

## LUIS SÁNCHEZ GONZÁLEZ

### SHORT SUMMARY

I got the Telecommunications Engineer on 2002 and PhD (Suma Cum Laude) from the University of Cantabria on 2009. I have been granted with 2 (six-year) periods of research activity and 2 (five-year) period of teaching activity. Currently, my research is focused on the aspects of network technologies and communications of the Internet of Things (IoT) and its application to Smart Cities. I also work on the integration of these networks in the Semantic Web for the provision of services through the "Web of Things".

My research activity, started in 2000, has been developed mainly in the framework of international research cooperative projects from the 5th, 6th and 7th Framework Program and Horizon 2020 of the European Commission, as well as the Celtic and ITEA programs or the CENIT program at the national level. In this sense, I have collaborated in more than a dozen of projects in the last 5 years. In addition to the research and technological development activities, in the projects in which I have collaborated, I have worked as technical coordinator of the project, leading and coordinating both the daily work of the different work packages, and the technological audits of the projects. In some cases, these projects had a budget of more than 10 million euros. Participation in these projects has led to a fluid exchange of knowledge and experience with European companies, research centers and universities.

As a result of this work, I am co-editor of two chapters in a book by Springer and I have published scientific articles both in journals and international congresses of recognized prestige. In this sense, I should highlight the 15 publications in journals indexed in the Journal Citations Report and the participation in two of the major congresses in the area organized by the Communications Society, the PIMRC in 2010 and the ICC in 2014. In the first one, as a guest speaker at one of the panels of the congress and in the second one presenting a scientific article admitted within the Selected Areas in Communications symposium. I have also been invited to review articles from journals included in the first quartiles of the JCR and international congresses forming part of the organizing and program committee of the latter. Moreover, I have also participated as external expert reviewer for the French National Research Agency (ANR) evaluating research projects for competitive Calls. In the knowledge transfer aspect, I participated in the creation and, during its first years of operation, in the administration of a spin-off company that has among its objectives the transfer to the productive sector the knowledge and technology generated by the research that I develop within the research group to which I belong.

In the teaching component, I have taught during the last twelve academic years at the university in first and second cycle, official undergraduate and graduate degrees and doctoral programs with positive evaluations of my activity every year. I have been Associate Professor since October 2011.

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### EDUCATION

- Ph.D, Communications Engineering at University of Cantabria (Spain), 2009
  - Thesis Topic: Contribution to the Cross-Layer Optimization of Intra-Cluster Communication Mechanisms in Personal Networks

- M.Sc, Telecommunications Engineering at University of Cantabria (Spain), 2002

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**ACADEMIC POSITIONS**      **ASSOCIATE PROFESSOR (OCTOBER 2011 TO PRESENT)**

University of Cantabria  
Network Planning and Mobile Communications Lab

**ASSISTANT LECTURER (OCTOBER 2008 TO OCTOBER 2011)**

University of Cantabria  
Network Planning and Mobile Communications Lab

**RESEARCH FELLOW (FEBRUARY 2002 TO OCTOBER 2008)**

University of Cantabria  
Network Planning and Mobile Communications Lab

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**RESEARCH ACTIVITY:**      **POP-MACHINA: COLLABORATIVE PRODUCTION FOR THE CIRCULAR ECONOMY; A PROJECT EXPERIENCE (COMPETITIVE CALLS) (LAST 5 YEARS)**      **POP-MACHINA: COLLABORATIVE PRODUCTION FOR THE CIRCULAR ECONOMY; A COMMUNITY APPROACH**

H2020 EUROPEAN COMMISSION

FUNDING (€): 370.000,00

PROJECT COORDINATOR: KU LEUVEN (Dr. Kris Bachus)

ROLE: PRINCIPAL INVESTIGATOR

**FIERCE: FUTURE INTERNET ENABLED RESILIENT CITIES**

SPANISH RESEARCH AGENCY

FUNDING (€): 78.600,00

PROJECT COORDINATOR: UNIVERSITY OF CANTABRIA (Dr, Luis Sánchez)

ROLE: PROJECT COORDINATOR, PRINCIPAL INVESTIGATOR

**BIGSANTANDER: SMART SANTANDER BIG IOT INTEGRATION**

H2020 EUROPEAN COMMISSION

FUNDING (€): 58.600,00

PROJECT COORDINATOR: UNIVERSITY OF CANTABRIA (Dr, Luis Sánchez)

ROLE: PROJECT COORDINATOR, PRINCIPAL INVESTIGATOR

**SELSINCAN, SISTEMA EVOLUTIVO DE LOCALIZACION Y CONDUCCION SIN CONEXION A CAN BUS**

SPANISH RESEARCH AGENCY

FUNDING (€): 181.449,00

PROJECT COORDINATOR: FAGOR ELECTRÓNICA S.COOP.

ROLE: PROJECT PARTICIPANT

**CEF EID-FIWARE**

H2020 EUROPEAN COMMISSION

FUNDING (€): 72.706,50

PROJECT COORDINATOR:

ROLE: PROJECT PARTICIPANT

**DELIVERING AN IOT ENABLED DIGITAL SINGLE MARKET FOR EUROPE AND BEYOND  
(SYNCHRONICITY)**

H2020 EUROPEAN COMMISSION

FUNDING (€):483.875,00

PROJECT COORDINATOR: AARHUS UNIVERSITY (Dr. Martin Brynskov)

ROLE: PROJECT PARTICIPANT

**FED4FIREPLUS: FEDERATION FOR FIRE PLUS**

H2020 EUROPEAN COMMISSION

FUNDING (€):50.000,00

PROJECT COORDINATOR: IMEC (Prof. dr. Ir. Peter Van Daele)

ROLE: PROJECT PARTICIPANT

**WORLDWIDE INTEROPERABILITY FOR SEMANTICS IOT (WISE-IOT)**

H2020 EUROPEAN COMMISSION

FUNDING (€):178.125,00

PROJECT COORDINATOR: EASY GLOBAL MARKET (Dr. Frank Le Gall)

ROLE: PROJECT PARTICIPANT

**APROVISIONAMIENTO DINAMICO DE CONECTIVIDAD EN ESCENARIOS INALAMBRICOS 5G DE  
ALTA DENSIDAD**

SPANISH RESEARCH AGENCY

FUNDING (€): 93.170,00

PROJECT COORDINATOR: UNIVERSITY OF CANTABRIA (Dr. Ramón Agüero)

ROLE: PROJECT PARTICIPANT

**PLATAFORMA LOGISTICA AVANZADA PARA EL NUEVO ESCENARIO DE TRANSPORTE ASISTIDO  
(PLANETA)**

SPANISH RESEARCH AGENCY

FUNDING (€):149.034,00

PROJECT COORDINATOR: FAGOR ELECTRÓNICA S.COOP.

ROLE: PROJECT PARTICIPANT

**CO- CREATING SMART CITIES OF THE FUTURE (ORGANICITY)**

H2020 EUROPEAN COMMISSION

FUNDING (€): 568.125,00

PROJECT COORDINATOR: AARHUS UNIVERSITY (Dr. Martin Brynskov)

ROLE: PROJECT PARTICIPANT

**FEDERATED INTEROPERABLE SEMANTIC IOT/CLOUD TESTBEDS AND APPLICATIONS (FIESTA)**

H2020 EUROPEAN COMMISSION

FUNDING (€): 387.630,98

PROJECT COORDINATOR: NATIONAL UNIVERSITY OF IRELAND (Dr, Martin Serrano)

ROLE: PROJECT TECHNICAL MANAGER, WORKPACKAGE LEADER, COORDINATOR OF UNIVERSITY OF CANTABRIA ACTIVITIES

**FEDERATED INTEROPERABLE SMART ICT SERVICES DEVELOPMENT AND TESTING PLATFORMS (FESTIVAL)**

H2020 EUROPEAN COMMISSION

FUNDING (€): 235.500,00

PROJECT COORDINATOR: CEA-LETI (Dr. Levent Gurgen)

ROLE: COORDINATOR OF UNIVERSITY OF CANTABRIA ACTIVITIES

**SOCIOTAL**

7<sup>TH</sup> FRAMEWORK PROGRAMME EUROPEAN COMMISSION

FUNDING (€): 300.660,00

PROJECT COORDINATOR: UNIVERSITY OF SURREY (Dr. Klaus Moessner)

ROLE: COORDINATOR OF UNIVERSITY OF CANTABRIA ACTIVITIES

**FI-WARE: FUTURE INTERNET CORE PLATFORM**

7<sup>TH</sup> FRAMEWORK PROGRAMME EUROPEAN COMMISSION

FUNDING (€): 116.143,00

PROJECT COORDINATOR: TELEFONICA (Mr. José Jiménez)

ROLE: PROJECT PARTICIPANT

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RESEARCH ACTIVITY:  
PUBLICATIONS IN  
JOURNALS (LAST 5  
YEARS)

**A SEMANTIC-ENABLED PLATFORM FOR REALIZING AN INTEROPERABLE WEB OF THINGS**  
JORGE LANZA, LUIS SANCHEZ, DAVID GOMEZ, JUAN RAMON SANTANA, PABLO SOTRES  
SENSORS, 19(4), 869; DOI: [HTTPS://DOI.ORG/10.3390/S19040869](https://doi.org/10.3390/S19040869)

**TOWARDS UNDERSTANDING CROWD MOBILITY IN SMART CITIES THROUGH INTERNET OF THINGS**

GÜRKAN SOLMAZ, FANG-JING WU, FLAVIO CIRILLO, ERNÖ KOVACS, JUAN RAMÓN SANTANA, LUIS SÁNCHEZ, PABLO SOTRES, AND LUIS MUÑOZ

IEEE COMMUNICATIONS MAGAZINE, VOL. 57(4), APRIL 2019. DOI: 10.1109/MCOM.2019.1800611

**BREAKING VENDORS AND CITY LOCKS THROUGH SEMANTIC-ENABLED GLOBAL INTEROPERABLE INTERNET-OF-THINGS SYSTEM: A SMART PARKING CASE**

PABLO SOTRES, JORGE LANZA, LUIS SANCHEZ, JUAN RAMÓN SANTANA, CARMEN LÓPEZ, LUIS MUÑOZ

SENSORS 2019, 19(2), 229; DOI:10.3390/S19020229

**FEDERATION OF INTERNET OF THINGS TESTBEDS FOR THE REALIZATION OF A SEMANTICALLY-ENABLED MULTI-DOMAIN DATA MARKETPLACE**

LUIS SANCHEZ, JORGE LANZA, RACHIT AGARWAL, PIERRE GUILLAUME RAVERDY, TAREK ELSALEH, YASMIN FATHY, SEUNGYEONG JEONG, ARIS DADOUKIS, THANASIS KORAKIS, STRATOS KERANIDIS, PHILIP O'BRIEN, JERRY HORGAN, ANTONIO SACCHETTI, GIUSEPPE MASTANDREA, ALEXANDROS FRAGKIADAKIS, PAVLOS CHARALAMPIDIS, NICOLAS SEYDOUX, CHRISTELLE ECREPONT, MENGXUAN ZHAO

SENSORS 2018, VOL. 18 (10), PP. 3375, OCTOBER 2018. DOI:10.3390/S18103375

**EXPERIMENTATION AS A SERVICE OVER SEMANTICALLY INTEROPERABLE INTERNET OF THINGS TESTBEDS**

LANZA, J.; SÁNCHEZ, L.; SANTANA, J. R.; AGARWAL, R.; KEFALAKIS, N.; GRACE, P.; ELSALEH, T.; ZHAO, M.; TRAGOS, E.; NGUYEN, H.; CIRILLO, F.; STEINKE, R.; SOLDATOS, J.

IEEE ACCESS 2018, VOL: 6, ISSUE: 1, PP. 1-19 DOI:10.1109/ACCESS.2018.2867452

**ON THE USE OF INFORMATION AND INFRASTRUCTURE TECHNOLOGIES FOR THE SMART CITY RESEARCH IN EUROPE: A SURVEY**

J. R. SANTANA, M. MAGGIO, R. DI BERNARDO, P. SOTRES, L. SÁNCHEZ, AND L. MUÑOZ

IEICE TRANS. COMMUN., VOL. E101.B, NO. 1, PP. 2-15, JAN. 2018.

**PRACTICAL LESSONS FROM THE DEPLOYMENT AND MANAGEMENT OF A SMART CITY INTERNET-OF-THINGS INFRASTRUCTURE: THE SMARTSANTANDER TESTBED CASE**

PABLO SOTRES, JUAN RAMÓN SANTANA, LUIS SÁNCHEZ, JORGE LANZA AND LUIS MUÑOZ

IEEE ACCESS, VOL. 5, pp. 14309-14322

**DESIGN AND IMPLEMENTATION OF A CLOUD-BASED PLATFORM FOR UNLEASHING THE PERSONAL AND COMMUNAL INTERNET OF THINGS**

IGNACIO ELICEGUI, CARMEN LÓPEZ, LUIS SÁNCHEZ, JORGE LANZA, LUIS MUÑOZ, ANTONIO PINTUS, ANDREA MANCHINU, AND ALBERTO SERRA

MOBILE INFORMATION SYSTEMS 2017

**SMART CITY SERVICES OVER A FUTURE INTERNET PLATFORM BASED ON INTERNET OF THINGS AND CLOUD: THE SMART PARKING CASE**

JORGE LANZA, LUIS SÁNCHEZ, VERÓNICA GUTIÉRREZ, JOSÉ ANTONIO GALACHE, JUAN RAMÓN SANTANA. PABLO SOTRES, LUIS MUÑOZ

ENERGIES 9, pp. 719, 2016

**A PROOF-OF-CONCEPT FOR SEMANTICALLY INTEROPERABLE FEDERATION OF IOT EXPERIMENTATION FACILITIES**

JORGE LANZA, LUIS SANCHEZ, DAVID GOMEZ , TAREK ELSALEH , RONALD STEINKE , FLAVIO CIRILLO

SENSORS 16 (7), pp. 1006, 2016

**MANAGING LARGE AMOUNTS OF DATA GENERATED BY A SMART CITY INTERNET OF THINGS DEPLOYMENT**

JORGE LANZA, PABLO SOTRES, LUIS SÁNCHEZ, JOSÉ ANTONIO GALACHE, JUAN RAMÓN SANTANA. VERÓNICA GUTIÉRREZ, LUIS MUÑOZ

INTERNATIONAL JOURNAL ON SEMANTIC WEB AND INFORMATION SYSTEMS 12 (4), pp. 22-42, 2016

**LARGE-SCALE MOBILE SENSING ENABLED INTERNET-OF-THINGS TESTBED FOR SMART CITY SERVICES**

JORGE LANZA, LUIS SÁNCHEZ, LUIS MUÑOZ. JOSÉ ANTONIO GALACHE, PABLO SOTRES, JUAN RAMÓN SANTANA, VERÓNICA GUTIÉRREZ

INTERNATIONAL JOURNAL OF DISTRIBUTED SENSOR NETWORKS 11 (8), pp. 157, 2015

**SMARTSANTANDER: IOT EXPERIMENTATION OVER A SMART CITY TESTBED**

LUIS SÁNCHEZ, LUIS MUÑOZ, JOSE ANTONIO GALACHE, PABLO SOTRES, JUAN RAMON SANTANA, VERONICA GUTIERREZ, RAJIV RAMDHANY, ALEX GLUHACK, SRDJAN KRKO, EVANGELOS THEODORIDIS, DENNIS PFISTERER

COMPUTER NETWORKS 61, pp. 217-238, 2014

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RESEARCH ACTIVITY:  
PUBLICATIONS IN  
CONFERENCES AND  
WORKSHOPS (LAST 5  
YEARS)

**SMART CITY SERVICES OVER A GLOBAL INTEROPERABLE INTERNET-OF-THINGS SYSTEM: THE SMART PARKING CASE**

PABLO SOTRES, CARMEN LÓPEZ, LUIS SÁNCHEZ, SEUNGMYEONG JEONG, JAEHO KIM  
2nd IEEE Global Internet of Things Summit, Bilbao, Spain, June 2018.

**A REFERENCE ARCHITECTURE FOR FEDERATING IOT INFRASTRUCTURES SUPPORTING SEMANTIC INTEROPERABILITY**

FRANCOIS CARREZ, DAVID GOMEZ, LUIS SANCHEZ, TAREK ELSALEH, JORGE LANZA, PAUL GRACE

European Conference on Networks and Communications, Oulu, Finland, June 12-15, 2017.

**SOCIOTAL-THE DEVELOPMENT AND ARCHITECTURE OF A SOCIAL IOT FRAMEWORK**

JORGE BERNAL BERNABE, IGNACIO ELICEGUI, ETIENNE GANDRILLE, NENAD GLIGORIC, ALEX GLUHAK, CHRISTINE HENNEBERT, JOSE L. HERNANDEZ-RAMOS, CARMEN LÓPEZ, ANDREA MANCHINU, KLAUS MÖESSNER, MICHELE NATI, COLIN O'REILLY, NIKLAS PALAGHIAS, ANTONIO PINTUS, LUIS SÁNCHEZ, ALBERTO SERRA, ROB VAN KRANENBURG

Global IoT Summit 2017, 6-9 June 2017, Geneva, Switzerland

**SMARTSANTANDER, SMART CITY SERVICES**

LUIS SANCHEZ (INVITED TALK)

Workshop on IoT Infrastructures and Data Analytics for Smart Cities, 7<sup>th</sup> March 2017. Paris. France

**UNIFIED IOT ONTOLOGY TO ENABLE INTEROPERABILITY AND FEDERATION OF TESTBEDS**

RACHIT AGARWAL, DAVID GÓMEZ, TAREK ELSALEH, AMELIE GYRARD, JORGE LANZA, LUIS SANCHEZ, NIKOLAOS GEORGANTAS, VALERIE ISSARNY,

IEEE 3rd World Forum on Internet of Things (WF-IoT) (WF-IoT 2016), pp. 70-75, 12-14 December 2016, Reston, USA

**SMART CITY SERVICES FOR CITIZEN-CENTRIC INTERNET OF THINGS**

NENAD GLIGORIC, SRDJAN KRKO, DEJAN DRAJIC, IGNACIO ELICEGUI, CARMEN LÓPEZ, LUIS SÁNCHEZ, MICHELE NATI, JORGE BERNAL BERNABÉ, JOSÉ L. HERNÁNDEZ-RAMOS, DAVIDE CARBONI, ALBERTO SERRA

5th International Conference on Information Society and Technology, pp. 399-404

**CO-CREATION AS THE KEY TO A PUBLIC, THRIVING, INCLUSIVE AND MEANINGFUL EU IOT**

ROB VAN KRANENBURG, NATHALIE STEMBERT, M. VICTORIA MORENO, ANTONIO F.SKARMETA, CARMEN LOPEZ, IGNACIO ELICEGUI, AND LUIS SANCHEZ

8th International Conference on Ubiquitous Computing & Ambient Intelligence (UCAmI 2014), Belfast, Ireland, 2-5 December 2014

**SOCIOTAL: CREATING A CITIZEN-CENTRIC INTERNET OF THINGS**

NENAD GLIGORIC, SRDJAN KRKO, IGNACIO ELICEGUI, CARMEN LÓPEZ, LUIS SÁNCHEZ, MICHELE NATI, ROB VAN KRANENBURG, M. VICTORIA MORENO, DAVIDE CARBONI

4th International Conference on Information Society and Technology, Kopaonik, Serbia, March 9-13, 2014

**SMARTSANTANDER: EXPERIMENTING ON A FUTURE INTERNET ENABLED SMART CITY**

LUIS SANCHEZ

Sensors, Energy harvesting, wireless Networks, & Smart Objects Conference (SENSO 2014), Aix-en-Provence, France, 22-24 October 2014.

**ON THE ENERGY SAVINGS ACHIEVED THROUGH AN INTERNET OF THINGS ENABLED SMART CITY TRIAL**

LUIS SANCHEZ, IGNACIO ELICEGUI, JAVIER CUESTA, LUIS MUÑOZ

IEEE International Conference on Communications (ICC), Australia, 2014

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TEACHING ACTIVITY

**MAIN LECTURER AT B.SC. COURSES**

Protocols and Networks  
Non-conventional Networks  
Security in Communication Networks

**MAIN LECTURER AT M.SC. COURSES**

Next Generation Networks (Protocols and Services)  
Protocols and Networks

**STUDENT ADVISING**

**Pablo Sotres**

PhD on Information Technologies and Mobile Communications, University of Cantabria.

*Implementation of a Platform for the Provision of Smart City Services based on the Internet of Things.*

Expected 2020.

**Juan Ramón Santana**

PhD on Information Technologies and Mobile Communications, University of Cantabria.

*A Contribution in Future Smart Cities: Services and Experimentation to Foster Novel Solutions for the City of Tomorrow.*

Expected 2020.

**Felipe Holgado**

PhD on Information Technologies and Mobile Communications, University of Cantabria.

*Circular Economy and Information and Communications Technologies to Foster the Smart City Paradigm.*

Expected 2023.

**B.Sc and M. Sc. Thesis supervision**

More than 10 B.Sc and M.Sc Thesis supervised

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LANGUAGES

**ENGLISH**

Fluent Reading, Writing and Speaking  
Cambridge Advanced Certificate (C1)

**SPANISH (MOTHER LANGUAGE)**

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OTHER

**CO-FOUNDER OF SPIN-OFF COMPANY**

Tecnologías, Servicios Telemáticos y Sistemas S.A (<http://www.tst-sistemas.es/>). 2007.



**EXTERNAL PROJECT REVIEWER FOR THE FRENCH NATIONAL RESEARCH AGENCY (ANR) AND CHIST-ERA ERA-NET ([HTTP://WWW.CHISTERA.EU/](http://www.chistera.eu/)).**

**EXTERNAL PROJECT REVIEWER FOR THE H2020 RESEARCH PROJECT WISHFUL OPEN CALLS**

**EXTERNAL PROJECT REVIEWER FOR THE ICOIN PROGRAM FROM IMINDS (BELGIUM)**

**REFEREE SERVICES:**

- IEEE Transactions On Industrial Electronics (Ed. IEEE)
- IEEE Internet Of Things Journal (Ed. IEEE)
- ACM Computing Surveys (Ed. ACM)
- IEEE Transactions On Wireless Communications (Ed. IEEE)
- IEEE Wireless Communications Magazine (Ed. IEEE)
- IEEE Transactions On Systems, Man, And Cybernetics: Systems (Ed. IEEE)
- Future Generation Computer Systems (Ed. Elsevier)
- IEEE Systems Journal (Ed. IEEE)
- Transportation Research Part C: Emerging Technologies (Ed. Elsevier)
- IEEE Transactions On Mobile Computing (Ed. IEEE)
- IEEE Access (Ed. IEEE)
- Ad Hoc Networks (Ed. Elsevier)
- Computer Networks (Ed. Elsevier)
- Computer Communications (Ed. Elsevier)
- Sustainable Cities And Society (Ed. Elsevier)
- Energies (Ed. MDPI)
- Mobile Networks And Applications (Ed. Springer)
- Sensors (Ed. MDPI)
- IEEE Communications Letters (Ed. IEEE)
- Telecommunication Systems (Ed. Springer)
- Sustainability (Ed. MDPI)
- Software: Practice And Experience (Ed. Willey)
- Electronics Letters (Ed. EIT)
- Journal Of Sensor And Actuator Networks (Ed. MDPI)
- Challenges (Ed. MDPI)
- ACM Transactions On Cyber-Physical Systems (Ed. ACM)

**TECHNICAL COMMITTEE MEMBER FOR INTERNATIONAL CONFERENCES:**

- PIMRC
- WPMC
- CCNC
- WCNC
- Future Networks and Mobile Summit
- Chinacom
- MONAMI
- etc.

