE SYSTEM VERIFICATION AND VALIDATION
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Date	JUNE 2020
University or Centre	Teaching Science and Technology, Inc. (USA)
Studies	<ul style="list-style-type: none"> • Designing Space Missions & Systems • Space System Operations. Mission Management. • Analyze proposed mission designs with insight into the critical trade-offs between cost, schedule, performance, and risk.
Certificate	DESIGNING SPACE MISSIONS & SYSTEMS
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Date	MARCH 2016
University or Centre	INTERNATIONAL CLUB BPM (Business Process Management)
Studies	<ul style="list-style-type: none"> • BPM standards and good practices. • Analysis and Design using BPM. • Implementing Agile applications using BPM • Operational Intelligence and IT Strategy alignment.
Certificate	INTERNATIONAL CERTIFICATION: BPM: RAD®-C

Date NOVEMEBER 2013
 University or Centre **NATIONAL CYBERSECURITY AGENCY** (Agencia Española de Certificaciones de Ciberseguridad- ACC)
 Studies

- Security environment. Security of media
- Systems Security. Security and Operations.
- Data Security and Safety

 Certificate **NATIONAL CYBERSECURITY CERTIFICATION (SECURITY MANAGEMENT)**

Date NOVEMEBER 2013
 University or Centre **NATIONAL CYBERSECURITY AGENCY** (Agencia Española de Certificaciones de Ciberseguridad- ACC)
 Studies

- Cryptography and Steganography.
- Systems access control and authentication
- Perimeter Security. Communications security
- Safety in operating systems.
- Security in wireless networks

 Certificate **NATIONAL CYBERSECURITY CERTIFICATION (SECURITY AND IT)**

Date JUNE 2010
 University or Centre **APM GROUP**
 Studies

- ICT Services Strategy. Design of ICT Services
- Transition from ICT Services.
- ICT Services Operation
- Continuous Improvement.
- New ISO 20000 and ITIL V3.

Certificate **ITIL FOUNDATION V3 BRIDGE**
 Date JULY 2010
 University or Centre **SPANISH PROFESSIONAL ASSOCIATION OF PRIVACY**
 Studies

- Legal concepts. LOPD.
- Technical on privacy.
- Regulatory spheres.
- Administrative procedures for data protections.

 Certificate **ACP CONSULTANT**

Date SEP 2010
 University or Centre **ISACA (Information Systems Audit and Control Association).**
 Studies

- Risk Identification, Assessment and Evaluation
- Risk Response and Monitoring
- IS Control Design and Implementation
- IS Control Monitoring and Maintenance

 Certificate **CERTIFIED IN RISK AND INFORMATION SYSTEMS CONTROL – IT (CRISC)**

Date OCT 2009. NOV 2013 (RENEW).
 University or Centre **OPEN GROUP**
 Studies

- Architecture Development Methods
- Architecture Content Framework
- Enterprise Continuum & Tools
- Foundation Architecture - TRM and III-RM
- Architecture Capability Framework

 Certificate **TOGAF V8 CERTIFIED**

Date	SEP 2009
University or Centre	APMG (AMP Group).
Studies	<ul style="list-style-type: none"> • Use of Managing Successful Programmes (MSP) • Programme Management : profiles, documentation, processes, activities, and techniques. • Transformational Flow in programmes. • Programme Office Management

Certificate **MSP PRACTITIONER**

Date	SEP 2009
University or Centre	APMG (AMP Group).
Studies	<ul style="list-style-type: none"> • Managing Successful Programs (MSP) Theory: Principles and Themes. • Program Management Theory: profiles, documentation, processes, and activities. • Transformational Flow Theory.

Certificate **MSP FOUNDATIONS**

Date	JUL 2009
University or Centre	ISACA (Information Systems Audit and Control Association).
Studies	<ul style="list-style-type: none"> • How IT management issues are affecting organizations • The need for a control framework driven by the need for IT Governance • How COBIT meets the requirement for an IT Governance Framework • How COBIT is used with other standards and best practices • The COBIT Framework and all the components of COBIT • How to apply COBIT in a practical situation

Certificate **COBIT FOUNDATIONS**

Date	DEC 2008
University or Centre	ISACA (Information Systems Audit and Control Association).
Studies	<ul style="list-style-type: none"> • Strategic Alignment. Value Delivery • Risk Management. Resource Management • Performance Measurement

Certificate **CERTIFIED IN THE GOVERNANCE OF ENTERPRISE IT (CGEIT)**

Date	JUN 2008
University or Centre	APMG (AMP Group).
Studies	<ul style="list-style-type: none"> • Process Model Detailed of PRINCE2 (Project In Control Environments). • Components in Project Management with PRINCE2 • Technical Tools for Project Management with PRINCE2 • Project Management Templates with PRINCE2. PRINCE2 in projects

Certificate **PRINCE2 PRACTITIONER**

Date	MARCH 2008
University or Educational Centre	EXIN (Examination Institute for Information Science)
Studies	<ul style="list-style-type: none"> • Service Desk. Configuration Control • Problem Management, Changes Control. Release Management. • Availability, Capacity Management, Continuity • Financial Management and Service Level Management • Providers Management and Client Management

Certificate **ISO 20000 FOUNDATIONS**

Date	OCT 2007
University or Educational Centre	SOFTWARE ENGINEERING INSTITUTE (SEI)
Studies	<ul style="list-style-type: none">• CMM (Common Maturity Model)
Certificate	CMMI FOUNDATIONS
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Date	MAY 2007
University or Educational Centre	APMG (AMP Group).
Studies	<ul style="list-style-type: none">• Process Model of PRINCE2 (Project In Control Environments)• Components in Project Management with PRINCE2• Technical Tools for Project Management with PRINCE2
Certificate	PRINCE2 FOUNDATIONS
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Date	DECEMBER 2006
University or Educational Centre	ISACA (Information Systems Audit and Control Association).
Studies	<ul style="list-style-type: none">• Information security governance• Risk management.• Information security program management• Information security management.• Response management
Certificate	CERTIFIED INFORMATION SECURITY MANAGER (CISM). ANSI (ISO/IEC 17024).
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Date	DECEMBER 2005
University or Educational Centre	ISACA (Information Systems Audit and Control Association).
Studies	<ul style="list-style-type: none">• IS Audit Process IT Governance• Systems and Infrastructure Lifecycle Management• IT Service Delivery and Support.• Protection of Information Assets• Business Continuity and Disaster Recovery
Certificate	CERTIFIED INFORMATION SYSTEMS AUDITOR (CISA). ANSI (ISO/IEC 17024).
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Date	FROM JUNE 2005 TO DECEMBER 2005
University or Educational Centre	EXIN (Examination Institute for Information Science)
Studies	<ul style="list-style-type: none">• Service Desk. Configuration Control• Problems Management.• Changes Control• Release Management• Availability and Capacity Management.• Continuity• Financial Management and Service Level Management
Certificate	ITIL FOUNDATIONS
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Date	FROM FEBRUARY TO JUNE 2005
University or Educational Centre	APPLUS, Certification Technological Centre.
Studies	<ul style="list-style-type: none">• ISO 17799.• SGSI UNE 71502 / BS7799-2.• Risk Analysis.• Continuity Plans.
Certificate	EXPERT IN IMPLANTATION OF SYSTEMS OF MANAGEMENT OF THE SECURITY OF THE INFORMATION
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COURSES ABOUT DEFENCE, SECURITY AND SPACE

Date	FROM OCTOBER 2018 TO NOW
University or Centre	EUROPEAN SPACE AGENCY (ESA)
Studies	COURSES ABOUT SECURITY, MANAGEMENT AND SPACE
Certificate(s)	<ul style="list-style-type: none"> ○ IPR & Licensing Agreements. This course covers the basics of Intellectual property Law, the categories of relevant agreements, the typical clauses and pitfalls in software license agreements. It training provides a general overview of IPR and software licences, including open source licences. Provided in the European Space Research and Technology Center (ESTEC). ○ Open Source Licensing. This course gives guidelines on Open Source licensing (basics and for Contracts Officers), an in-depth look at mainstream Open Source licenses, Open Source in the development process, License compatibility and compliance. It covers legal explanations and practical aspects of open source licensing in general and the most common open source licenses. Provided in the European Space Research and Technology Center (ESTEC). ○ Space Policy of the EU. Seminary about the space policy of the European Union provided in the European Space Research and Technology Center (ESTEC). ○ Procurement and contractual aspects of Space large projects. The course includes the main category of contracts relevant to Space activities (including main differences between R&D and satellite procurement), the main contractual risks and possible mitigations (price types, remedies, incentives), the different liabilities associated to a large project and the principles of contractual change management. Course provided in ESTEC. ○ Introduction into ESA Standardization System. Seminary about the ESA Standardization System provided in the European Space Research and Technology Centre (ESTEC). ○ Integrated Project and Technical Review Process. Course about the technical review process of the integrated projects in the European Space Agency provided in the European Space Research and Technology Centre (ESTEC). ○ Cybersecurity Awareness (Beat Cybercrime). The course includes 8 online sessions about the basic knowledge and familiarization on the most important and relevant topics of the Cyber Security provided by the ESA Computer and Communications Emergency Response Team (ESA CERT). ○ Business Continuity Procedures in ESA. The course includes 3 online seminars about the crisis management procedures, evacuation plans and other topics related to business continuity. ○ ESA classified information data services. The courses includes an overview of the data services (ERCD) provided by ESA to manage classified information. The course includes 4 modules: introduction and physical security, information protection, personnel Security and security incidents. ○ Agile Product Delivery: SCRUM. Course about the SCRUM methodology Applied to the Space Sector in the European Space Research and Technology Centre (ESTEC). ○ ESA Knowledge Retention and Transfer Best Practices. The course includes 2 online seminars about the Knowledge Retention and Transfer Best Practices in the Space Sector. ○ Space Programs and the Conflict Management Technics. The course includes the main technics used for the conflict management in large programs. ○ Fraud Prevention in the Space Sector. The course includes 2 online seminars about the Fraud Prevention Processes in the Space Sector.

Date	FROM FEBRUARY 2015 TO JULY 2018
University or Centre	NATO Communications and Information Agency (NCIA), NATO Education and Training Facilities, NATO Centres of Excellences and other NATO entities.
Studies	COURSES ABOUT SECURITY AND IT SECURITY IN THE DEFENCE ENVIRONMENT
Certificate(s)	<ul style="list-style-type: none"> ○ Border Security. Background information and general principles of the Schengen Area. NATO Joint Advanced Distributed Learning System (NATO JADL). ○ Critical Information Security Fundamentals. Introduction to the art and science of information security in NATO. NATO Joint Advanced Distributed Learning System (NATO JADL).

- **Security in the information age.** Introduction to the changing nature of international relations as brought about by the information revolution, with a specific focus on risks and insecurity in the information age. NATO Joint Advanced Distributed Learning System (NATO JADL).
- **Cyber Defence Awareness.** Basic knowledge and familiarization on the most important and relevant topics of the Cyber Defence and IT Security area. NATO Joint Advanced Distributed Learning System (NATO JADL).
- **Infrastructure Awareness Course.** Current and prospective strategic level issues related to critical infrastructure protection (CIP). NATO Joint Advanced Distributed Learning System (NATO JADL).
- **Introduction to NATO Environmental Protection.** Introduction to Environmental Protection in a NATO context. NATO School Oberammergau.
- **Security Policy, International Relations, and Information Technology.** This course addresses the relationships between international politics/policies and modern information technologies. It also provides a basic knowledge of Internet search tools and techniques. NATO Joint Advanced Distributed Learning System (NATO JADL).
- **NATO Intelligence an Overview.** This course conveys core concepts about intelligence as described in Allied Joint Publication 2 series (Intelligence publications). NATO School Oberammergau.
- **NATO Energy Security Awareness.** The purpose of this course is to raise awareness of current energy developments and to provide basic knowledge on the role of new technologies in enhancing energy efficiency in the military and supporting the protection of critical infrastructures. NATO Energy Security Centre of Excellence.
- **European Security and Defense Policy (ESDP).** This course provides an introduction into the European Security and Defense Policy. NATO School Oberammergau.
- **NATO Civil Emergency Planning - An Overview.** NATO Civil Emergency Planning (CEP) Overview. This course details the roles, origins and organization of CEP, and describe the tools, processes and procedures used by CEP to accomplish its responsibilities. NATO School Oberammergau.
- **Introduction to the Energy Security Center.** This course familiarises students with the NATO ENSEC Center of Excellence (COE), its mission and organisation, and discuss how it enhances military energy efficiency for NATO as it was outlined at NATO's Chicago Summit. NATO Center of Excellence (COE).
- **Introduction to Satellite Operations.** This course focuses on the physical behaviour of the Military satellites in space. NATO School Oberammergau.
- **NATO JISR Operations Awareness Course.** The course provides the students key definitions, basic understanding and explanation of the JISR (Joint Intelligence, Surveillance and Reconnaissance) process that underpin NATO JISR Operations. NATO School Oberammergau.
- **Multinational Crisis Management.** This course introduces the concept of NATO crisis management. NATO School Oberammergau.
- **Introduction to the NATO Public Key Infrastructure (NPKI).** The course provides key definitions, concepts and processes associated to the NATO PKI. NATO Communications and Information Systems School.

Date

FROM FEBRUARY 2012 TO JULY 2018

University or Centre

NATO Communications and Information Agency (NCIA), NATO Education and Training Facilities, NATO Centres of Excellences and other NATO entities.

Studies

COURSES ABOUT INFORMATION TECHNOLOGY, EXERCISES AND PROCESSES IN THE DEFENCE ENVIRONMENT

- **NATO Newcomers and NATO Basics:** Two courses with an overview of the North Atlantic Treaty Organization. NATO Joint Advanced Distributed Learning System (NATO JADL).
- **Operations and the Information Age.** This course is an introduction to the IT applications in order to support military operations. NATO Joint Advanced Distributed Learning System (NATO JADL).

- **Joint Exercise Management Module (JEMM).** The JEMM is a support tool that supports the preparation and execution of a training event within the Exercise Control Organization (EXCON). It constitutes a central repository for key scenario documentation, processes, objectives, story lines, requests for information from observers/trainers, etc. NATO Joint Warfare Centre.
- **Computer Assisted Exercise (CAX) Course.** Overview of the organizational structure, tools and processes needed to conduct a CAX. NATO Joint Warfare Centre.
- **NATO RRT - Expert Training.** The Rapid Reaction Team (RRT) learning module is intended to prepare NATO civil experts for possible deployment away from their normal places of business to provide expertise on behalf of NATO. NATO School Oberammergau.
- **NATO Strategic Communications.** The aim of this course is to familiarise with the basics of communications and the concept of strategic communications NATO Strategic Communications Centre of Excellence.
- **Introduction to NATO's ETEE - Global Programming.** The course provides a fundamental understanding of NATO's approach to Education, Training, Exercise and Evaluation (ETEE). It outlines the governance structure, development methodology and the production planning process. NATO Joint Advanced Distributed Learning System (NATO JADL).
- **NATO Maritime Command and Control Systems.** Three courses about the NATO Maritime Command and Control Systems. NATO Maritime Interdiction Operational Training Center (NMIOTC).
- **NATO Lessons Learned Courses.** Two courses about the NATO Lessons Learned process: *ETE-IT-22081 Lessons Learned Course* (describing the Bi-SC Directive 080-006) by the NATO Joint Analysis & Lessons Learned Center and *Lessons Learned Process* by the NATO Military Center of Excellence.
- **NATO Procurement and Contracting Course.** This course is composed by several modules. The main objective of the course is to provide a very detailed guide about the NATO contracting by introducing planning mission support strategies as well as market research. NATO School Oberammergau.
- **Joint Warfare Training Course.** The purpose of this course is to introduce the Joint Warfare Centre's (JWC's) structures, roles, responsibilities, as well as its current operational missions. NATO Joint Warfare Centre.
- **Exercise Planning Course.** This course provides a theoretical introduction and overview of the NATO joint and multinational exercise planning process. NATO Joint Warfare Centre

OTHER COURSES

Date
University or Centre
Studies
Certificate(s)

FROM MARCH 1995 TO JANUARY 2012

Several Organizations.

Courses on Information technologies in several Organizations.

- Data management in Defence. Department of Defence. (20 Hours).
- Quality in the Development of Software (ESPELSA-STC, 100 Hours).
- Architecture and SAP Communications. (LMDATA, 20 Hours).
- Services of Directory and Metadirectory. CRITICAL PATH
- Services Web and Architecture SOA. ARTIX. (IONA, 20 Hours).
- Advanced Administration of Oracle (ATI, 50 Hours).
- Replication of Databases in Real time (Quest, 5 Hours).
- OO Databases (Ideal Objects S.A. 25 Hours).
- Advanced Development of Applications in Internet (ABS, 50 hours).
- Object-oriented programming (Ideal Objects S.A. 25 Hours).
- ORBIX and CORBA (Ideal Objects S.A., 20 Hours).
- Administration of Networks. (CEESINE – TISA, 200 Hours).
- CENTURY21: COBOL CICS DB2, Foundation. (SPAIN BOX, 50 Hours).
- Programming in Java (LEGIONET - CENTRISA, 40 Hours).
- Programming in Visual BASIC (CSI/CSIF, 200 hours).

LANGUAGES	LEVEL	SPANISH	ENGLISH	FRENCH
		C2	C2	B2

RESEARCHING AND PUBLICATIONS

More than fifteen (15) years of research experience in various universities and entities (part-time), including the Department of Software Engineering of the National Distance Education University (UNED), the Department of Applied Economics VI of the Complutense University Madrid, as a collaborator in Research and Development projects for the European Commission, through the public company Isdefe. **More than forty (40) articles** have been published in various scientific journals within the fields of systems auditing, information security, databases, software economic models, advanced public economics or economic impact analysis. and techniques, **more than twenty (20) presentations carried out in various international conferences and forums and several publications, including books and book chapters.**

PAPERS AND JOURNALS

(Chronological order)

1. López, J.C.; Heradio, R.; Cerrada, J. A.; J. R. Coz. “*A first generation software product line for data acquisition systems in astronomy*”. SPIE Symposium on Astronomical Telescopes and Instrumentation: Synergies between Ground and Space. Marseille, France, June 23-28, 2008.

This article presents a case study on developing a software product line for data acquisition systems in astronomy based on the Exemplar Driven Development methodology and the Exemplar Flexibilization Language tool. The main strategies to build the software product line are based on the domain commonality and variability, the incremental scope and the use of existing artefacts. It consists on a lean methodology with little impact on the organization, suitable for small projects, which reduces product line start-up time. Software Product Lines focuses on creating a family of products instead of individual products. This approach has spectacular benefits on reducing the time to market, maintaining the knowledge, reducing the development costs and increasing the quality of new products. The maintenance of the products is also enhanced since all the data acquisition systems share the same product line architecture.

2. J. R. Coz; Heradio, R.; Cerrada, J.A.; Lopez, J.C. “*A generative approach to improve the abstraction level to build applications based on the notification of changes in databases.*” 10th International Conference on Enterprise Information Systems. Barcelona, Spain, June 12 – 16, 2008.

This paper highlights the benefits, in terms of quality, productivity and time-to-market, of applying a generative approach to increase the abstraction level to build applications based on the notification of changes in databases. Most of the databases maintain meta-tables with information about all stored tables; this information is used in an automatic process to define the software product line (SPL) variability. The remaining variability can be specified by means of domain specific languages. Code generators can automatically query the meta-tables, analyze the input specifications and configure the current product. The paper also introduces the Exemplar Driven Development process to incrementally develop code generators and the Exemplar Flexibilization Language that supports the process implementation.

3. R. Heradio; J. A. Cerrada; J. C. Lopez; J. R. Coz. “*Code Generation with the Exemplar Flexibilization Language*”. Workshop on Generative Technologies (ETAPS’08). Budapest, Hungary, April 5, 2008.

Code Generation is an increasing popular technique for implementing Software Product Lines that produces code from abstract specifications written in Domain Specific Languages (DSLs). This paper proposes to take advantage of the similitude among the products in a domain to generate them by analogy. That is, instead of synthesizing the final code from scratch or transforming the DSL specifications, the final products are obtained by adapting a previously developed domain product. The paper also discusses the capabilities and limitations of several currently available tools and languages to implement this kind of generators and introduce a new language to overcome the limitations.

5. J. R. Coz. **"State of maturity of information security in the Government"**. *Expert AURIATIC Blog*, Madrid October 2010.

Paper summarizing the state of maturity of the Security of Information in Public Administration.

6. J. R. Coz. **"Impact of Data Management in Information Security in the Government"**. *Expert AURIATIC Blog*, Madrid January 2011.

Paper summarizing the impact of Data Management in the management of information security in public administration.

7. J. R. Coz. **"Impact of ICT certifications in finding employment in times of crisis"**. *Opinion article in leonnoticias.com*. April 2011.

Paper on the importance of professional certifications in the job search. The article presents some statistics from a study by the Institute Innovate on job search websites and the relationship with some professional certifications in ICT.

8. J. R. Coz, E. Fojón. **"International Panorama in the establishment of National Cyber Security Strategy"**. *Security Computers and Communications Journal*. Madrid June 2011.

Every state should evaluate the need to protect its cyberspace in order to ensure social, economic and cultural. One of the key instruments to achieve this goal is the definition of a National Cybersecurity Strategy. This article lists the basic pillars of national cyber security strategies exist in the international arena and to include leadership from the state, the creation of an organizational structure control, the development of training and awareness, public economic momentum - private, foreign policy, and regulations normalizations, and finally, the management of R + D + i. It also describes certain structures and capabilities developed by different nations in the field of Cyber Security.

9. J. R. Coz, E. Fojón. **"Precariousness in the audit functions in government systems"**. *INNOVATIA magazine*. Madrid June 2011.

The responsibility for the control of public information systems is a function delegated by the state. Under the umbrella of this control, Systems Audit function plays a very prominent and public administrations have not yet evolved to the level required by the citizens, who demand quality public services, safe, effective and efficient. Until this function is not considered strategic, administrations fail to mature citizen's demand. The article addresses this issue, describing the status of the audit function in government.

10. J. R. Coz, E. Fojón. **The Cyber Security Geostrategic of Knowledge**. *Network Security Magazine*. Madrid. November 2011.

The Government of Spain should develop a "knowledge Geostrategy cyber security". This strategy must have the support and involvement of all sectors of our society and a commitment to political forces that can be maintained over time, beyond alternations in power.

11. J. R. Coz, E. Fojón C., R. Heradio, J.A. Cerrada. **"Evaluation of the privacy of a virtual social network"**. *RISTI Journal* nº 9, 6-2012. ISSN 1646-9895.

Both for organizations and companies as a whole, the protection of cyberspace is a crucial aspect and privacy of information is one of the pillars on which rests this protection. In the process of construction of cyberspace, virtual social networks have become one of the most important elements for the exchange of information, and its use globally and massive serves to underscore its strategic importance. In this paper, we propose the evaluation of privacy in online social networks, through a maturity model, a framework for comprehensive assessment and control box.

12. J. R. Coz y Vicente Pastor. **"Situational Awareness in Defence Environment"**. *Security Cybersecurity, Infosecurity and Privacy Journal*. February 2013.

Once it has reached a sufficient level of maturity in cyber defense techniques and media, it is necessary to continue to improve and be able to know, dynamically, the security level of the systems. It is necessary to enable appropriate use of resources and application of the principles of risk management by threat information and probabilistic models obtained from the analysis of safety data. As the situation changes very quickly and requires an immediate response to the threats of information is received and the damage from security incidents, it is necessary to rely on data visualization techniques complex to make the right decisions in the shortest time possible. This article presents the current situation situational awareness systems for cyber and outlines the concept of information visualization as an element of situational awareness.

13. J. R. Coz y Vicente Pastor. ***“Situational Awareness in Defence Environment: challenges”***. Cybersecurity, Info-security and Privacy Journal. April 2013.

It is clear that to achieve adequate control over our ICT infrastructure necessary to operate our situational awareness systems. However, many times we forget about the challenges of introducing new ways of working and we focus too much on the technologies that we will acquire, forgetting to give adequate attention to the processes that need to be created, modified and adapted in the business and organizational changes necessary. In many cases, it is key to do a better use of human resources, to integrate new systems within the organization. We presented here some of these challenges along with recommendations for how to minimize the associated risks.

14. J. R. Coz et all. ***“A Domain Engineering Approach to Increase Productivity in the Development of a Service for Changes Notification of the Configuration Management Database”***. *Journal of Software Engineering and Applications. JSEA. Vol.6 No.4, April 2013.* pp. 207-220. DOI: 10.4236/jsea.2013.64026

This paper presents a domain engineering approach to build a software product line that supports the change notification service in a Configuration Management Database (CMDB) according to the Information Technology Infrastructure Library (ITIL) best practices. For the development of this product line, the proposed approach makes use of a construction of products methodology by analogy. This is a new notation reports the variability of the products, obtaining metrics as important as the number of products and uses a language that enables, by means of the flexibilization of a product and the development of some generators, to build the rest of the product line. In addition, the paper offers a standard for the analysis and design of the CMDB as well. Finally, the paper presents an economic model for the product line, where the profitability and productivity of the proposed solution are analyzed.

NOTE: Paper selected as one of the best papers in Computers Science by the "Journal of Software Engineering and Applications" (2013).

15. J. R. Coz, E Fojón, A. Hernández y G. Colom. ***“Cyber cells: a tool for national cyber security and cyber defense”***. *ARI. Real Instituto Elcano. ARI 26/2013.* September 2013.

Except for countries that are pioneers in cyber security and cyber defense such as the US, China and Israel, these days most nations are developing basic cybernetic capabilities, such as information and communications technologies and the organizations and procedures that will make them work when they reach maturity. When this happens, it will be necessary to devise the organizations and operational procedures –cyber cells– that allow countries to operate using those previously established capabilities. This paper describes the concept of cyber cells, their functions, tasks and areas of operation, as well as the enablers that will allow them to work. Although it is a matter of a next-generation capability that will complement those which are now being set up, the authors argue that Spain should think about what kind of cyber cells would in fact complement the cyber security capabilities that are being established for use by the military and national security forces.

16. José-Ramón Coz-Fernandez, Rubén Heradio-Gil, José-Antonio Cerrada-Somolinos, ***“Cost Models and Productivity Building Applications Based on the Notification of Changes in Databases”***. *Software Engineering. Vol. 1, No. 2, 2013, pp. 7-12. DOI: 10.11648/j.se.20130102.11*

This paper presents a generative approach to build a Software Product Line (SPL). This SPL is used to build applications based on the Notification of Changes in databases. The paper highlights the benefits, in terms of productivity and cost, using this approach. To obtain the economic data we have used two cost models, the SIMPLE Model (Structured Intuitive Model for Product Line Economics) and one adaptation of COPLIMO (Constructive Product Line Investment Model). Both models demonstrate the great productivity of this SPL. The paper also introduces the Exemplar Driven Development (EDD) process used to build the SPL.

17. J. R. Coz, E. Fojón. ***Models and approaches about Cybersecurity in virtual social networks***. Network Security Magazine. Madrid. September 2013.

The cyberspace evolves through an extremely complex construction process, and one of its most important elements is the virtual social networks, which have become a component of strategic importance. Social networks facilitate the exchange of information, and its widespread use is global. In recent years the number of cyber-attacks over this element of the cyberspace has been increasing. This article summarizes various models and approaches that support Cybersecurity in virtual social networks.

18. José-Ramón Coz-Fernandez.

- ***“Delay of National Cybersecurity Strategy.”***
- ***“What we find in the new national Cybersecurity strategy”***.
- ***“A Brief Analysis on the new National Cybersecurity Strategy.”***

Blog THIBER. Madrid. September - December 2013.

19. José-Ramón Coz-Fernández et al. ***Cloud Controls Matrix adaptation to the Spanish legislation on the matter (Regulation Law Data Protection, RLOPD) and the National Security Scheme (ENS)***. Cloud Security Alliance, Madrid. June 2014.

The Cloud Security Alliance has published a guide that lists the most important reference controls in Cloud security, based on the principles published in the Cloud Controls Matrix 3.0 and the requirements of the Spanish legislation on the matter (Regulation Law Data Protection, RLOPD), and the National Security Scheme (ENS).

20. José Ramón Coz Fernandez and other members of the Embassies Data-Working Group from THIBER. ***The embassies of data: the protection of state information***. Real Institute Elcano. ARI 36/2014. July 2014.

Estonia is considering replicate abroad the computer databases that allow the delivery of essential public services to mitigate the damage of a possible injury or loss. The gradual awareness of societies and governments against the dangers of cyberspace is leading them to acquire new Cybersecurity and Cyberdefence instruments. This study examines the "embassies data" concept as a response option, and how it could be established in order to support the foreign policy and the Cybersecurity of a country.

21. J. R. Coz y Vicente Pastor. ***"Multi-agent environments and Cyber-Physical Systems in Cyberdefence"***. *Cybersecurity, Info-security and Privacy Journal*. September 2013.

This paper describes the main characteristics of Cyber-intelligent systems, called MAS & T (Multi-Agent Systems and Technologies), and the Cyber-Physical Systems (CPS), and its impact on the Cyberdefence. In recent years, these systems have become highly relevant and currently there is a great potential for innovation, development and research in this area.

22. José Ramón Coz Fernandez. ***"France, a leadership in Cyberdefence"***. ISMS Forum Spain. October 2014.

The article describes the main issues about the leadership of France in the field of Cyberdefence and the most relevant aspects of the National Cyber Security Programme with a budget of one billion euros.

23. J. R. Coz y Vicente Pastor. ***"The challenge of sharing information on Cyberdefence"***. *Cybersecurity, Info-security and Privacy Journal*. Madrid November 2014.

Cyber investments have increased almost exponentially in the last decade in the more advanced countries, and budgets in large engineering programs to support ICT Cyberdefence have, in some cases, a budget of several million euros, as is the case in the most advances Countries or leading organizations such as NATO. As a result, support systems on Cyberdefence are increasingly complex and require interoperable architectures that enable information sharing occurs in a standardized way. In this article, we detail some of the concepts, standards and protocols having the greatest impact on the exchange of information on the Cyberdefence.

24. José Ramón Coz Fernandez. ***"Arabia Saudi, the country of the oil, and the Cyber security"***. ISMS Forum Spain. October 2014.

The article describes the main issues about the leadership of Arabia Saudi in the field of Cyberdefence and the most relevant aspects of the National Cyber Security Projects with a budget of several billion euros.

25. José Ramón Coz Fernandez & Others. ***"Cloud Computing Spanish Security State of the Art Analysis"***. *Cloud Security Alliance, Spanish Chapter*. ISMS Forum Spain. November 2014.

CSA-ES has renewed its insights into cloud security within Spanish and Spanish-speaking cloud market by means of its 2014 Cloud Security State-of-the-Art Study. This Study counted on the feedback collected form more than 60 different companies mainly based in Spain. However, It also includes other countries and regions around the world such as South and North America.

26. José Ramón Coz Fernandez. ***"Cyber United Kingdom, a great bet for the Cybersecurity and Cyberdefence"***. ISMS Forum Spain. October 2014.

The article describes the main issues about the leadership of the UK in the field of Cyberdefence and the most relevant aspects of the National Cyber Security Programs.

27. J. R. Coz and Vicente Pastor. ***"STIX: standard for sharing information on Cyberdefence"***. *Cybersecurity, Info-security and Privacy Journal*. February 2015.

In this paper, the authors describe the existing proposals that facilitate the automation of the sharing information on Cyberdefence. The paper includes an analysis as well about the initiative of the American corporation MITRE to describe intelligence on Cyber Threats (STIX, Structured Threat information eXpression).

28. J. R. Coz and Vicente Pastor. ***“Cybersecurity profiles on request”***. *INNOVATIA*. February 2015.

Market growth Cybersecurity in the most technologically advanced countries is assuming a change in the processes of incorporation of staff with expertise in this field. The article presents some concepts on Cybersecurity and analyzes the importance of training and education.

29. J. R. Coz and Enrique Fojón. ***“Different speeds in the field of cyber in NATO”***. *THIBER – El Mundo*. March 2015.

Short paper about the need for all stakeholders to develop specific skills and capabilities about Cyberdefence.

30. J. R. Coz and Vicente Pastor. ***“Without effective coordination there is no Cyberdefence”***. *Ciber- Elcano. Elcano Institute*. April 2015.

This article shows the coordinating organizations and initiatives that exist in other countries to facilitate sharing of information and contribute to the collective defense of cyberspace in prevention and response to security incidents.

31. J. R. Coz and Vicente Pastor. ***“The ISACs (Information Sharing and Analysis Centers) as basic architectures for Cyberdefence”***. *Cybersecurity, Info-security and Privacy Journal*. April 2015.

In the field of Cyberdefence one of the most important structures are the Information Sharing and Analysis Centers (ISAC). In this paper, we describe the main features of these centers and their impact on Cyberdefence.

32. J. R. Coz. ***“The Cyber-Commands and the Segregation of duties”***. *THIBER- Elcano. Elcano Institute*. June 2015.

The paper presents the concept of segregation of duties in the Cyber-Commands. It also analyzes how this issue can be dealt with compensating controls and audits, as it is performed in the most important international Cyber Programs.

33. J. R. Coz and Vicente Pastor. ***“Military Cyberdefence and the Internet of the Things (IoT)”***. *Cybersecurity, Info-security and Privacy Journal*. September 2015.

Practically all the elements of support for Cyber Defense in organizations and companies with a high degree of maturity at an international level will require, in the short term, various changes of great relevance. What is the trigger for these changes? This is the aspect that is adding greater complexity to the Cyber Defense environment, if possible, and it is the consideration of the multiple interconnections to the network of a wide variety of physical devices. This concept, which Cyber Defense specialists are beginning to analyze under the umbrella of systems architecture, is known as the Internet of Things (IoT), and presents a series of new challenges that must be addressed with great urgency.

34. J. R. Coz and Vicente Pastor. ***“I do not know what goes on in my network. Can I protect it properly?”*** *Ciber-Elcano. Elcano Institute*. October 2015.

This article shows the difficulties that arise for effective cyber defense exercise that processes, technologies and human teams dedicated to managing information systems and those engaged to defend them from external attacks, are separated from each other.

35. J. R. Coz and Enrique Fojón. ***“National cybersecurity a priority”*** *El Espanol*. November 2015.

This article summarizes the major steps to address prior to the design of a large national cybersecurity program, in line with what has been done in the most developed countries in this field and the situation of maturity of the national cybersecurity.

36. J. R. Coz and Vicente Pastor. ***“New Higher Education in cyber defense at the international level”***. *Cybersecurity, Info-security and Privacy Journal*. June 2016.

In this article, we describe the main features of Higher Education in the field of cybersecurity internationally, highlighting the main disciplines covering and the situation regarding the degrees offered in other countries. In recent years, the demand for professionals in this field has grown so that educational systems have not responded on many occasions with the haste shown by industry and, in general, the market.

37. J. R. Coz and Vicente Pastor. ***“The NATO cyber-incubator projects and other international initiatives”*** *Ciber- Elcano. Elcano Institute*. September 2016.

In this article, we briefly describe the main features of one of NATO's most important cybersecurity initiatives. It is the project incubator framed within the efforts that the Organization is carrying out in its association with industry and the academic environment for issues related to cybersecurity (NICP – NATO-Industry Cyber Partnership). In recent years, a series of initiatives have been launched in this field that have become very relevant and currently constitute the pillars of innovation and research in cybersecurity within NATO. Similarly, the most developed countries in this field and various international organizations are carrying out far-reaching programs and projects that involve the development of similar initiatives. Due to its degree of ambition, we highlight this initiative in this article, although we also briefly explain some of the most outstanding multinational efforts.

38. J. R. Coz. *"The role of cybersecurity in communicative management in organizations"*. INNOVATIA Journal n. 55. Madrid, March 2018.

In the mentioned article published in the Innovatia Journal, the role of cybersecurity in communicative management is described, and how the different aspects covered by cybersecurity can support the challenges that communication faces in all organizations. The main conclusion of the article is that the main characteristics of the organizational communication processes must be supported by an adequate cybersecurity.

39. J. R. Coz, A Valiño Castro, S. Acosta Ortega. *"The economic impact of the Spanish Navy in the Spanish economy in 2017"*. Revista General de Marina (Spanish Navy Journal). ISSN: 0034-9569. Pages 73-82. July 2019.

The mentioned article analyzes in detail the impact of the Navy's economic activity on the Spanish national economy in 2017, including the increase generated in production, income and employment. For the analysis, the MOCIE economic knowledge management model has been used, which allows measuring the economic impact of the programs on the national economy.

URL Journal :

<http://www.armada.mde.es/archivo/rgm/2019/07/RGM%20Julio%202019%20V%20FINAL%20IMPRESA.pdf>

URL paper: <http://www.armada.mde.es/archivo/rgm/2019/07/rgm072019cap07.pdf>

40. J. R. Coz, A Valiño Castro. *"Integration of a knowledge management model to assess the economic impact in the programs of the Defence sector"*. Revista de Economía Industrial (Economic Industrial Journal) N412: Industria de Defensa (Defence Industry). Pages 57–65. September 2019.

This article aims to analyze aspects focused on the control of programs in the Defence sector. The main features of the control framework of programs are addressed, highlighting the main standards, guides and good practices. The knowledge model for economic impact, called MOCIE, together with the support information system for this model, are also presented and described, and how it can be integrated within the framework of program management.

URL Journal : [https://www.mincotur.gob.es/es-](https://www.mincotur.gob.es/es-ES/servicios/Documentacion/Publicaciones/Paginas/detallePublicacionPeriodica.aspx?numRev=412)

[ES/servicios/Documentacion/Publicaciones/Paginas/detallePublicacionPeriodica.aspx?numRev=412](https://www.mincotur.gob.es/es-ES/servicios/Documentacion/Publicaciones/Paginas/detallePublicacionPeriodica.aspx?numRev=412)

URL paper:

<https://www.mincotur.gob.es/Publicaciones/Publicacionesperiodicas/EconomiaIndustrial/RevistaEconomiaIndustrial/412/C0Z%20FERNÁNDEZ%20y%20VALIÑO%20CASTRO.pdf>

41. J. R. Coz, and Vicente Pastor. *"The complexity of performing cyber audits in the space sector along the supply chain"*. Cyber Security: A Peer-Reviewed Journal. Volume 4. November 2020.

Cyber audits are not at all easy to perform. The number of dependencies present in the modern systems makes the process truly complicated and the findings, when available, are difficult to interpret and understand. The increasing trend to subcontract large parts of a programme or project hides some of those dependencies and other details under a huge number of contracts and other legal documentation which, in some cases, obliges the auditor to become a real documentation archaeologist in search of the Holy Grail. In this paper, the authors introduce the concept of cyber audits, explain some of the factors that contribute to the complexity of the projects in the space sector along the supply chain, and describe tools that can assist in the audit process, before concluding with some recommendations to be taken into account to facilitate the process.

Journal URL: <https://www.henrystewartpublications.com/csj/v4>

42. J. R. Coz. *"Auditing IT Governance in the Navigation Sector"*. ISACA Journal, news and trends. 29 March 2021

Auditing IT governance in the navigation sector is a challenge. The number of interdependencies and stakeholders in new navigation systems makes the process truly complex, and the increasing trend in subcontracting large parts of a system hides some of those interdependencies and other details in a huge number of contracts. This obliges the auditor to become a true documentation archaeologist to assess an organization's IT governance. It is important to understand the concept of cyber audits in the navigation sector, identify some of the factors that contribute to the complexity of projects in the navigation sector along the supply chain and recognize how COBIT® can contribute to the different analyses performed.

Conference URL:

<https://www.isaca.org/resources/news-and-trends/industry-news/2021/auditing-it-governance-in-the-navigation-sector>

43. J. R. Coz, A Valiño Castro. *"The industrial and economic impact of space programs in Europe in the post-COVID-19: its implications for industrial policy"*. Revista de Economía Industrial (Economic Industrial Journal) N420: Geoeconomía Industrial. (Industrial Geoeconomy). Pages 67–80. September 2021.

The article initially analyzes the characteristics of the sector and the space industry in the world, putting the European and Spanish space industry in its place. European space policy is analyzed, and emphasis is placed on the implications of the new Space Programs proposed by the European Union and the European Space Agency (ESA), analyzing the impact of these programs on the space industry and Spanish Industrial Policy.

Journal: <https://www.mincotur.gob.es/es-ES/Publicaciones/Paginas/detallePublicacionPeriodica.aspx?numRev=420>. Paper : <https://www.mincotur.gob.es/Publicaciones/Publicacionesperiodicas/EconomiaIndustrial/RevistaEconomiaIndustrial/420/C0Z%20Ferna%CC%81ndez%20y%20Valin%CC%83o%20Castro.pdf>

44. J. R. Coz, A Valiño Castro. ***“The new strategic capabilities for the European Union provided by the space sector. Special reference to the PNT”***. *Journal of Industrial Economics* Number.430: Pages 65 – 72. March 2024. The EU's action in space is carried out through the European Space Agency with the collaboration of the member countries. This collaboration has been favored by the high cost of aerospace projects and has generated considerable experience in carrying out joint projects in the military and civil aerospace sector which, given the threats, are totally intertwined in this sector. In the article we analyse the strategic capabilities provided by space policy, with special reference to positioning, navigation and timing, and their importance in industrial development.

Journal URL:

<https://www.mintur.gob.es/es-ES/Publicaciones/Paginas/detallePublicacionPeriodica.aspx?numRev=430>

Paper URL:

<https://www.mintur.gob.es/Publicaciones/Publicacionesperiodicas/EconomiaIndustrial/RevistaEconomiaIndustrial/430/COZ%20FERN%C3%81NDEZ%20Y%20VALINO.pdf>

45. J.R.C. Fernández and R.B. Hijón, ***“Cybersecurity Audits of the Supply Chain within the Galileo Ground Control Segment”***. *Trans. Appl. Sci. Eng. Technol.*, vol. 1, no. 1, pp. 1-9, 2025.

Auditing the compliance of cybersecurity processes, regulations, requirements, and policies in the navigation sector is a real challenge. The number of interdependencies and the stakeholders in the new navigation systems make the processes truly complex, and the increasing trend in subcontracting big parts of a system hides some of those interdependencies and other details in a huge number of assets and other regulatory and legal documentation obliges the auditors to become archaeologists to assess the cybersecurity status. In this article, the authors introduce the experience of cybersecurity audits in the navigation sector within the ground control segment (GCS) and explain some of the factors that contribute to the complexity of this activity.

Journal URL:

<https://lanashscience.com/article/cybersecurity-audits-of-the-supply-chain-within-the-galileo-ground-control-segment>

Paper URL: https://lanashscience.com/articles_file/127- article1740994400.pdf

CONFERENCES AND CONGRESS

(Chronological order)

1. J. R. Coz; R. Heradio; J. A. Cerrada; ***“Building a Product Line, using technology Queue Management through a generative approach”***. XVIII National Users Congress - Oracle. Málaga, October 2008.

The paper deals with the presentation of a framework that is designed to build applications based on the mechanisms Oracle change notification. The Framework to present construction is used for software product lines (SPL) using an approach based on generative programming.

2. J. R. Coz ***“Using Best Management Practices offered by PRINCE2 applied in the Court Records Branch of the Ministry of Justice”***. III Edition Spanish Projects Management Forum with PRINCE2, Madrid June 2009.

Lecture summary of the proposed implementation of good practices in PRINCE2 in the Court Records Branch of the Ministry of Justice. It is used for the management of functional changes in large systems.

3. A. Sanz Villalba, J. R. Coz. ***“Migration from methodology PRINCE2 Project Management ad hoc high-security environments”***. IV Edition Spanish Projects Management Forum with PRINCE2, Madrid June 2009.

Presentation on the use of good project management practices applied to large information systems in the Defense environment.

4. J. R. Coz, E. Fojón C., R. Heradio, J.A. Cerrada. ***“Scorecard as process support Maturity Privacy Assessment in a Virtual Social Network”***. ITGSM'2010. V International Congress on IT Governance and Service Management: Proposals for Tough Economic Times. Alcalá de Henares, June 2010.

Internet is a dynamic and globalizing, continuously, is very heterogeneous information feeds. It is increasingly common for Internet users to share personal information on the internet, with the advantages and risks involved, so it is necessary global regulation, which safeguards the privacy thereof. In recent years, Virtual social networks have become one of the most popular services for the exchange of information, mostly personal and global use relevance starts its importance. This article summarizes the Maturity Model Privacy in a Virtual Social Network, the Assessment Framework Maturity and details a Support Tool Evaluation Shaped Scorecard.

5. J. R. Coz, E. Fojón. ***“An educational model for a National Cyber security Strategy”***. ENISE Congress (International Meeting of the Information Security). Leon. October 2011.

Provide reasonable assurance for proper cultural, social and economic development in a country is an inalienable responsibility of the State. Within the wide range of this responsibility, the protection function of the Cybersecurity plays a very prominent role, and our country has not yet evolved to the level required by citizens demanding a public service that gives safety, effectiveness and efficiency in the control and protection of information in cyberspace. One of the key tools used by neighboring countries is the definition of a National Cybersecurity Strategy. International strategies implemented base their operation on a series of pillars. A very prominent pillar is education. This paper summarizes the most important characteristics of education in this area and proposes a model for management.

6. J. R. Coz, E. Fojón et all. ***“The Cyber security Strategy and Reference Models”***. I Spanish Cyber Security Institute Forum. 20.11.2012. Madrid.

This short paper presents some strategic considerations about Cybersecurity and then analyzed these strategic considerations from a practical standpoint, exposing some reference models internationally.

7. J. R. Coz et all. ***“Study of the State of Security in Cloud Computing in Spain”***. International Conference on Information Security of the ISMS Forum. Madrid, Auditorio Mutua Madrileña, November 20, 2014.

The presentation summarizes the main conclusions on the state of security in Cloud Computing in Spain in 2014, including aspects such as the degree of use of the cloud, the most demanded services, security expectations, technical security requirements, satisfaction of Cloud Users, service models and security incidents. Document: [URL](#). Conference: [URL](#)

8. J. R. Coz, R. Delgado, M. Rodríguez y T. Arroyo. ***“COBIT-PAM Evaluation Tool”***. ISACA COBIT Working Group. 10.09.2015. Madrid

At this conference a tool for assessing the maturity of an organization's IT governance COBIT-based PAM process is presented.

9. J. R. Coz. ***“Conference about the Knowledge management model (MOCIE) and a case study in the Spanish defense sector”*** International Congress CIdEM 2016. Granada, October 2016.

In this conference, it is presented the model of knowledge management based on the input-output framework that enables us to know the economic impact of the public investments. This model has been applied in the area of Defense in order to assess the economic impact of a series of investment programs in the aeronautic sector.

10. J. R. Coz. ***“Conference on the management of economic knowledge in the new economy of Defense”***. II Conferences about Aerospace and economy of the Spanish Air Force. Madrid. March 2017.

An innovative and emblematic research project was presented, which can provide a notable improvement in the economic management of defense programs. It was analyzed the economic context of Defense and provided the main conclusions of this project and its lessons learned. During the research project, a large case study was developed within the Defense Aeronautics Sector: the maintenance of aircrafts.

11. J. R. Coz. ***“Why is it so difficult to characterize cyberspace? Valid approaches for cyber-defense”*** International Congress CIdEM 2018. Granada, October 2018.

This communication describes some of the relationships related to knowledge management and maneuverability in cyberspace, and some pertinent approaches that obtain relevant information that supports operations..

12. J. R. Coz. ***“Cybersecurity Challenges in Critical Environments. The ground segment of Galileo”***. XXX Global Congress of Cybersecurity, Information Security and Privacy, SECURMATICA. Madrid, April 23-25, 2019.

This paper describes some of the main challenges of cybersecurity in critical environments. The paper describes as a use case, the Ground Segment of the European Satellite Navigation Program Galileo, a program with a budget of more than 1,500 million euros.

Conference URL: <https://securmatica.com/pdf/2019-programa7.pdf>

13. J. R. Coz. ***“The Big Challenges to Perform a Cyber Audit. The Case of Galileo Program”***. EuroCACS/CSX Conference. Geneva, Switzerland, 16-18 October 2019.

This paper presents some of the main challenges when conducting a cyber-audit of a complex program. The paper describes as a case of use the European Satellite Navigation Program Galileo, a program with a budget of more than 1,000 million euros annually.

URL Conference: <https://next.isaca.org/conferences/euro-cacs-csx-2019>

14. J. R. Coz. ***"Planning Complex Cyber Audits. The Case of Galileo Ground Segment"***. Infosecurity ISACA North America Expo and Conference. New York, USA, 18-20 November 2019.

This paper describes the main activities and problems faced by auditors when planning complex cyber audits in large programs with a great political and economic impact. The paper describes as a use case the ground segment of the European Satellite Navigation Program Galileo, a program with a budget of more than 1,500 million euros. Conference URL:

<https://www.infosecuritynorthamerica.com/en/Sessions/80849/Planning-Complex-Cyber-Audits-The-Case-of-Galileo-Ground-Segment-1500-MEuros>

15. J. R. Coz. ***"Lessons Learnt about planning cyber-audits in international environments"*** ISACA Iberoamerica Congress 2020. 26-30 October 2020.

During the congress "ISACA Iberoamerica 2020, cybersecurity, a challenge that transcends borders", organized with the collaboration of more than twenty chapters of ISACA, and performed online, two conferences were presented about pre-planning and planning of cybersecurity-audits, in international environments, with complex logistical deployments.

Conference URL:

https://www.brighttalk.com/webcast/18299/446003?utm_source=Reed+Exhibitions&utm_medium=brighttalk&utm_campaign=446003.

Conference II URL:

https://www.brighttalk.com/webcast/18299/451175?utm_source=Reed+Exhibitions&utm_medium=brighttalk&utm_campaign=451175

16. J. R. Coz. ***"Planning complex cybersecurity audits in the space sector"***. V-Applied2021

3rd Edition of Applied Science, Engineering and Technology Webinar, 27-28 March, 2021, Live Stream.

The cybersecurity audits are described as the evaluation of the level of compliance of the information security management system and implemented security measures with defined requirements, security policies in place and the appropriate safety standards. The conference described the main challenges to plan these cybersecurity audits and the most relevant lessons learnt at the European Space Agency.

Conference URL: <https://www.sciwideonline.com/appliedscience-virtual>

17. J. R. Coz. ***"Logistics in Audit Planning in the Space Sector"***. ISACA Madrid Event 2021. Session 1. 3 of June 2021 (Online).

The presentation deals with the problem of logistics planning in cyber audits in the space sector. The conference presents the process of Cyber-Audits of the navigation sector in the European Space Agency, the main elements to consider during planning and how logistics impacts the different activities that are carried out during the execution of cyber-audits.

18. J. R. Coz. ***"The importance of the Logistics within the Cybersecurity Audits in the Navigation Sector"***. V-Applied2022. 3rd Global Webinar on Applied Science, Engineering and Technology. V-Applied2022. Theme: Contemporary Challenges and Practical Solutions in Applied Science and Engineering. February 2022.

The paper deals with the logistics process during the planning of cyber audits in the space sector of Navigation. The conference exposes the main elements to consider during logistics planning and how the logistics process impacts the different activities that are carried out during the execution of cyber-audits and in the associated supply chain.

Conference URL: <https://www.globalscientificguild.com/3rd-applied-science/>

19. J. R. Coz. ***"Lessons learned planning audits in the European Space Agency"***. C-Meet Event about Digitalization and Innovation. Santander, September 2022.

The paper presents the main lessons learned, compiled over four years, when planning Cybersecurity audits at the European Space Agency. In addition, the paper presents the peculiarities of the space sector and how the complexity of its supply chain impacts during the audit process and the main aspects to consider, including tools, human resources, procedures and techniques.

Event URL: <https://c-meet.es/c-meet-ciberseguridad-digitalizacion-innovacion/>

Presentation: <https://www.youtube.com/watch?v=awpbjH6x-YQ>

Conference: https://www.youtube.com/watch?v=kLw1w_HX82I&t=23720s

Interview: https://www.youtube.com/watch?v=M_SspKk_dbo

20. J. R. Coz. ***"The ESA, the Navigation sector and employment opportunities"***. Event organized by the European University of the Atlantic ([URL](#)) Santander, May 2023.

The conference outlined the main programs run by the European Space Agency, with special emphasis on programs in the Navigation sector, and the different employment opportunities offered by the sector. The conference was part of a series of conferences on employment organized by the European University of the Atlantic. News about the Event: [URL](#)

21. J. R. Coz. *“Experience of the European Space Agency with cybersecurity audits in the navigation sector. XXV International Information Security Conference of the ISMS FORUM. Madrid, Cívitas Metropolitano, 16th November 2023.*

The presentation summarizes the main aspects of the cybersecurity audits coordinated by the European Space Agency in the navigation sector. Almost a hundred audits are coordinated annually on the entire supply chain, distributed throughout the world, that provides services and products related to positioning, navigation and timing services.

Conference URL: [URL](#)

22. J. R. Coz. *“Keynote: European Space Agency experience with cybersecurity audits. Protecting an investment of more than €6 billion in navigation systems”. ENISE 18 International Conference. Leon, Spain. October 2024.*

The conference highlighted the most critical aspects of the cybersecurity audits performed by the space industry, and coordinated by the European Space Agency within the European Union programs related to the PNT (Positioning, Navigation and Timing) sector. Currently the PNT is the biggest economical sector in the space area, with a big impact on other sectors.

Event URL: [URL](#). Main Conferences: [DAY 1](#), [DAY2](#).

Conference URL: https://youtu.be/jVycW4a_Vec?t=22485

23. J. R. Coz. *“European Space Agency experience with Cybersecurity Audits for PNT. The critical aspects of the Cyber Internal Audits”. Internal Audits Talks organised by the European Medicine Agency. Amsterdam, Netherlands. 25th October 2024.*

The talk was held in the context of the sessions organized by the European Medicines Agency, which brings together Internal Auditors from various European agencies such as ESA, EUROPOL, F4E, EIB, EASA, EPO and others. The talk summarizes the main challenges faced by internal audits and reflects the complexity in the case of the space sector and navigation systems.

BOOKS AND CHAPTERS

(Reverse chronological order)

1. Auditing Industrial Systems and Critical Infrastructures. ISACA, Madrid Chapter. November 2020.

This document aims to present and describe a model for auditing industrial control systems and critical infrastructures, showing the methodology that must be followed with the review of the risk analysis, control models and periodic tests that must be done for its verification, in order to conclude on the maturity of the status of the cybersecurity.

General URL: <http://www.isaca.org/chapters7/Madrid/members/Pages/Publicaciones.aspx>

2. Identification and Control of Risks in Processes Validated with Blockchain. ISACA, Madrid Chapter. November 2020.

This document, prepared by a group of experts from the Madrid Chapter of ISACA, analyzes in detail the different controls and risks associated with the processes that make use of Blockchain technology and their impact on cybersecurity.

General URL: <http://www.isaca.org/chapters7/Madrid/members/Pages/Publicaciones.aspx>

3. Compliance and Audit on Cloud Systems. ISACA, Madrid Chapter. November 2020.

The objective of this document is to define a guide for the Auditors to organize and carry out an audit of Cloud environments, also giving a practical guide with some of the points that have been considered most representative for conducting audits of services in Cloud Environments.

General URL: <http://www.isaca.org/chapters7/Madrid/members/Pages/Publicaciones.aspx>

4. Security and Defense. Strategies and challenges of a globalized world. Vol. I, Part. II, About Cyberspace and Cyberdefence. ISBN: 978-84-338-6520-5. Pages 341-365. Editorial Universidad de Granada. 2019.

This book has been consolidated after the Congress of Military Studies held at the University of Granada in October 2018, within the framework of a collaboration agreement between the University of Granada and the Ministry of Defense, which for more than 25 years has managed to bring together University and Army in research activities. The part II contains, among other aspects, a chapter about Cyberspace and Cyberdefence.

Book URL: <http://cemixugrdoc.ugr.es/pages/7-publicaciones/7a-biblioteca-conde-de-tendilla-directorio/28seguridadydefensa/>

5. New Models of Risk Analysis in Cybersecurity. ISACA, Madrid Chapter. November 2018.

This document, prepared by a group of experts from the Madrid Chapter of ISACA, analyzes the situation that organizations face when they have to manage risks associated with Cybersecurity. As a result of the analysis, a specific dynamic risk analysis model for Cybersecurity is proposed.

General URL: <http://www.isaca.org/chapters7/Madrid/members/Pages/Publicaciones.aspx>

6. Reviewing the function of Systems Audit in the digitized company. ISACA, Madrid Chapter. November 2018.

This document, prepared by a group of experts from the Madrid Chapter of ISACA, reviews the function of systems auditing within the company. The main objective of this function is to ensure that controls are effective, that processes are executed as designed, and that risk levels are located within the company's risk.

General URL: <http://www.isaca.org/chapters7/Madrid/members/Pages/Publicaciones.aspx>

7. Data Privacy Audit/Assurance Program (Spanish). March 2018. ISACA.

A team of ISACA in which I participated has translated this book. The Data Privacy Audit/Assurance Program shares control objectives and controls in areas of data privacy beginning with data collection all the way through incident management. The main objective is to provide organizations with a means to assess the effectiveness of their practices around data governance for privacy, confidentiality, and compliance (DGPC).

URL: <http://www.isaca.org/Knowledge-Center/Research/ResearchDeliverables/Pages/data-privacy-audit-program.aspx>

8. The New Economy of Defense. - Reflections from the Aerospace Area. Chapter 10, p. 253-272. Editorial Ministry of Defense. March 2018.

This work reflects the contents of a coordinated effort between University, Industry, Academia and Public Administration. Experts from these sectors review traditional concepts about Economy, Defense and Aerospace Sector and update them. The book chapter presents an economical model to analyze the economic impact of the maintenance of the aircrafts.

Book URL: <http://www.ejercitodelaire.mde.es/EA/ejercitodelaire/es/.galleries/anexos/La-Nueva-Economia-de-la-Defensa-en-un-Nuevo-Orden-Mundial.pdf>

9. Military and security studies at the dawn of the 21st century. ISBN 978-84-338-6085-9, p. 473-491. Editorial Universidad de Granada. June 2017.

The work brings together the contributions of numerous experts and research groups from different universities, research centers in Spain and abroad. It collects the effort of civilian and military investigators, gathered around the same concerns. It is a relevant material, of great intellectual value, of full relevance, thorough, analytical and with very new contributions to the fields of security and defense, from different disciplines such as Economy, Political Science, History, Engineering and Sociology.

The book chapter presents the MOCIE model for the economic impact of public programs and their application to the defense sector in Spain. <https://dialnet.unirioja.es/servlet/libro?codigo=693346>

10. Knowledge management model proposal based on an economic output input framework. Case study: Spanish Defence sector. THESIS DISSERTATION.

Departamento de Economía Aplicada VI. Universidad Complutense de Madrid. April 2016.

In the current macroeconomic scenario, making economic decisions in any public organization must be supported by adequate economic intelligence. It is a priority to obtain models, techniques and tools to ensure adequate control in all its investments. In this paper, we present a model of knowledge management based on the input-output framework that enables us to know the economic impact of the investments. This model is supported by an information system that will contribute to economic analysts in decision-making in the field of public investments. The model and the system have been applied in the area of Defense in order to assess the economic impact of a series of investment programs in the aeronautic sector.

Dissertation URL: <http://eprints.ucm.es/40568/>

11. COBIT 5 for Information Security (Spanish). November 2015. ISBN 978-1-60420-387-5.

A team of ISACA Madrid in which I participated has translated this book. This publication is intended for several audiences who are dealing with cybersecurity directly or indirectly. These may include information security managers (ISMs), corporate security managers, end users, service providers, IT administrators and

IT auditors. The primary purpose is to enable a uniform governance, risk management and security management framework for enterprises and other organizations. The secondary purpose is to provide guidance on detailed concepts and steps in transforming cybersecurity.

URL: <http://www.isaca.org/COBIT/Pages/COBIT-5-spanish.aspx>

12. COBIT 5 for Information Security (Spanish). January 2014. Product Code: CB5ISS.

A team of ISACA Madrid in which I participated has translated this book. COBIT 5 for Information Security is a major strategic evolution of COBIT 5—the only business framework for the governance and management of enterprise IT. This evolutionary version incorporates the latest thinking in enterprise governance and management techniques, and provides globally accepted principles, practices, analytical tools and models to help increase the trust in, and value from, information systems.

URL: <http://www.isaca.org/COBIT/Pages/COBIT-5-spanish.aspx>

13. COBIT 5 Enabling Processes (Spanish). January 2013. ISACA. ISBN 978-1-60420-285-4.

A team of ISACA Madrid in which I participated has translated this book. The book "COBIT 5: Process Catalysts" complements COBIT 5. This publication contains a detailed reference guide of the processes defined in the process model COBIT. The COBIT 5 framework builds on basic principles, which are covered in detail and include comprehensive guide catalysts for the governance and management of enterprise IT.

URL: <http://www.isaca.org/COBIT/Pages/COBIT-5-spanish.aspx>

14. National Cyber Security, a commitment for everybody. SCSi June 2012.

Information and Communications Technology (ICT) have contributed to the welfare and progress of societies, in such a way that a large part of public and private relations depend on these technologies. Over time and throughout evolution risks have emerged that have made it necessary to manage the ICT security. Initially cyber security was concerned with protecting information reactively, although subsequently it has evolved towards a proactive position, which identifies and manages risks that threaten cyber space. Within the framework of the Spanish Cyber Security Institute and ISMS Forum, a study was carried out which developed an approach to concepts of cyber space and cyber security.

English Book URL: <http://www.ismsforum.es/ficheros/descargas/a-national-cyber-security-strategy-.pdf>

Spanish Book URL: <https://www.ismsforum.es/ficheros/descargas/informe-scsi1348666221.pdf>

15. Development of a notification changes service in a CMDB using generative programming. THESIS DISSERTATION.

National University of Distance Education. School of Engineering. Department of Software Engineering and Computer Systems. February 2011.

Dissertation URL: <http://e-spacio.uned.es/fez/eserv.php?pid=tesisuned:IngInf-Jrcoz&dsID=Documento.pdf>

16. Maturity Model for Privacy of Virtual Social Network. February 2010. José Ramón Coz y Enrique Fojón Chamorro. ISBN: 978-1-4457-2017-3.

This book presents the most important aspects related to the privacy of information of virtual social networks. The work presents a maturity model for valuing virtual social network in this area. the book is aimed at both professionals information technology interested in pursuing this matter, as the users of social networking sites that are concerned about the privacy of your information

Book URL: <http://www.amazon.com/MODELO-MADUREZ-PRIVACIDAD-VIRTUAL-Spanish/dp/1445720175>

17. Auditing Framework for Information Systems. Edited by ISACA MADRID. (2009). ISBN: 978-84-613-4128-3.

One of the tasks traditionally performed ISACA ® has been the publication of materials that would guide systems auditors in carrying out their audit work. Therefore, begun by the same Code of Professional Ethics has developed a whole body of law, which includes Standards, Guidelines and Tools and Techniques. These over fifty documents, original version provided: For the auditors, the minimum quality levels must work together to fulfill their professional responsibility. To the Management and any interested third parties in the audit function, bases for generating appropriate expectations. To all of them, additional information on how to comply and how to interpret the standards of application. In short, a set of materials worth collecting in a reference book that can be used as a reference for those who have some connection with the audit of information systems.

Book URL: http://www.revistasic.com/revista87/otrostitulos_87.htm

18. Electronic Notes in Theoretical Computer Science (ENTCS), Vol. 238. N 2, 06/2009. 25-34.

Book Chapter about Generative programming by Language EFL (Exemplar Flexibilisation Language).

Book URL: <http://portal.acm.org/citation.cfm?id=1555111>

19. Advanced Software and Control for Astronomy II.

Edited by Bridger, Alan; Radziwill, Nicole M. Proceedings of the SPIE, Volume 7019, pp. 70191L-70191L-9. ISBN-10: 0819472298. (2008).

Book Chapter about generative programming used in data acquisition systems in astronomy.

Book URL: <http://adsabs.harvard.edu/abs/2008SPIE.7019E..52L>

JOURNALS, GROUPS AND PUBLICATIONS COLLABORATIONS

■ Editorial Board Member of the following Journals:

- Mediterranean Journal of Basic and Applied Sciences. ISSN: 2581-5059. [URL](#)
- Asian Journal of Basic Science & Research (AJBSR). ISSN: 2582-5267. [URL](#)
- Open Access Journal of Applied Science and Technology (OAJAST). ISSN: 2993-5377 [URL](#)
- Cyber Security: A Peer-Reviewed Journal. ISSN: 2398-5100 (print), 2398-5119 (web) [URL](#)
- Journal of Marketing & Supply Chain Management. ISSN: 2754-6683. [URL](#)
- International Journal of Applied Science and Research (IJASR). ISSN:2581-7876. [URL](#)
- Transactions on Applied Science, Engineering and Technology (TASET). [URL](#)
- Journal of Applied Surface Science (JASS). ISSN: 2993-5326. [URL](#)

■ Reviewer of several Journals as Knowledge Management Research & Practice, British Journal of Economics, Management & Trade, Journal of Global Economics, Management and Business, International Scholars Journals, Journal of Basic and Applied Research international, British Journal of Mathematics & Computer Science, Advances in Research, British Journal of Applied Science & Technology, Asian Journal of Economics, Business and Accounting, Journal of Supercomputing, Asian Journal of Research in Computer Science, Asian Journal of Pure and Applied Mathematics, Asian Journal of Advances in Research or BP International or Journal of Advances in Mathematics and Computer Science.

■ Certificates of Excellence in Reviewing by several Scientific Journals as the Asian Research Journal of Mathematics ([URL](#)), the Journal of Energy Research and Reviews ([URL](#)), the Journal of Research in Computer Science ([URL](#)), BP International ([URL](#)), the Journal of Economics, Management and Trade ([URL](#)), the Asian Journal of Pure and Applied Mathematics, the Journal of Engineering Research and Reports ([URL](#)) or the Journal of Advances in Mathematics and Computer Science ([URL](#)).

■ Researcher since 2016 in the Department of Applied, Public and Political Economics ([URL](#)) of the Complutense University of Madrid ([URL](#)). Summary of the main collaborations carried out to date: <https://produccioncientifica.ucm.es/unidades/1263/colaboracion/investigador/4274749?lang=en>

PATENTS – INTELLECTUAL PROPERTY REGISTRATION

■ Intellectual property registration: **Maturity Model of a Virtual Social Network in terms of Privacy. Comprehensive Scorecard as support to the evaluation of the model.** File number 12/RTPI-009226/2009. Reference: 12/070438.8/09.

■ **EFL. Exemplar Flexibilization Language.** Ruby implementation of the Exemplar Flexibilization Language. It is a language designed for the automatic generation of code published under the GNU license, General Public License (LGPL).

Three versions of this implementation have been published, available as Ruby Gems:

- <https://rubygems.org/gems/EFL/versions/1.0> , del 15th November 2007
- <https://rubygems.org/gems/EFL/versions/1.0.1>, del 18th February 2008
- <https://rubygems.org/gems/EFL/versions/1.0.2>, del 14th April 2009

RESEARCHING AND MORE LINKS RELATED

- ENISE 18 Conference, Organised by INCIBE. León. October 2024. [URL](#)
- Two conferences in the summer course about the Space Science from the Universidad Complutense of Madrid, in El Escorial. July 2024. Summary of the course: [URL](#)
- Conference on the experience of the European Space Agency with audits in the navigation sector. November 2023. Summary of the sessions: [URL](#)
- Seminar about the Economic Weapon and the Space Sector organized by the Complutense University. May 2023. [URL](#)

- Conference on employment in the space sector organized by the European University of the Atlantic. May 2023. [URL](#)
- C-Meet Event About Digitalization and Innovation organized by the CEOE Cantabria. September 2022. [URL](#) [Event](#). [Presentation](#). [Conference](#). [Interview](#).
- Conference in the third edition of the Applied Sciences, Engineering and Technology Webinar (V-Applied2022) on planning complex logistics during the cyber-audits process. February 2022. [URL](#)
- Conference on the problem of logistics in cyber-audits of the space sector at the Event organized by ISACA Madrid in June 2021. [URL](#)
- Article on the IT Government audit in the navigation sector in the ISACA Journal, news and trends in March 2021. [URL](#)
- Conference in the third edition of the Applied Sciences, Engineering and Technology Webinar (V-Applied2021) on planning complex cyber-audits. March 2021. [URL](#)
- Conferences on the lessons learned on audit planning in international environments at the ISACA Iberoamerica 2020 Congress. October 26-30, 2020. [URL](#)
- Conference on the navigation sector and cybersecurity at the Info-Security ISACA North America Expo, Nueva York, USA, 18-20 November 2019. [URL](#)
- Conference on cyber-audits in the navigation sector at the EuroCACS / CSX Conference. Geneva, Switzerland, 16-18 October 2019. [URL](#)
- Spanish Economic Industrial Journal Number 412 (Defence Industry). September 2019. [URL](#)
- XXX Global Congress of Cybersecurity, Information Security and Privacy, SECURMATICA. Conference about cybersecurity in critical environments. *Madrid, April 2019*. [URL](#)
- The role of cybersecurity in communicative management in organizations. INNOVATIA. Feb 28, 2018. [URL](#)
- Conference on the management of economic knowledge in the new economy of Defense. II Conferences about Aerospace and economy of the Spanish Air Force. Madrid. March 2017. [URL](#)
- Conference about the knowledge management model based on an economic output input framework. A case study applied in the Spanish Defense sector. International Military Congress CIdEM 2016. October 2016. [URL](#)
- The NATO cyber-incubator projects and other international initiatives. Ciber- Elcano Journal. September 2016. [URL](#)
- Military Cyberdefence and the Internet of the Things (IoT). Cybersecurity, Info-security and Privacy Journal. September 2015. [URL](#)
- National Cybersecurity, a priority. El español. November 2015. [URL](#)
- I do not know what goes on in my network. Can I protect it properly? Ciber- Elcano Journal. October 2015. [URL](#)
- Military Cyberdefence and the Internet of the Things (IoT). Cybersecurity, Info-security and Privacy Journal. September 2015. [URL](#)
- COBIT-PAM Evaluation Tool. ISACA COBIT Working Group. 10.09.2015. Madrid. [URL](#)
- The Cyber-commands and the Segregation of Duties. Ciber- Elcano Journal. June 2015. [URL](#)
- The ISACs (Information Sharing and Analysis Centers) as basic architectures for Cyberdefence. Cybersecurity, Info-security and Privacy Journal. April 2015. [URL](#)
- Without effective coordination, there is no Cyberdefence. Ciber- Elcano Journal. April 2015. [URL](#)
- Different speeds in the field of Cyber in NATO. THIBER – Elcano. March 2015. [URL](#)
- Cybersecurity profiles on request. INNOVATIA Journal. February 2015. [URL](#)
- STIX: standard for sharing information on Cyberdefence. Cybersecurity, Info-security and Privacy Journal. February 2015. [URL](#)
- Cloud Computing Security State of the Art Analysis 2014. Cloud Security Alliance, Spanish Chapter. (CSA-ES). November 2014. [URL](#). [PDF](#).
- Cyber United Kingdom, a great bet for the Cybersecurity and Cyberdefence! ISMS Forum Spain. January 2015. [URL](#)
- Saudi Arabia, the country's oil and Cyber security! ISMS Forum Spain. October 2014. [URL](#)
- The challenge of sharing information on the Cyberdefence. Cybersecurity, Info-security and Privacy Journal. November 2014. [URL](#). [PAPER](#).
- France, a leadership in Cyberdefence. ISMS Forum Spain. October 2014. [URL](#)
- Multi-agent environments and Cyber-Physical Systems in Cyberdefence. Cybersecurity, Info-security and Privacy Journal. September 2014. [URL](#). [PAPER](#).
- The embassies of data: the protection of state information. THIBER. ARI 36/2014. 16/7/2014. [URL](#). [PAPER](#).
- Controls Matrix for Cloud adapted to the National Security Schema and Privacy Standards. Spanish Cloud Security Alliance. Madrid, June 2014. [URL](#)
- Experts convened by ISMS Forum discussed the current state of national Cybersecurity in Spain. Madrid, October 2013. [URL](#)
- Papers in Spanish, in THIBER Blog (Think Tank about Cybersecurity)
 - Title: Delay of the National Cyber Security Strategy in Spain. Madrid, October 2013. [URL](#)
 - Title: Key ideas about the National Cyber Security Strategy in Spain. Madrid, October 2013. [URL](#)
 - Title: Brief Analysis about the National Cyber Security Strategy in Spain. Madrid, Dec. 2013. [URL](#)
- Cyber cells: a capacity for national cyber security and cyber defense '. Prezi presentation exportable format (self-executable). 2013. [URL](#)
- Models and approaches about Cybersecurity in virtual social networks. Network Security Magazine. Madrid. September 2013. [URL](#)

- Cyber cells: a tool for national cyber security and Cyberdefence. Real Instituto Elcano. September 2013. [URL](#). [PAPER](#).
- Cost Models and Productivity Building Applications Based on the Notification of Changes in Databases. [SUMMARY](#). [PAPER](#).
- A Domain Engineering Approach to Increase Productivity in the Development of a Service for Changes Notification of the Configuration Management Database. Journal of Software Engineering and Applications. April 2013. [SUMMARY](#). [PAPER](#).
- Situational Awareness: Challenges. Cybersecurity, Info-security and Privacy Journal. April 2013. [URL](#). [PAPER](#).
- Situational Awareness. Cybersecurity, Info-security and Privacy Journal. February 2013. [URL](#). [PAPER](#).
- Cybercrime experts call for lawsuits in the I Cyber security Forum. 2013. [URL](#).
- Evaluation of the privacy of a virtual social network. RISTI n° 9, 6-2012. ISSN 1646-9895. [PAPER](#).
- National Cyber Security, a commitment for everybody. SCSJ June 2012. [URL](#).
- The Cyber Security Geostrategic of Knowledge. Network Security Magazine. Madrid. January 2012. [URL](#).
- International Panorama in the establishment of National Cyber Security Strategy. SIC. June 2011. [URL](#).
- Presentation and Paper at the V International Congress ITSM Forum. Madrid, Spain 2010. [URL](#). [Congress](#). [Schema](#).
- Electronic Notes in Theoretical Computer Science, Volume 238, Number 2, June 2009. [URL](#).
- Code Generation with the EFL. Oxford University Course. [URL](#).
- A first-generation software product line for data acquisition systems in astronomy [URL](#).

TEACHING EXPERIENCE

More than fifteen (15) years of teaching experience in various entities, business schools and universities (part-time), including the Complutense University of Madrid (UCM), the ISEN University Center of the University of Murcia, the Superior Center for National Defense Studies (CESEDEN), the Association of Systems Auditors or the International Business School (IIBS), among others. During this period, teaching has been given on Systems Audit, Information Technology Control, Business Continuity and Disaster Recovery, Information Security, IT Service Management, Cryptology, Software Development Methodologies, Economic Impact, Program Management and Projects or preparation for various international certifications such as COBIT, CISA, CISM, CISSP or CGEIT.

SUBJECTS AND COURSES

- ✚ **Teacher of various science and technology subjects.** Preparation for the official title of Professional Education. Valladolid (Spain). Ministry of Defence. August 1996 – December 1996. 100 hours accredited by the Ministry of Education.
- ✚ **Teaching several courses on Databases and Object Oriented Programming:** CORBA, C++, C, Object Store, Oracle. Company Ideal Objects S.A. October 1997 - February 1998. Madrid. 120 hours in total.
- ✚ **Teaching several courses on Object Oriented Analysis and Programming:** UML, C++, Java, .NET, . Grupo FCC. ESPELSA STC Division. Madrid. 120 Horas in total. June 1998 – December 2002.
- ✚ **Teaching several courses in the Ministry of Defence.** Inspección General CIS and Centro Superior de Estudios de Defensa Nacional (CESEDEN). Madrid. September 2003 – September 2005.
 - Courses about Software Quality Processes: CMMI, PECAL, SPICE, ISO 12207. 120 Hours in total.
 - Courses about Data Management in the Defence Sector: databases, data mining, data warehouse, NATO Data Management Policy. 120 Hours in total.
 - Courses about IT Management in the Defence Sector: ITIL, ITSM, ISO20000, TCO, eTOM. 120 Hours total.
 - Course about SOA Architecture and Web Services: XML, UDDI, SOAP, WSDL. 40 Hours in total.

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- ✚ **Professor at the Information Systems Audit and Control Association (ISACA) for the preparation of official certifications**, during the period September 2005 - June 2016. Courses organized by the ISACA Madrid chapter. The courses were given in several centres and companies, in various locations in Madrid.
 - Preparation for the **CISA** Certification (Certified Information Systems Auditor) granted by ISACA: auditing, COBIT, SW development methodologies, ICT project management and ICT service management. Total, about 240 Hours.
 - Preparation for the **CISM** Certification (Certified Information Security Manager) granted by ISACA: business continuity and disaster recovery, information security and cryptology. Total, about 60 hours.
-
- ✚ **Professor at the International Business School (IBBS) and the Innove Institute**, in the centres of León and Madrid, during the period from September 2007 to September 2017. Seminars and subjects during this period: Systems Audit, Government and ICT Control, Business Continuity and Disaster Recovery, Information Security, IT Service Management and Software Methodologies. Total, about 300 Hours.
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- ✚ **Professor at NEMIND, currently part of the BTS group, for the preparation of the official CISSO and CISSP certifications**. Madrid. September 2003 – September 2005.
 - Preparation for **CISSO** Certification: Certified Information Systems Security Officer, granted by the NICCS (National Initiative for Cybersecurity Careers and Studies). Total, about 40 Hours.
 - Preparation for **CISSP** Certification: Certified Information Systems Security Professional, granted by the International Information System Security Certification Consortium (ISC)². Total, about 80 Hours.
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- ✚ **Delivery of a series of Seminars on the economic impact of the space sector** for the Master's Degree in Defense Logistics and Economic Management of the Complutense University of Madrid ([URL](#)), for the Almirante Juan de Borbón Chair ([URL](#)) and for the University Center ISEN of Cartagena ([URL](#)). From June 2021 to the present.
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- ✚ Two conferences on cybersecurity, audits and employment in the space sector during **the summer course "The universe in our hands: the rise of space sciences in Spain"**, organized by the **Complutense University of Madrid**, in El Escorial, Madrid, in July 2024 ([URL](#)).
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- ✚ **Professor at the International University of La Rioja ([UNIR](#))**. From the academic year 2020-2021 to the present, responsible for the Technological Management subject at the Faculty of Engineering and Technology ([ESIT](#)). The course covers systems auditing, risk management and its associated tools, business continuity in accordance with the ISO31K and the ISO22301 standards, the information security management in accordance with the ISO27K series, the CMMI maturity models, the IT Governance according to COBIT and the ICT quality management ([URL](#)).
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- ✚ Member of the Council of the Faculty of Engineering and Technology at the International University of La Rioja for the Master's Degree in Information Technology Management ([URL](#))
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VISITING PROFESSOR PROGRAMS

The Visiting Professors Programme aims to make it easier for the different centers of the Universities to invite researchers residing abroad with relevance in their respective fields of knowledge. There are two stays as a visiting professor at the following universities:

- ✚ **Visiting Professor at the European University of the Atlantic ([URL](#))**. Santander, May 2023. As part of the stay, the professor participated in the fourth session of the employment days organized by the university and a conference was given where students had the opportunity to learn more about the space industry, the cybersecurity and the audits, as well as the job opportunities that are available. News about the event: [URL](#)
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- ✚ **Visiting Professor at the Cantabria University ([URL](#)).** Santander, September 2024. As part of the stay, various scientific seminars were held on the programs of the European Space Agency, the Navigation and Cybersecurity sectors. In addition, a conference was held for the students on employment in the space and cybersecurity sectors. Communication about the visit: [URL](#). News about the event: [URL](#)

UNIVERSITY RADIO PROGRAMS

1. Security and access control based on biometric systems.

Coz, J.R.; Heradio, R.; Estívariz, J. F. Broadcast by RADIO 3 (RNE) 26/03/2008.

Canal UNED: <http://unedradio.blogspot.com/2008/03/la-ingenieria-de-software-y-sistemas.html>

Audio: http://teleuned.uned.es/realaudiocemav/2007_2008/2008_03/20080326_02.wma

This program discussed issues on information security, privacy and access control systems based on biometric type. Some examples of use as an ID card or electronic passports.

2. Cryptology History and Evolution

Coz, J.R.; Heradio, R.; Fdez. Amorós, David. Broadcast by RADIO 3 (RNE) 23/11/2011.

Audio: <http://cozweb.es/radio/cripto1.mp3>

Summary: <http://cozweb.es/radio/cripto1.pdf>

This program introduces the basic concepts of cryptology and related disciplines, the Cryptanalysis, Steganography, and cryptography. In addition, a brief historical overview of the evolution.

3. Cryptology and Cybersecurity.

Coz, J.R.; Heradio, R.; Fdez. Amorós, David. Broadcast by RADIO 3 (RNE) 30/11/2011.

Audio: <http://cozweb.es/radio/cripto2.mp3>

Summary: <http://cozweb.es/radio/cripto2.pdf>


This program introduces some progress on Cryptology and reviews the most relevant issues of national security in cyberspace (Cybersecurity).

MASTER'S DEGREE THESIS TUTOR

From the academic year 2020-2021 to the present, **Master's Degree Thesis Tutor at the Faculty of Engineering and Technology ([ESIT](#)) of the International University of La Rioja ([UNIR](#))** in the following Masters:

- ✚ **Master's Degree in Cybersecurity. [URL](#).** A total of **36 Final Master's Thesis have been tutored to date.**
- *New methodology for the protection of information applied to Android mobile devices.* R.H. Cuví Vargas.
 - *Attacks on the OPENID CONNECT + OAuth2 authentication protocol.* C.A. Quiñonez Murillo
 - *Methodology for the implementation of Secure ERP E-CABILDO software for Municipal Governments.* J.W. Sandoval Paspuel
 - *The level of alignment of financial regulation in Peru according to the NIST Cybersecurity framework.* E.A. Rojas Gonzales.
 - *Development of a guide for the management of Malware in companies.* F. Campà Aubets
 - *Design of a Methodology for the analysis of Inherent and Residual Risks based on the mapping of the CSF NIST framework and the MITRE ATT&CK Matrix.* H.Y. Ortiz Pérez.
 - *Red Team methodology based on computer attacks in companies.* V.M. Ramírez Medina.
 - *Proposal for a new protocol for the implementation and use of TLS 1.3.* H.E. Quiroga González.
 - *Construction of a protocol to support the granting of credits supported by OSINT tools and application to a use case.* L.D. Jiménez Terrazas
 - *Proposal for a Technical Security Audit methodology applicable to entities in the financial sector in Colombia.* J.D. Caro Quiroga.
 - *Creation of a Technical Security Audit Process based on the MITRE ATTACK matrix and NIST CSF.* K.S. Salazar Espinosa.

- *Proposal of methodology for compliance with the MSPI guidelines in the financial sector.* A.M. Guevara Mera.
- *Blockchain in Risk Management, Fraud Detection and Requirements Implementation (KYC) and Framework.* C.J. Sánchez Gómez.
- *Development of an agile method for the implementation of an information security management system in the sector of private small and medium-sized ICT companies.* L. Chávez Pérez.
- *Comprehensive methodology for information security based on ISO 27001, ISO 22301 and ISO 31000 standards for EFR.* R.G. Quecan Fetecua
- *Experimental pilot on Computer Risk Analysis applying Rules of Association and Development of Security Plan in mass consumption companies.* V. Vélez Sarmiento
- *Formulation of a methodology for strengthening the data networks of the DIAN entity.* A.C. Rodríguez Moyano
- *Information portal on cyberattacks and a list of possible solutions.* J.L. Guaca Torres
- *Analysis of vulnerabilities in SMEs through exposure to social engineering and proposal of mitigation measures.* M. Saavedra Ortiz
- *Methodology for the development of security policies in accordance with ISO 27001 standards for customers in cloud environments.* V.K. Rodríguez López
- *Continuous Audit Methodology for an Insurance Company in Peru.* K.V. Salinas Ticona
- *Development of a didactic application of encryption methods.* O. Santos Barnabas
- *Development of an experimental pilot on a Near Field Communication Reader for ENV cards.* J.M. Sierra Ramos
- *Experimental pilot on the data exfiltration capacity of malware.* W.E. Silva Salas.
- *Web Crawler as a Support Tool for the Web Pentest Process.* Y. Saavedra Guerrero
- *To evaluate compliance with the Organic Law on the Protection of Personal Data (LOPD) by applying a blockchain network at the San Juan Hospital in the city of Riobamba.* B.A. Giraldo Baquerizo, M.B. Villacis Rivera and J.J. Delgado Anchundia
- *Development of a cloud file encryption tool.* T. Kamisato Orellana
- *Developing "Insecure" REST Web Services with Express.js: Exploring Vulnerabilities and Solutions.* D.A. Usca Farinango
- *Implementation of a platform for computer incidents and defense procedures.* D.M, Silva Gurrionero, S.A. Sánchez Gutiérrez and M.A. Carreño Vargas
- *Methodology of a basic security management for small businesses in Colombia.* J.D. Rúa Henao, A.F. González Torres and D.F. Salazar Valdion
- *Prototype for DDoS Attack Mitigation in the National AURORA Program.* G.E. Herrera Quispe
- *ISMS implementation methodology based on ISO27001 in IT providers.* L.A. Mendaño and C.A Damaceña Toaza.
- *Research on the methodologies and patterns of botnet attacks.* A. Díaz Artola
- *Social Network Analysis to detect cybercrimes using NLP and SNA techniques.* E. Gutiérrez Pérez.
- *Proposal for the Implementation of the Cloud Architecture for an Efficient Administration of Justice in the Judiciary.* M. J. Quispe Sandoval
- *Security audit of Smarts d.o.o.* F. Ortega Guardia.

 **Master's Degree in Direction and Management of Information Technology (IT).** [URL](#) A total of 18 Final Master's Thesis have been tutored to date.

- *Digital Transformation of the Main Processes of the "Hotel Quindeloma and Art Galery" of Traditional IT Management.* G. Tasiguan Simbaña, T. Landívar Moreno, R. Rivera Toala.
- *Improvement of IT Governance Processes in a Food Products Company.* A.M. Espinosa Guaita.
- *Build a TOGAF architecture based on an ISMS system.* R.A. Argüello Ruiz.
- *IT strategic plan for the TRUSTHAB company based on the PETI methodology.* J.J. Peñaherrera Romero
- *Business Continuity Management System for the pharmaceutical industry.* C.V. Pauta Cuji
- *Guide to Migration of Farmaenlace Servers according to the type of Cloud to a VDC infrastructure.* M.G. Inuca Morales
- *Technological improvement of customer service in the National Electricity Corporation Ecuador (CNEL-EP) in the marketing sector.* L.A. Guzmán Peña and E.L. Quichimbo Bermeo.

- *Implementation of an ISMS under ISO 27001 in a private non-profit foundation.* P.I. Bueno Martín
- *Implementation of a strategic IT plan to digitally transform a Legal Tech.* O.G. Matos Godoy
- *Development of a model to implement an agile methodology in the Directorate of Information Technology Management of the University of Guayaquil.* I. R. Pacheco Guerrero and J.X. Torres Reyes
- *Design of a strategic IT plan (PETI) in a medium-sized hydrocarbons company.* A.C. Claro Osorio
- *Implementation of a data transmission and Internet infrastructure for the Migration Offices.* Dávila Villacorta and K.A. Morales Guerrero
- *Design of an IT security governance based on the ISO 27000 standard.* R.D. Ullrich Estrella
- *Framework for the implementation of ICT in public sector companies.* R. Caballero Tomás
- *Implementation of an Aggregator for online sales in Marketplace.* A. Lopez de Bikuña Alzola
- *Implementation of an IT service management area in a public entity.* F.J. Calatayud Cristóbal
- *Digital transformation in sports entities.* C. E. Baz Hormigos
- *Review and adaptation of the new NIS2 to the audit control framework in support of the navigation sector.* L. H. Rodríguez Pineda.
- *Technology Governance Plan focused on digital transformation for the International Organization for Migration in Ecuador.* J. F. López Dávila, D. A. Cifuentes Arias
- *Plan for the Creation of a SOC (Security Operations Center), for the CONQUITO Economic Promotion Corporation, using Agile Methodologies and PMP Approach.* A. A. Barzallo Bravo, E. A. Granja Herrera

✚ **Master's Degree in Software Engineering.** [URL](#) A total of **5 Final Master's Thesis** have been tutored to date.

- *Development of an application to support an audit control framework to support the ground segment of the navigation sector.* J. M. Frías Salvachua.
- *Development of a Microservices-Based Platform for Water Quality Management and Analysis.* Frank Montalvo Ochoa
- *Development and Implementation of a legal chat based on artificial intelligence and optimization of the user interface in the company Legalti – Ecuador.* R. S. Noroña Echeverria, S. Morales Reinoso.
- *LinkuyConnect: Open-Source Mobile Application for Monitoring Wellbeing in Older Adults.* N. D. Moreira Ledesma.
- *Design and development of a Web application for the management of the academic area of the Emmanuell Educational Corporation.* I. J. Gomez Leguizamon

GRADUATION EXAMINATIONS COMMITTEE







From the academic year 2020-2021 to the present, **member of courts, as President and Secretary, for the assessments of the final master's dissertations** at the Faculty of Engineering and Technology ([ESIT](#)) of the International University of La Rioja ([UNIR](#)), in the Master University in Computer Security.

INNOVATION TEACHING PROJECTS









- ✚ New Higher Education in cyber defense at the international level”. Cybersecurity, Info-security and Privacy Journal. June 2016. [URL](#)
- ✚ ENISE Congress 2011 on the Legal Framework for Critical Infrastructure. Conference on an educational model for a National Strategy for Cyber security. [URL](#)
- ✚ Impact of ICT certifications in finding employment in times of crisis. Leon, April 2011. [URL](#)
- ✚ Development of software product families from a generative. [URL](#)
- ✚ Teaching innovation project consisting of the elaboration of the contents and didactic or teaching materials of the subject entitled Technological Management at the Higher Faculty of Engineering and Technology ([ESIT](#)) of the International University of La Rioja ([UNIR](#)) and adaptation to the 4Ps Model. Carried out in the period September 2022 - June 2023.

ANOTHER INFORMATION

MEMBERSHIPS

-  THIBER (Cybersecurity think tank) member. [URL](#)
 -  Numerary Senior Partner of ATI (Spanish Association of Technicians of Computer science). [URL](#)
 -  Associated to the Society of the Institute of Managers of Company (IDE-CESEM).
 -  ISMS Forum member. [URL](#)
 -  Member of the BPM Club. [URL](#)
 -  ISACA Member. [URL](#)
-

SOCIAL NETWORKS PROFILES

-  Research Gate Profile: https://www.researchgate.net/profile/Jose_Coz
-  LinkedIn Profile: <https://es.linkedin.com/in/jrcoz>
-  ORCID: <https://orcid.org/0000-0002-1622-2252>
-  Publons: <https://www.webofscience.com/wos/author/record/AFT-0646-2022>
-  Academia: <https://ucm.academia.edu/JoseRamonCozFernandez>
-  [Some Conferences: Youtube](#)
-  [Summary Version of the Curriculum](#)
-  [Google Scholar Profile](#)