



Diego Seco Naveiras

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General quality indicators of scientific research

This section describes briefly the main quality indicators of scientific production (periods of research activity, experience in supervising doctoral theses, total citations, articles in journals of the first quartile, H index...). It also includes other important aspects or peculiarities.

Total citations: 390 h-index: 12 (source: Google Scholar)

**Diego Seco Naveiras**

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Current professional situation

Employing entity: Universidad de Concepción **Type of entity:** University
Department: Departamento de Ingeniería Informática y Ciencias de la Computación, Facultad de Ingeniería
Professional category: Associate Professor
Start date: 01/01/2016
Type of contract: Permanent employment **Dedication regime:** Full time contract
Primary (UNESCO code): 120308 - Codes and coding systems; 120312 - Data banks; 120317 - Informatics; 120318 - Information systems; design and componente

Previous positions and activities

	Employing entity	Professional category	Start date
1	Universidad de Concepción	Assitant Professor	01/03/2013
2	Universidad de La Coruña	Contratado postdoctoral Ángeles Alvariño - Xunta de Galicia	18/01/2010
3	Universidad de La Coruña	Contratado predoctoral María Barbeito - Xunta de Galicia	01/01/2009
4	Universidad de La Coruña	Contratado con cargo a proyecto	01/10/2008
5	Universidad de La Coruña	Becario tercer ciclo Xunta de Galicia	01/10/2006
6	Enxenio S.L.	Analista Programador	06/03/2006



- 1** **Employing entity:** Universidad de Concepción **Type of entity:** University
Department: Departamento de Ingeniería Informática y Ciencias de la Computación, Facultad de Ingeniería
Professional category: Assitant Professor
Start-End date: 01/03/2013 - 31/12/2015
Type of contract: Permanent employment contract
Field of management activity: University
- 2** **Employing entity:** Universidad de La Coruña **Type of entity:** University
Professional category: Contratado postdoctoral Ángeles Alvariño - Xunta de Galicia
Start-End date: 18/01/2010 - 26/12/2012 **Duration:** 35 months - 10 days
- 3** **Employing entity:** Universidad de La Coruña **Type of entity:** University
Professional category: Contratado predoctoral María Barbeito - Xunta de Galicia
Start-End date: 01/01/2009 - 17/01/2010
- 4** **Employing entity:** Universidad de La Coruña **Type of entity:** University
Professional category: Contratado con cargo a proyecto
Start-End date: 01/10/2008 - 31/12/2008 **Duration:** 3 months
- 5** **Employing entity:** Universidad de La Coruña **Type of entity:** University
Professional category: Becario tercer ciclo Xunta de Galicia
Start-End date: 01/10/2006 - 30/09/2008 **Duration:** 2 years
- 6** **Employing entity:** Enxenio S.L.
Professional category: Analista Programador
Start-End date: 06/03/2006 - 31/10/2006 **Duration:** 7 months - 26 days



Education

University education

1st and 2nd cycle studies and pre-Bologna degrees

University degree: Higher degree

Name of qualification: Ingeniero en Informática

Degree awarding entity: Universidad de La Coruña **Type of entity:** University

Date of qualification: 10/02/2006

Doctorates

Doctorate programme: Doctor en Computación

Degree awarding entity: Universidad de La Coruña **Type of entity:** University

Date of degree: 28/09/2009

Attended advanced, improvement and innovative teacher training and new technology courses and seminars focused on improving teaching

- Title of course/seminar:** Curso 3.1: Diseño de Programas de Asignaturas
Goals of the course/seminar: Design of syllabus based on SCTs and new learning methodologies
Organising entity: Universidad de Concepción **Type of entity:** University
Faculty, institute or centre: Dirección de Docencia
Duration in hours: 27 hours
Start-End date: 19/05/2014 - 13/06/2014
- Title of course/seminar:** Teaching Development Seminar Series
Goals of the course/seminar: Active learning activities
Organising entity: Centre for Teaching Excellence - University of Waterloo
Duration in hours: 10 hours
End date: 2012
- Title of course/seminar:** Innovación e transferencia de tecnoloxía
Organising entity: Centro Universitario de Formación e Innovación Educativa - Universidade da Coruña **Type of entity:** University Centres and Structures and Associated Bodies
Duration in hours: 12 hours
Start date: 2012
- Title of course/seminar:** Métodos de Investigación Cualitativos: Atlas.ti (nivel inicial)
Organising entity: Centro Universitario de Formación e Innovación Educativa - Universidade da Coruña **Type of entity:** University Centres and Structures and Associated Bodies
Duration in hours: 12 hours
Start date: 2012

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
English	C2	C2	C2	C2	C2
Gallegan	C2	C2	C2	C2	C2
Spanish	C2	C2	C2	C2	C2

Teaching experience

General teaching experience

- 1** **Name of the course:** Tecnologías de la información e innovación geográfica
University degree: Magíster en Análisis Geográfico
Frequency of the activity: 2
Start date: 2019 **End date:** 2020
End date: 2020 **Type of hours/ ECTS credits:** Hours
Hours/ECTS credits: 15
Entity: Universidad de Concepción **Type of entity:** University
Faculty, institute or centre: Facultad de Arquitectura Urbanismo y Geografía
- 2** **Name of the course:** Estructuras de Datos
University degree: Ingeniero en Informática
Frequency of the activity: 5
Start date: 2016 **End date:** 2020
End date: 2020 **Type of hours/ ECTS credits:** Hours
Hours/ECTS credits: 85
Entity: Universidad de Concepción **Type of entity:** University
Faculty, institute or centre: Departamento de Ingeniería Informática y Ciencias de la Computación
- 3** **Name of the course:** Bases de datos espaciales y sistemas de información geográfica
University degree: Doctorado y Magíster en Ciencias de la Computación
Frequency of the activity: 2
Start date: 2017 **End date:** 2019
End date: 2019 **Type of hours/ ECTS credits:** Hours
Hours/ECTS credits: 34
Entity: Universidad de Concepción **Type of entity:** University
Faculty, institute or centre: Departamento de Ingeniería Informática y Ciencias de la Computación
- 4** **Name of the course:** Fundamentos de Estructuras de Datos y Algoritmos
University degree: Doctorado en Ciencias de la Computación
Frequency of the activity: 4
Start date: 2016 **End date:** 2019
End date: 2019 **Type of hours/ ECTS credits:** Hours
Hours/ECTS credits: 51
Entity: Universidad de Concepción **Type of entity:** University
Faculty, institute or centre: Departamento de Ingeniería Informática y Ciencias de la Computación



- 5** **Name of the course:** Taller de programación competitiva
University degree: Ingeniero en Informática
Frequency of the activity: 9
Start date: 2014 **End date:** 2019
End date: 2019 **Type of hours/ ECTS credits:** Hours
Hours/ECTS credits: 51
Entity: Universidad de Concepción **Type of entity:** University
Faculty, institute or centre: Departamento de Ingeniería Informática y Ciencias de la Computación
- 6** **Name of the course:** Estructuras de Datos y Algoritmos Avanzados
University degree: Doctorado y Magister en Ciencias de la Computación
Frequency of the activity: 7
Start date: 2013 **End date:** 2019
End date: 2019 **Type of hours/ ECTS credits:** Hours
Hours/ECTS credits: 85
Entity: Universidad de Concepción **Type of entity:** University
Faculty, institute or centre: Departamento de Ingeniería Informática y Ciencias de la Computación
- 7** **Name of the course:** Taller de análisis de datos en proyectos de ingeniería
University degree: Ingeniero en Informática
Start date: 2016 **End date:** 2016
End date: 2016 **Type of hours/ ECTS credits:** Hours
Hours/ECTS credits: 34
Entity: Universidad de Concepción **Type of entity:** University
Faculty, institute or centre: Departamento de Ingeniería Informática y Ciencias de la Computación
- 8** **Name of the course:** Programación II
University degree: Ingeniero en Informática
Frequency of the activity: 4
Start date: 2013 **End date:** 2015
End date: 2015 **Type of hours/ ECTS credits:** Hours
Hours/ECTS credits: 85
Entity: Universidad de Concepción **Type of entity:** University
Faculty, institute or centre: Departamento de Ingeniería Informática y Ciencias de la Computación
- 9** **Name of the course:** Desarrollo de aplicaciones empresariales
University degree: Ingeniero en Informática
Start date: 2014 **End date:** 2014
End date: 2014 **Type of hours/ ECTS credits:** Hours
Hours/ECTS credits: 68
Entity: Universidad de Concepción **Type of entity:** University
Faculty, institute or centre: Departamento de Ingeniería Informática y Ciencias de la Computación
- 10** **Name of the course:** Taller de proyectos internacionales
University degree: Ingeniero en Informática
Start date: 2013 **End date:** 2013
End date: 2013 **Type of hours/ ECTS credits:** Hours
Hours/ECTS credits: 34
Entity: Universidad de Concepción **Type of entity:** University
Faculty, institute or centre: Departamento de Ingeniería Informática y Ciencias de la Computación



- 11** **Name of the course:** Bases de datos documentales
University degree: Ingeniero en Informática
Start date: 2010
End date: 2013
Hours/ECTS credits: 51
Entity: Universidad de La Coruña
Faculty, institute or centre: Facultad de Informática
- End date:** 2013
Type of hours/ ECTS credits: Hours
Type of entity: University
- 12** **Name of the course:** Informática básica
University degree: Ingeniero en Informática
Start date: 2010
End date: 2013
Hours/ECTS credits: 80
Entity: Universidad de La Coruña
Faculty, institute or centre: Facultad de Informática
- End date:** 2013
Type of hours/ ECTS credits: Hours
Type of entity: University
- 13** **Name of the course:** Bases de datos I
University degree: Ingeniero en Informática
Start date: 2009
End date: 2012
Hours/ECTS credits: 59
Entity: Universidad de La Coruña
Faculty, institute or centre: Facultad de Informática
- End date:** 2012
Type of hours/ ECTS credits: Hours
Type of entity: University
- 14** **Name of the course:** Diseño de recursos informativos en el entorno web
University degree: Ingeniero en Informática
Start date: 2009
End date: 2012
Hours/ECTS credits: 80
Entity: Universidad de La Coruña
Faculty, institute or centre: Facultad de Informática
- End date:** 2012
Type of hours/ ECTS credits: Hours
Type of entity: University
- 15** **Name of the course:** Bases de datos II
University degree: Ingeniero en Informática
Start date: 2009
End date: 2010
Hours/ECTS credits: 10
Entity: Universidad de La Coruña
Faculty, institute or centre: Facultad de Informática
- End date:** 2010
Type of hours/ ECTS credits: Hours
Type of entity: University
- 16** **Name of the course:** Informática aplicada a la empresa
University degree: Ingeniero en Informática
Start date: 2008
End date: 2010
Hours/ECTS credits: 90
Entity: Universidad de La Coruña
Faculty, institute or centre: Facultad de Informática
- End date:** 2010
Type of hours/ ECTS credits: Hours
Type of entity: University



- 17** **Name of the course:** Sistemas de Información Geográfica
University degree: Máster en Computación
End date: 2012 **Type of hours/ ECTS credits:** Hours
Hours/ECTS credits: 10
Entity: Universidad de La Coruña **Type of entity:** University
Faculty, institute or centre: Facultad de Informática

Experience supervising doctoral thesis and/or final year projects

- 1** **Project title:** Análisis espacio-temporal de zonas de producción sucia en Chile
Type of project: End of course project
Entity: Universidad de Concepción **Type of entity:** University
Student: Vicente Varas Pavez
Date of reading: 31/01/2020
- 2** **Project title:** Algorithms for the median string problem
Type of project: Doctoral thesis
Entity: Universidad de Concepción **Type of entity:** University
Student: Pedro Aniel Sánchez Mirabal
Date of reading: 19/12/2019
- 3** **Project title:** Optimización en la creación de rectángulos de cobertura mínima en índices espaciales
Type of project: Master
Entity: Universidad de Concepción **Type of entity:** University
Student: Carlos Sebastián Sepúlveda Morales
Date of reading: 07/06/2019
- 4** **Project title:** Desarrollo de un Servicio de Nomenclátor en Web
Type of project: End of course project
Entity: Universidad de Concepción **Type of entity:** University
Student: Eduardo Barrios Garrido
Date of reading: 11/04/2019
- 5** **Project title:** Desarrollo de una aplicación móvil para la mejora del sistema de colectivos de Concepción
Type of project: End of course project
Entity: Universidad de Concepción **Type of entity:** University
Student: Francisco Javier Geister Altamirano
Date of reading: 27/12/2018
- 6** **Project title:** Representación compacta para series de tiempo de rásters
Type of project: Master
Entity: Universidad de Concepción **Type of entity:** University
Student: Nataly Scarleth Cruces Saavedra
Date of reading: 07/12/2018
- 7** **Project title:** Estructura de datos eficiente en espacio para manejo de trayectorias sobre redes
Type of project: Master
Entity: Universidad de Concepción **Type of entity:** University
Student: Rodrigo Alejandro Rivera Fierro
Date of reading: 27/06/2018



- 8** **Project title:** Implementación de sistema de información geográfica y visores de mapas web para el proyecto Gesitran Biobío empleando plataforma ArcGIS
Type of project: End of course project
Entity: Universidad de Concepción **Type of entity:** University
Student: Jhonny Alexis Gutiérrez Astete
Date of reading: 25/04/2018
- 9** **Project title:** Dinámicas del ciclo celular y complejos de proteínas en el descubrimiento de vías de señalización en levadura
Type of project: Master
Entity: Universidad de Concepción **Type of entity:** University
Student: Daniel Inostroza
Date of reading: 13/04/2018
- 10** **Project title:** Sistema de Smart Home basado en herramientas de Colud Computing
Type of project: End of course project
Entity: Universidad de Concepción **Type of entity:** University
Student: Marcela Torres Sanhueza
Date of reading: 09/03/2018
- 11** **Project title:** Desarrollo de un Sistema de Información Geográfica para la Dirección de Vialidad del MOP
Type of project: End of course project
Entity: Universidad de Concepción **Type of entity:** University
Student: Celedonio Alarcón Fuentes
Date of reading: 12/01/2018
- 12** **Project title:** Estructura de datos para manejo de trayectorias sobre redes
Type of project: End of course project
Entity: Universidad de Concepción **Type of entity:** University
Student: Rodrigo Rivera Fierro
Date of reading: 24/08/2017
- 13** **Project title:** Quadtree Eficientes en Espacio para Conjuntos de Datos con Clústers
Type of project: Master
Entity: Universidad de Concepción **Type of entity:** University
Student: Javier González Nova
Date of reading: 04/08/2017
- 14** **Project title:** Un índice espacio temporal para puntos móviles basado en estructuras de datos compactas
Type of project: Doctoral thesis
Co-director of thesis: Miguel R. Luaces
Entity: Universidad de La Coruña **Type of entity:** University
Student: Miguel Esteban Romero Vásquez
Date of reading: 11/07/2017
- 15** **Project title:** Representación comprimida de trayectorias de objetos móviles en rutas implícitas
Type of project: End of course project
Entity: Universidad de Concepción **Type of entity:** University
Student: Nataly Cruces Saavedra
Date of reading: 12/01/2017



- 16** **Project title:** Sistema de ayuda a la toma de decisiones para Seguros Generales de Incendio basado en tecnologías GIS
Type of project: End of course project
Entity: Universidad de Concepción **Type of entity:** University
Student: Jorge Garay Chandía
Date of reading: 29/12/2016
- 17** **Project title:** Representaciones compactas de matrices con localidad espacial
Type of project: Master
Entity: Universidad de Concepción **Type of entity:** University
Student: P. Alejandro Pinto Medina
Date of reading: 22/11/2016
- 18** **Project title:** Sistema de información electrónica para la pesquería pelágica (SIEPP) de la región del Bio- Bio
Type of project: End of course project
Entity: Universidad de Concepción
Student: Juan López Barriga
Date of reading: 20/05/2016
- 19** **Project title:** Implementación del proceso de gestión de la configuración ITIL en una entidad bancaria
Type of project: End of course project
Entity: Universidad de Concepción **Type of entity:** University
Student: Mariana Sanhueza Soto
Date of reading: 04/09/2015
- 20** **Project title:** Representación eficiente en espacio de matrices con localidad espacial
Type of project: End of course project
Entity: Universidad de Concepción **Type of entity:** University
Student: Alejandro Pinto
Date of reading: 26/08/2015
- 21** **Project title:** Recomendación de puntos de interés empleando una representación granular del tiempo
Type of project: Master
Entity: Universidad de Concepción **Type of entity:** University
Student: Francisco Serrano Vergara
Date of reading: 30/06/2015
- 22** **Project title:** Estructura de datos eficiente en espacio para relaciones binarias
Type of project: End of course project
Entity: Universidad de Concepción **Type of entity:** University
Student: Javier González Nova
Date of reading: 28/05/2015
- 23** **Project title:** Autenticación biométrica de identidad utilizando la cédula de identidad peruana
Type of project: End of course project
Entity: Universidad de Concepción **Type of entity:** University
Student: Tomás Castañeda Püschel
Date of reading: 12/12/2014



- 24** **Project title:** Verificación de identidad utilizando dispositivos móviles y la nueva cédula chilena
Type of project: End of course project
Entity: Universidad de Concepción **Type of entity:** University
Student: Javier Alejandro Rodríguez Quintana
Date of reading: 12/12/2014
- 25** **Project title:** Desarrollo de sistema de gestión y navegación de rutas turísticas
Type of project: End of course project
Entity: Universidad de Concepción **Type of entity:** University
Student: Maximiliano Opitz Turra
Date of reading: 11/12/2014
- 26** **Project title:** Estrategias de limpieza basadas en ranking de inconsistencias en bases de datos espaciales
Type of project: End of course project
Entity: Universidad de Concepción **Type of entity:** University
Student: Rodrigo Andrés Troncoso Gajardo
Date of reading: 28/07/2014
- 27** **Project title:** Desarrollo de una aplicación para equipos móviles basada en tecnología NFC, usando metodologías ágiles
Type of project: End of course project
Entity: Universidad de Concepción **Type of entity:** University
Student: Rodrigo Alberto Palma Martínez
Date of reading: 04/04/2014
- 28** **Project title:** Desenvolvemento dun xogo de sopa de letras online
Type of project: End of course project
Entity: Universidad de La Coruña **Type of entity:** University
Student: José Luis Pernas Álvarez
Date of reading: 12/2010
- 29** **Project title:** Desarrollo de un juego de Monopoly online con capacidades de promoción turística
Type of project: End of course project
Entity: Universidad de La Coruña **Type of entity:** University
Student: Miguel Montero Fernández
Date of reading: 06/2009
- 30** **Project title:** O xogo da Curuxa: unha versión didáctica do xogo da oca para o web
Type of project: End of course project
Entity: Universidad de La Coruña **Type of entity:** University
Student: Pablo González Ramos
Date of reading: 06/2009
- 31** **Project title:** Desarrollo de un juego web de ahorcado en gallego
Type of project: End of course project
Entity: Universidad de La Coruña **Type of entity:** University
Student: Javier Fraguio Costoya
Date of reading: 12/2008



- 32** **Project title:** Desenvolvemento dun xogo de encrucillados online
Type of project: End of course project
Entity: Universidad de La Coruña **Type of entity:** University
Student: Iván Queipo Fernández
Date of reading: 09/2008
- 33** **Project title:** Sistema para a recuperación de documentos con referencias xeográficas
Type of project: End of course project
Entity: Universidad de La Coruña **Type of entity:** University
Student: César Suárez Suárez
Date of reading: 06/2008
- 34** **Project title:** Deseño e implementación dun sitio web de podcasting
Type of project: End of course project
Entity: Universidad de La Coruña **Type of entity:** University
Student: Laura Prol Baña
Date of reading: 12/2007
- 35** **Project title:** Ferramentas para a análise dos accesos a sitios web: Módulo de presentación de estadísticas
Type of project: End of course project
Entity: Universidad de La Coruña **Type of entity:** University
Student: Iván Ferreiro Pérez
Date of reading: 12/2007
- 36** **Project title:** Herramienta para el análisis de accesos a sitios web: Módulo de configuración y captura de la información
Type of project: End of course project
Entity: Universidad de La Coruña **Type of entity:** University
Student: Xurxo Muiños Pantín
Date of reading: 12/2007

Student tutorials

- 1** **Name of the programme:** Plan de Tutorías ICI
Entity: Universidad de Concepción **Type of entity:** University
Number of recognized hours/ECTS credits: 1 **Frequency of the activity:** 2
Number of tutored students: 10
- 2** **Name of the programme:** Plano de Acción Titorial de Titulación
Entity: Universidad de La Coruña **Type of entity:** University
Number of recognized hours/ECTS credits: 2



Other activities/achievements not included above

- 1** **Description of the activity:** External Master Committee: Natalia González
Organising entity: Universidad Técnica Federico Santa María
End date: 22/11/2019
- 2** **Description of the activity:** External Master Committee: Fernando Domínguez
Organising entity: Universidad del Bío-Bío **Type of entity:** University
End date: 17/05/2019
- 3** **Description of the activity:** External Master Committee: Martita Muñoz
Organising entity: Universidad del Bío-Bío **Type of entity:** University
End date: 24/04/2019
- 4** **Description of the activity:** External Master Committee: Joel Torres
Organising entity: Universidad del Bío-Bío **Type of entity:** University
End date: 24/08/2018
- 5** **Description of the activity:** External Master Committee: Fancisco Javier Palominos González (Mag. Análisis Geográfico)
Organising entity: Universidad de Concepción **Type of entity:** University
End date: 26/04/2018
- 6** **Description of the activity:** Curso de Georreferenciación para la toma de decisiones (20 hrs.) - Escuela de Verano "Ciclo de entrenamiento en Ciencia de Datos para el Análisis Político y Políticas Públicas"
Organising entity: DemoData **Type of entity:** Innovation and Technology Centres
End date: 25/01/2018
- 7** **Description of the activity:** Doctoral Committee: José Fuentes
Organising entity: Universidad de Concepción **Type of entity:** University
End date: 09/09/2016
- 8** **Description of the activity:** External Master Committee: Felipe José Lara Ramírez
Organising entity: Universidad del Bío-Bío **Type of entity:** University
End date: 07/09/2016
- 9** **Description of the activity:** External Master Committee: Luis Emilio Cabrera Crot
Organising entity: Universidad del Bío-Bío **Type of entity:** University
End date: 24/06/2016
- 10** **Description of the activity:** Committee for the reformulation of Ingeniería Civil Informática
Organising entity: Universidad de Concepción **Type of entity:** University
End date: 2016
- 11** **Description of the activity:** Doctoral Committee: Diego Caro
Organising entity: Universidad de Concepción **Type of entity:** University
End date: 13/07/2015



- 12 Description of the activity:** Doctoral Committee: Mauricio Oyarzún Silva
Organising entity: Universidad de Santiago de Chile **Type of entity:** University
End date: 05/05/2015
- 13 Description of the activity:** External Master Committee: Senén González
Organising entity: Universidad de Chile **Type of entity:** University
End date: 16/05/2014
- 14 Description of the activity:** Curso de Bases de Datos: PostgreSQL (20 h.)
Organising entity: Aula de Formación Informática - Universidade da Coruña
End date: 2009

Scientific and technological experience

Scientific or technological activities

R&D projects funded through competitive calls of public or private entities

- 1 Name of the project:** Instituto Milenio Fundamentos de los Datos (IMFD)
Type of project: Basic research (including archaeological digs, etc)
Entity where project took place: Pontificia Universidad Católica de Chile **Type of entity:** University
City of entity: Santiago, Chile
Name principal investigator (PI, Co-PI....): Marcelo Arenas; Pablo Barceló
Nº of researchers: 42
Funding entity or bodies:
 Ministerio de Economías, Fomento y Turismo **Type of entity:** State agency
Start-End date: 01/06/2018 - 31/05/2028 **Duration:** 10 years
Total amount: 10.000.000 €
- 2 Name of the project:** Asistentes Inteligentes para las Infraestructuras de Datos Espaciales
Entity where project took place: Universidad de Concepción **Type of entity:** University
Name principal investigator (PI, Co-PI....): Diego Seco
Nº of researchers: 95
Funding entity or bodies:
 Programa Iberoamericano de Ciencia y Tecnología para el Desarrollo **Type of entity:** -
City funding entity: Madrid, Community of Madrid, Spain
Type of participation: Principal investigator
Start-End date: 01/01/2019 - 31/12/2022
Total amount: 115.000 €
- 3 Name of the project:** Multigranular modeling and processing of massive moving-object data
Entity where project took place: Universidad de Concepción **Type of entity:** University
Name principal investigator (PI, Co-PI....): Andrea Rodríguez; Diego Seco



Nº of researchers: 2

Funding entity or bodies:

CONICYT – Ministerio de Educación

Type of entity: State agency

City funding entity: Chile

Start-End date: 01/04/2017 - 31/03/2020

Total amount: 100.000 €

4 Name of the project: Bioinformatics and Information Retrieval Data Structures Analysis and Design (BIRDS)

Type of project: Basic research (including archaeological digs, etc)

Geographical area: European Union

Degree of contribution: Scientific coordinator

Entity where project took place: Universidad de La Coruña **Type of entity:** University

City of entity: A Coruña, Galicia, Spain

Name principal investigator (PI, Co-PI....): Susana Ladra; Diego Seco

Nº of researchers: 24

Funding entity or bodies:

European Commission

Type of entity: State agency

Type of participation: Coordinator of the UdeC team

Name of the programme: Horizon 2020

Code according to the funding entity: H2020-MSCA-RISE-2015-690941

Start-End date: 01/01/2016 - 31/12/2019

Total amount: 648.000 €

Dedication regime: Part time

Applicant's contribution: The overall goal of BIRDS is to establish a long term international network involving leading researchers in bioinformatics and information retrieval from four different continents, to strengthen the partnership through the exchange of knowledge and expertise, and to develop integrated approaches to improve current approaches in both fields. It will be implemented through staff exchanges, in addition to summer schools, workshops and conferences to facilitate knowledge sharing between members of the partnership. Eight teams from four different continents participate in this project. The team of the University of Concepción is coordinated by the applicant, Diego Seco, and it comprises 4 senior researchers and 3 post-graduate students.

5 Name of the project: Velocity: Procesado eficiente de Big Data espacio-temporal para FlatCity

Entity where project took place: Universidad de La Coruña **Type of entity:** University

Name principal investigator (PI, Co-PI....): Miguel A. Rodríguez Luaces; Susana Ladra

Nº of researchers: 6

Funding entity or bodies:

Ministerio de Economía y Hacienda

Type of entity: State agency

City funding entity: Madrid, Community of Madrid, Spain

Start-End date: 30/12/2016 - 29/12/2019

Total amount: 30.613 €

6 Name of the project: Hermes-Space&Time-Healthy and efficient routes in massive open-data based smart cities: spatio-temporal modelling and querying

Entity where project took place: Universidad de La Coruña **Type of entity:** University

Name principal investigator (PI, Co-PI....): Miguel A. Rodríguez Luaces

Nº of researchers: 6

**Funding entity or bodies:**

Ministerio de Economía y Hacienda

Type of entity: State agency**City funding entity:** Madrid, Community of Madrid, Spain**Start-End date:** 01/01/2014 - 30/09/2017**Total amount:** 105.149 €**7 Name of the project:** AQUASAT: An integrated service for site-specific management of irrigation water**Entity where project took place:** Universidad de Concepción **Type of entity:** University**Name principal investigator (PI, Co-PI....):** Mario Lillo**N° of researchers:** 5**Funding entity or bodies:**

CONICYT – Ministerio de Educación (Chile)

Type of entity: State agency**City funding entity:** Chile**Start-End date:** 01/08/2014 - 31/07/2016**Total amount:** 160.000 €**8 Name of the project:** GEOSOCIAL: High Performance Processing of Microblogs with Geographic and Temporal Information**Entity where project took place:** Universidad de Concepción**Name principal investigator (PI, Co-PI....):** Diego Seco Naveiras**N° of researchers:** 4**Funding entity or bodies:**

CONICYT – Ministerio de Educación (Chile)

Type of entity: State agency**City funding entity:** Chile**Start date:** 02/11/2013**Duration:** 2 years**Total amount:** 48.000 €**9 Name of the project:** GEOSOCIAL: Análisis de alto rendimiento de microblogs con información geográfica y temporal para su explotación social**Entity where project took place:** Universidad de Concepción**City of entity:** Chile**Name principal investigator (PI, Co-PI....):** Diego Seco Naveiras**N° of researchers:** 3**Funding entity or bodies:**

Universidad de Concepción (Chile)

Type of entity: University**Start date:** 07/06/2013**Duration:** 4 months - 24 days**10 Name of the project:** Grupo de Referencia Competitivo**Entity where project took place:** Universidad de La Coruña **Type of entity:** University**Name principal investigator (PI, Co-PI....):** Nieves Rodríguez Brisaboa**N° of researchers:** 18**Funding entity or bodies:**

XUNTA DE GALICIA

City funding entity: Spain**Start date:** 01/01/2013**Duration:** 3 years



- 11** **Name of the project:** Sistema de recepción y gestión de envío de pedidos y cálculo de rutas para Novolar
Entity where project took place: Universidad de La Coruña **Type of entity:** University
Name principal investigator (PI, Co-PI....): Miguel A. Rodríguez Luaces
Funding entity or bodies: XUNTA DE GALICIA
City funding entity: Spain
Start date: 01/12/2010 **Duration:** 1 year - 9 months - 29 days
- 12** **Name of the project:** Grupo de Referencia Competitivo
Entity where project took place: Universidad de La Coruña **Type of entity:** University
Name principal investigator (PI, Co-PI....): Nieves Rodríguez Brisaboa
Nº of researchers: 18
Start date: 01/01/2010 **Duration:** 3 years
- 13** **Name of the project:** Procesado de alto rendimiento de grandes conjuntos de datos representados como Grafos
Name principal investigator (PI, Co-PI....): Nieves Rodríguez Brisaboa
Funding entity or bodies: Ministerio de Ciencia e Innovación
Start date: 01/01/2010 **Duration:** 2 years - 11 months - 30 days
- 14** **Name of the project:** XEOEDUCA: Herramienta para el desarrollo de aplicaciones para el autoaprendizaje de la geografía
Entity where project took place: Universidad de La Coruña
Name principal investigator (PI, Co-PI....): Miguel A. Rodríguez Luaces
Funding entity or bodies: XUNTA DE GALICIA
City funding entity: Spain
Start date: 01/09/2008 **Duration:** 2 years - 1 month
- 15** **Name of the project:** Herramientas y plataforma GIS Open Source
Entity where project took place: Universidad de La Coruña
Name principal investigator (PI, Co-PI....): Nieves Rodríguez Brisaboa
Funding entity or bodies: XUNTA DE GALICIA
City funding entity: Spain
Start date: 15/08/2005 **Duration:** 3 years

R&D non-competitive contracts, agreements or projects with public or private entities

- 1** **Name of the project:** Análisis de datos de lances de pesca
Type of project: Research and development, including transfer **Geographical area:** Non EU International
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Maichel Aguayo; Diego Seco
Nº of researchers: 8
Funding entity or bodies:



Blumar Seafoods

Type of entity: Business

Start date: 27/06/2019

Duration: 5 months

Total amount: 9.000 €

- 2 Name of the project:** Ciencia de datos aplicada al área forestal
Type of project: Research and development, including transfer
Geographical area: Non EU International
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI...): Guillermo Cabrera; Diego Seco
Nº of researchers: 6
Funding entity or bodies: Forestal Arauco S.A.
Start date: 27/06/2019
Duration: 3 months
Total amount: 10.000 €
- 3 Name of the project:** Servicio de búsqueda semántica de información geográfica
Type of project: Research and development, including transfer
Geographical area: Non EU International
Degree of contribution: Coordinator of total project, network or consortium
Name principal investigator (PI, Co-PI...): Diego Seco
Nº of researchers: 3
Funding entity or bodies: Fuerza Aérea de Chile, Comando de Combate, Servicio Aerofotogramético
Type of entity: State agency
Start date: 01/11/2018
Duration: 5 months
Total amount: 15.000 €
- 4 Name of the project:** Infraestructura de Datos Espaciales Corporativa IDE-SAF
Type of project: Research and development, including transfer
Geographical area: Non EU International
Degree of contribution: Coordinator of total project, network or consortium
Name principal investigator (PI, Co-PI...): Diego Seco
Nº of researchers: 1
Funding entity or bodies: Fuerza Aérea de Chile, Comando de Combate, Servicio Aerofotogramético
Type of entity: State agency
Start date: 10/10/2017
Duration: 3 months
Total amount: 5.000 €
- 5 Name of the project:** Tecnologías inteligentes para el análisis del comportamiento de los usuarios en el acceso y consumo de contenidos digitales en multiplataformas
Name principal investigator (PI, Co-PI...): Miguel Ángel Rodríguez Luaces; R. Cao; A. A. Betanzos
Funding entity or bodies: PRISA DIGITAL S.L.
Start date: 21/11/2011
Duration: 2 years - 6 months - 29 days
- 6 Name of the project:** Convenio para o desenvolvemento do Proxecto de Investigación "Aplicación de localización e cálculo do camiño a puntos de interese próximos para dispositivos móbiles"
Name principal investigator (PI, Co-PI...): Miguel Ángel Rodríguez Luaces

**Funding entity or bodies:**

Novaware

Start date: 01/07/2011**Duration:** 1 year - 5 months - 30 days

- 7 Name of the project:** Convenio para o desenvolvemento do proxecto "Plataforma Tecnolóxica GIS para a promoción das empresas asociadas a Neria-Costa da Morte"

Name principal investigator (PI, Co-PI....): Ángeles Saavedra Places**Funding entity or bodies:**

Asociación Neria-Costa da Morte

Start date: 22/09/2010**Duration:** 1 year - 3 months - 9 days

- 8 Name of the project:** Contrato de colaboración entre la Universidade da Coruña e Indra Software Labs S.L.U. en el marco de la convocatoria de concesión de ayudas para la realización de proyectos de I+D efectuada por CDTI mediante resolución del 25 de junio de 2009 del CDTI. (BOE 163 del 7 de julio de 2009)

Name principal investigator (PI, Co-PI....): José Ramón Paramá Gabía**Funding entity or bodies:**

Indra Software Labs S.L.U.

Start date: 01/01/2010**Duration:** 2 years - 3 months

- 9 Name of the project:** Convenio administrativo entre la UDC y la Diputación de A Coruña para financiar la creación de una Web de Rutas Culturales

Name principal investigator (PI, Co-PI....): Nieves Rodríguez Brisaboa**Funding entity or bodies:**

Deputación de A Coruña

Start date: 03/12/2008**Duration:** 11 months - 30 days

- 10 Name of the project:** Convenio para el desarrollo del proyecto de investigación "Desarrollo de Módulos y Aplicaciones de Sistemas de Información Geográfica en Software Libre"

Name principal investigator (PI, Co-PI....): Miguel A. Rodríguez Luaces**Funding entity or bodies:**

Enxenio S.L.

Start date: 15/10/2008**Duration:** 1 year

- 11 Name of the project:** Convenio de colaboración entre a Consellería de Vivenda e Solo e a Universidade da Coruña para financiar o proxecto de investigación dun sistema de información Xeográfica das actuacións da Consellería de Vivenda e Solo

Name principal investigator (PI, Co-PI....): Nieves Rodríguez Brisaboa**Funding entity or bodies:**

XUNTA DE GALICIA

Start date: 11/09/2008**Duration:** 1 year - 3 months - 19 days

- 12 Name of the project:** Convenio de Colaboración entre a Excm. Deputación Provincial da Coruña e a Universidade da Coruña para financiar a adaptación do nodo IdeAC e as súas aplicacións a Xestión Municipal

Name principal investigator (PI, Co-PI....): Miguel A. Rodríguez Luaces**Funding entity or bodies:**

Deputación de A Coruña

Start date: 16/05/2008**Duration:** 1 year - 6 months



- 13** **Name of the project:** Convenio para el desarrollo del proyecto de Investigación "Software de Calidad para Centros Educativos"
Name principal investigator (PI, Co-PI....): Nieves Rodríguez Brisaboa
Funding entity or bodies:
Enxenio S.L.
Start date: 15/10/2007 **Duration:** 1 year - 16 days
- 14** **Name of the project:** Convenio entre la Diputación Provincial de A Coruña y la Universidade da Coruña para financiar la ampliación de funcionalidades del Nodo ideAC y de las aplicaciones de gestión y publicación de la EIEL (gisEIEL y webEIEL)
Name principal investigator (PI, Co-PI....): Miguel A. Rodríguez Luaces
Funding entity or bodies:
Deputación de A Coruña
Start date: 01/09/2007 **Duration:** 1 year - 2 months - 29 days
- 15** **Name of the project:** Convenio entre la Excm. Diputación Provincial de A Coruña y la Universidad de A Coruña para financiar el proyecto de la creación de la Web Cultura Galega
Name principal investigator (PI, Co-PI....): Ángeles Saavedra Places y Nieves Rodríguez Brisaboa
Funding entity or bodies:
Deputación de A Coruña
Start date: 19/06/2007 **Duration:** 11 months - 29 days
- 16** **Name of the project:** Contrato para actividades de asesoramiento y asistencia técnica entre la Universidad de A Coruña y Proyestegal S.L.
Name principal investigator (PI, Co-PI....): Miguel A. Rodríguez Luaces; José R. Paramá Gabía
Funding entity or bodies:
Proyestegal S.L.
Start date: 24/05/2007 **Duration:** 1 year - 5 months - 29 days
- 17** **Name of the project:** Contrato para Actividades de Asesoramiento e Asistencia Técnica entre a Universidade da Coruña e Enxenio S.L., en Técnicas de Museística Virtual (Ref. 484-2006)
Name principal investigator (PI, Co-PI....): Nieves Rodríguez Brisaboa
Funding entity or bodies:
Enxenio S.L.
Start date: 24/11/2006 **Duration:** 5 years - 1 month - 7 days
- 18** **Name of the project:** Contrato para Actividades de Asesoramiento y Asistencia Técnica entre la Universidad de A Coruña e THERA (Ref. 485-2006)
Name principal investigator (PI, Co-PI....): Nieves Rodríguez Brisaboa
Funding entity or bodies:
THERA
Start date: 24/11/2006 **Duration:** 11 months - 29 days



Results

Industrial and intellectual property

- 1 **Title registered industrial property:** BBDD con mutaciones para generación de informes
Inventors/authors/obtainers: J. Antonio Cotelo; Diego Seco; Lorenzo Montserrat; Manuel Hermida
Entity holder of rights: Health in Code S.L.
Nº of application: 03/2010/446
Country of inscription: Spain
Date of register: 2009
Conferral date: 23/09/2009
Operating aut.region/region: United Kingdom

- 2 **Title registered industrial property:** Registro de cardiopatías familiares
Inventors/authors/obtainers: J. Antonio Cotelo; Diego Seco; Lorenzo Montserrat; Manuel Hermida
Entity holder of rights: Health in Code S.L.
Nº of application: 03/2010/447
Country of inscription: Spain
Date of register: 2009
Conferral date: 23/09/2009
Operating aut.region/region: United Kingdom

Scientific and technological activities

Scientific production

H index: 12
Date of application: 07/01/2020

Publications, scientific and technical documents

- 1 Carlos E. SanJuan-Contreras; Gilberto Gutiérrez; Miguel A. Martínez-Prieto; Diego Seco. cBiK: A Space-Efficient Data Structure for Spatial Keyword Queries. IEEE Access. 8 - 1, pp. 98827 - 98846. IEEE, 2020. ISSN 2169-3536
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
Impact source: ISI **Category:** Science Edition - COMPUTER SCIENCE, INFORMATION SYSTEMS
Impact index in year of publication: 4.098 **Journal in the top 25%:** Yes
Position of publication: 23 **No. of journals in the cat.:** 155
Relevant publication: Yes

- 2 Pedro Mirabal; José Abreu; Diego Seco. Assessing the best edit in perturbation-based iterative refinement algorithms to compute the median string. Pattern Recognition Letters. 120, pp. 104 - 111. Elsevier, 2019. ISSN 0167-8655



Type of production: Scientific paper

Corresponding author: No

Impact source: ISI

Impact index in year of publication: 1.954

Position of publication: 56

Relevant publication: Yes

Format: Journal

Category: Science Edition - COMPUTER SCIENCE, ARTIFICIAL INTELLIGENCE

Journal in the top 25%: No

No. of journals in the cat.: 132

- 3** Daniel Inostroza; Cecilia Hernández; Diego Seco; Gonzalo Navarro; Álvaro Olivera. Cell Cycle and Protein Complex Dynamics in Discovering Signaling Pathways. *Journal of Bioinformatics and Computational Biology*. 17 - 3, pp. 1950011. World Scientific Publishing, 2019. ISSN 0219-7200

Type of production: Scientific paper

Corresponding author: No

Impact source: ISI

Impact index in year of publication: 0.994

Position of publication: 47

Relevant publication: Yes

Format: Journal

Category: Science Edition - MATHEMATICAL & COMPUTATIONAL BIOLOGY

Journal in the top 25%: No

No. of journals in the cat.: 59

- 4** Zheng Li; Diego Seco; Alexis Eloy Sánchez Rodríguez. Microservice-Oriented Platform for Internet of Big Data Analytics: A Proof of Concept. *Sensors*. 19 - 5, pp. 1134. MDPI, 2019. ISSN 1424-8220

Type of production: Scientific paper

Corresponding author: No

Impact source: ISI

Impact index in year of publication: 3.031

Position of publication: 15

Relevant publication: Yes

Format: Journal

Category: Science Edition - INSTRUMENTS & INSTRUMENTATION

Journal in the top 25%: Yes

No. of journals in the cat.: 61

- 5** Antonio Fariña; Migue Ángel Martínez-Prieto; Francisco Claude; Gonzalo Navarro; Juan J. Lastra-Díaz; Nicola Prezza; Diego Seco. On the reproducibility of experiments of indexing repetitive document collections. *Information Systems*. 83, pp. 181 - 194. Elsevier, 2019. ISSN 0167-8655

Type of production: Scientific paper

Corresponding author: No

Impact source: ISI

Impact index in year of publication: 2.541

Position of publication: 50

Relevant publication: Yes

Format: Journal

Category: Science Edition - COMPUTER SCIENCE, INFORMATION SYSTEMS

Journal in the top 25%: Yes

No. of journals in the cat.: 148

- 6** José Fuentes; Erick Elejalde; Leo Ferres; Diego Seco. Parallel Construction of Wavelet Trees on Multicore Architectures. *Knowledge and Information Systems*. pp. 1043 - 1063. Springer, 2017. Available on-line at: <<http://dx.doi.org/10.1007/s10115-016-1000-6>>. ISSN 0219-1377

Type of production: Scientific paper

Corresponding author: No

Impact source: ISI

Impact index in year of publication: 2.247

Position of publication: 56

Format: Journal

Category: Science Edition - COMPUTER SCIENCE, INFORMATION SYSTEMS

Journal in the top 25%: Yes

No. of journals in the cat.: 148



Relevant publication: Yes

- 7** ÁngelesS. Places; Antonio Fariña; MiguelR. Luaces; Óscar Pedreira; Diego Seco. A workflow management system to feed digital libraries: proposal and case study. Multimedia Tools and Applications. 75 - 7, pp. 3843 - 3877. Springer US, 2016. Available on-line at: <<http://dx.doi.org/10.1007/s11042-014-2155-3>>. ISSN 1380-7501

Type of production: Scientific paper

Format: Journal

Corresponding author: No

Impact source: ISI

Category: Science Edition - COMPUTER SCIENCE, INFORMATION SYSTEMS

Impact index in year of publication: 1.541

Journal in the top 25%: No

Position of publication: 84

No. of journals in the cat.: 148

Relevant publication: Yes

- 8** Nieves Brisaboa; Guillermo Luaces; Roberto Konow; Gonzalo Navarro; Diego Seco. Aggregated 2D Range Queries on Clustered Points. Information Systems. 60, pp. 34 - 49. 2016. Available on-line at: <<http://dx.doi.org/10.1016/j.is.2016.03.004>>.

Type of production: Scientific paper

Format: Journal

Corresponding author: Yes

Impact source: ISI

Category: computer science – information systems

Impact index in year of publication: 2.541

Journal in the top 25%: Yes

Position of publication: 50

No. of journals in the cat.: 148

Relevant publication: Yes

- 9** Gonzalo Rojas; Diego Seco; Francisco Serrano. Boosting Point-of-Interest Recommendation with Multigranular Time Representations. Journal of Universal Computer Science. 22 - 8, pp. 1148 - 1174. J.UCS Consortium, 2016. Available on-line at: <http://www.jucs.org/jucs_22_8/boosting_point_of_interest>. ISSN 0948-695X

Type of production: Scientific paper

Format: Journal

Corresponding author: No

Impact source: ISI

Category: Science Edition - COMPUTER SCIENCE, SOFTWARE ENGINEERING

Impact index in year of publication: 1.066

Journal in the top 25%: No

Position of publication: 66

No. of journals in the cat.: 104

Relevant publication: Yes

- 10** Reza Dorrigiv; Robert Fraser; Meng He; Shahin Kamali; Akitoshi Kawamura; Alejandro López-Ortiz; Diego Seco. On Minimum- and Maximum-Weight Minimum Spanning Trees with Neighborhoods. Theory of Computing Systems. 56 - 1, pp. 220 - 250. Springer US, 2015. Available on-line at: <<http://dx.doi.org/10.1007/s00224-014-9591-3>>. ISSN 1432-4350

Type of production: Scientific paper

Format: Journal

Corresponding author: No

Impact source: ISI

Category: Science Edition - COMPUTER SCIENCE, THEORY & METHODS

Impact index in year of publication: 0.458

Journal in the top 25%: No

Position of publication: 97

No. of journals in the cat.: 103

Relevant publication: Yes

- 11** Nieves R. Brisaboa; M. Andrea Rodríguez; Diego Seco; Rodrigo A. Troncoso. Rank-based strategies for cleaning inconsistent spatial databases. International Journal of Geographical Information Science. 29 - 2, pp. 280 - 304. Taylor & Francis, 2015. Available on-line at: <<http://dx.doi.org/10.1080/13658816.2014.965711>>.

Type of production: Scientific paper

Format: Journal

Corresponding author: Yes

Impact source: ISI

Impact index in year of publication: 2.370

Position of publication: 54

Relevant publication: Yes

Category: Science Edition - COMPUTER SCIENCE, INFORMATION SYSTEMS

Journal in the top 25%: Yes

No. of journals in the cat.: 148

- 12** N.R. Brisaboa; M.R. Luaces; M. Andrea Rodríguez; D. Seco. An inconsistency measure of spatial data sets with respect to topological constraints. *International Journal of Geographical Information Science*. 28 - 1, pp. 56 - 82. Taylor & Francis, 2014. Available on-line at: <<http://www.scopus.com/inward/record.url?eid=2-s2.0-84888024950&partnerID=40&md5=f5622662b1eadb3f81a343b11f72242c>>.

Type of production: Scientific paper

Format: Journal

Corresponding author: Yes

Impact source: ISI

Category: computer science – information systems

Impact index in year of publication: 2.370

Journal in the top 25%: Yes

Position of publication: 54

No. of journals in the cat.: 148

Relevant publication: Yes

- 13** F. Claude; P.K. Nicholson; D. Seco. On the compression of search trees. *Information Processing and Management*. 50 - 2, pp. 272 - 283. 2014. Available on-line at: <<http://www.scopus.com/inward/record.url?eid=2-s2.0-84890283525&partnerID=40&md5=e950517c1677aed62acf12254d875dbb>>.

Type of production: Scientific paper

Format: Journal

Corresponding author: Yes

Impact source: ISI

Category: computer science – information systems

Impact index in year of publication: 3.444

Journal in the top 25%: Yes

Position of publication: 25

No. of journals in the cat.: 148

Relevant publication: Yes

- 14** N.R. Brisaboa; M.R. Luaces; G. Navarro; D. Seco. Space-efficient representations of rectangle datasets supporting orthogonal range querying. *Information Systems*. 38 - 5, pp. 635 - 655. 2013. Available on-line at: <<http://www.scopus.com/inward/record.url?eid=2-s2.0-84874712861&partnerID=40&md5=21ed9fd6c583d19ba07154aed21c3357>>.

Type of production: Scientific paper

Format: Journal

Corresponding author: Yes

Impact source: ISI

Category: computer science – information systems

Impact index in year of publication: 2.551

Journal in the top 25%: Yes

Position of publication: 50

No. of journals in the cat.: 148

Relevant publication: Yes

- 15** N.R. Brisaboa; M.R. Luaces; A.S. Places; D. Seco. Exploiting geographic references of documents in a geographical information retrieval system using an ontology-based index. *GeoInformatica*. 14 - 3, pp. 307 - 331. 2010. Available on-line at: <<http://www.scopus.com/inward/record.url?eid=2-s2.0-77954087263&partnerID=40&md5=9959fb242bbb4ff9cc7d960cac891e38>>.

Type of production: Scientific paper

Format: Journal

Corresponding author: Yes

Impact source: ISI

Category: computer science – information systems

Impact index in year of publication: 2.091

Journal in the top 25%: No

Position of publication: 61

No. of journals in the cat.: 148

Relevant publication: Yes



- 16** José Fuentes Sepúlveda; Gonzalo Navarro; Diego Seco. Implementing the Topological Model Succinctly. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). 11811, pp. 499 - 512. Springer International Publishing, 2019. Available on-line at: <<https://doi.org/10.1007/978-3-030-32686-9>>. ISBN 978-3-030-32685-2
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 17** Rodrigo Rivera; María Andrea Rodríguez; Diego Seco. Faster and Smaller Two-Level Index for Network-Based Trajectories. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). 11147, pp. 348 - 362. Springer International Publishing, 2018. Available on-line at: <http://doi.org/10.1007/978-3-030-00479-8_28>. ISBN 978-3-030-00478-1
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes
- 18** José Fuentes-Sepúlveda; Erick Elejalde; Leo Ferres; Diego Seco. Efficient Wavelet Tree Construction and Querying for Multicore Architectures. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). 8504, pp. 150 - 161. Springer International Publishing, 2014. Available on-line at: <http://dx.doi.org/10.1007/978-3-319-07959-2_13>. ISBN 978-3-319-07958-5
Type of production: Scientific paper **Format:** Journal
- 19** F. Claude; R. Dorriviv; S. Kamali; A. López-Ortiz; P. Pra?at; J. Romero; A. Salinger; D. Seco. Broadcasting in conflict-aware multi-channel networks. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). 7748 LNCS, pp. 158 - 169. 2013. Available on-line at: <<http://www.scopus.com/inward/record.url?eid=2-s2.0-84873834391&partnerID=40&md5=497edac42d0a4f64910a0057532d2a0a>>.
Type of production: Scientific paper **Format:** Journal
- 20** R. Dorriviv; Fraser, R.; He, M.; S. Kamali; Kawamura, A.; A. López-Ortiz; D. Seco. On Minimum- and Maximum-Weight Minimum Spanning Trees with Neighborhoods. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). 7846 LNCS, pp. 93 - 106. 2012.
Type of production: Scientific paper **Format:** Journal
- 21** F. Claude; P.K. Nicholson; D. Seco. Space efficient wavelet tree construction. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). 7024 LNCS, pp. 185 - 196. 2011. Available on-line at: <<http://www.scopus.com/inward/record.url?eid=2-s2.0-80053950278&partnerID=40&md5=5f26633bb739a64194202915aa7c5799>>.
Type of production: Scientific paper **Format:** Journal
- 22** N.R. Brisaboa; M.R. Luaces; G. Navarro; D. Seco. A fun application of compact data structures to indexing geographic data. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). 6099 LNCS, pp. 77 - 88. 2010. Available on-line at: <<http://www.scopus.com/inward/record.url?eid=2-s2.0-79956295703&partnerID=40&md5=51753e05fb95ec34b82de4afa8d6d070>>.
Type of production: Scientific paper **Format:** Journal
- 23** L. Montserrat; J.A. Cotelo-Lema; M.R. Luaces; D. Seco. Collecting, analyzing, and publishing massive data about the hypertrophic cardiomyopathy. Communications in Computer and Information Science. 52, pp. 301 - 313. 2010. Available on-line at: <<http://www.scopus.com/inward/record.url?eid=2-s2.0-77950358582&partnerID=40&md5=fd0d0da062a36d0649d8813997161d9f>>.
Type of production: Scientific paper **Format:** Journal



- 24** N.R. Brisaboa; M.R. Luaces; O. Pedreira; Á.S. Places; D. Seco. Indexing dense nested metric spaces for efficient similarity search. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). 5947 LNCS, pp. 98 - 109. 2010. Available on-line at: <<http://www.scopus.com/inward/record.url?eid=2-s2.0-77951121352&partnerID=40&md5=b5fae347137610910f658b156936d012>>.
Type of production: Scientific paper **Format:** Journal
- 25** N.R. Brisaboa; M.R. Luaces; G. Navarro; D. Seco. Range queries over a compact representation of minimum bounding rectangles. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). 6413 LNCS, pp. 33 - 42. 2010. Available on-line at: <<http://www.scopus.com/inward/record.url?eid=2-s2.0-78649914154&partnerID=40&md5=b4d3c14179684c576dce98ff0f3370a5>>.
Type of production: Scientific paper **Format:** Journal
- 26** N.R. Brisaboa; M.R. Luaces; G. Navarro; D. Seco. A new Point Access Method based on wavelet trees. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). 5833 LNCS, pp. 297 - 306. 2009. Available on-line at: <<http://www.scopus.com/inward/record.url?eid=2-s2.0-78649937832&partnerID=40&md5=1d797a418a41247aa392175b4b6392ef>>.
Type of production: Scientific paper **Format:** Journal
- 27** M.R. Luaces; O. Pedreira; Á.S. Places; D. Seco. A web-based version of a trivial game to promote galician culture. Lecture Notes in Business Information Processing. 18 LNBIP, pp. 242 - 252. 2009. Available on-line at: <<http://www.scopus.com/inward/record.url?eid=2-s2.0-67249137911&partnerID=40&md5=597bd35f4c79807cef51b45fcd5d8dfc>>.
Type of production: Scientific paper **Format:** Journal
- 28** S. Ladra; M.R. Luaces; O. Pedreira; D. Seco. A toponym resolution service following the OGC WPS standard. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). 5373 LNCS, pp. 75 - 85. 2008. Available on-line at: <<http://www.scopus.com/inward/record.url?eid=2-s2.0-58449085474&partnerID=40&md5=df023aeb0f458ab41bd0c9a5071e06e8>>.
Type of production: Scientific paper **Format:** Journal
- 29** M.R. Luaces; J.R. Paramá; O. Pedreira; D. Seco. An ontology-based index to retrieve documents with geographic information. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). 5069 LNCS, pp. 384 - 400. 2008. Available on-line at: <<http://www.scopus.com/inward/record.url?eid=2-s2.0-49049114534&partnerID=40&md5=37ba69ca66c236c49723291f5293b079>>.
Type of production: Scientific paper **Format:** Journal
- 30** N. Brisaboa; O. Pedreira; D. Seco; R. Solar; R. Uribe. Clustering-based similarity search in metric spaces with sparse spatial centers. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). 4910 LNCS, pp. 186 - 197. 2008. Available on-line at: <<http://www.scopus.com/inward/record.url?eid=2-s2.0-38549178020&partnerID=40&md5=be695741ba4d2d515bdc27da6d91e26d>>.
Type of production: Scientific paper **Format:** Journal
- 31** M.R. Luaces; A.S. Places; F.J. Rodríguez; D. Seco. Retrieving documents with geographic references using a spatial index structure based on ontologies. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). 5232 LNCS, pp. 395 - 404. 2008. Available on-line at: <<http://www.scopus.com/inward/record.url?eid=2-s2.0-70350655994&partnerID=40&md5=d74030a56137c0d11d4ff79f654a32b7>>.
Type of production: Scientific paper **Format:** Journal



- 32** Brisaboa, N. R.; Luaces, M. R.; Seco, D. New Discovery Methodologies in GIS: Improving the Information Retrieval Process. *Discovery of Geospatial Resources: Methodologies, Technologies and, Emergent Applications*. pp. 37 - 55. IGI Global, 2012.
Type of production: Book chapter **Format:** Book

Works submitted to national or international conferences

- 1** **Title of the work:** A Compact Representation of Raster Time Series
Name of the conference: Data Compression Conference (DCC 2019)
Corresponding author: Yes
City of event: Snowbird, United States of America
Date of event: 2019
End date: 2019
Cruces, N.; Seco, D.; Gutiérrez, G. "Proceedings of the 2019 Data Compression Conference (DCC 2019), IEEE Computer Society". pp. 103 - 111.
- 2** **Title of the work:** Compact Representations of Event Sequences
Name of the conference: XXIV Jornadas de Ingeniería del Software y Bases de Datos (JISBD)
Corresponding author: No
City of event: Cáceres, Extremadura, Spain
Date of event: 2019
End date: 2019
Varela-Rodeiro, T.; Brisaboa, N. R.; Navarro, G.; Seco, D.; de Bernardo, G.
- 3** **Title of the work:** Covering a set of points with k bounding boxes
Name of the conference: Jornadas Chilenas de Computación
Corresponding author: No
City of event: Concepción, Chile
Date of event: 2019
End date: 2019
Sepúlveda, C.; Rodríguez, M. A.; Seco, D.
- 4** **Title of the work:** Trajectory Patterns Based on Segment-Cutting Clustering
Name of the conference: Alberto Mendelzon International Workshop on Foundations of Data Management (AMW 2019)
Corresponding author: No
City of event: Asunción, Paraguay
Date of event: 2019
End date: 2019
Cabrera-Crot, L.; Caniupán, M.; Rodríguez, M.A.; Seco, D. "Proceedings of the 2019 Alberto Mendelzon International Workshop on Foundations of Data Management".
- 5** **Title of the work:** Compact Representations of Event Sequences
Name of the conference: Data Compression Conference (DCC 2018)
Corresponding author: No
City of event: Snowbird, United States of America
Date of event: 2018
End date: 2018
Brisaboa, N.R.; de Bernardo, G.; Navarro, G.; Rodeiro, T.V.; Seco, D. "Proceedings of the 2018 Data Compression Conference (DCC 2018), IEEE Computer Society". pp. 237 - 246.



- 6** **Title of the work:** A workflow management system to feed digital libraries: proposal and case study
Name of the conference: XXII Jornadas de Ingeniería del Software y Bases de Datos (JISBD)
Corresponding author: No
City of event: Tenerife, Canary Islands, Spain
Date of event: 2017
End date: 2017
Places, A. S.; Fariña, A.; Luaces, M. R.; Pedreira, O.; Seco, D.
- 7** **Title of the work:** Improved Queryable Representations of Rasters
Name of the conference: Data Compression Conference (DCC 2017)
Corresponding author: Yes
City of event: Snowbird, United States of America
Date of event: 2017
Pinto, A.; Seco, D.; Gutierrez, G."Proceedings of the 2017 Data Compression Conference (DCC 2017), IEEE Computer Society". pp. 320 - 329.
- 8** **Title of the work:** Faster Compressed Quadrees
Name of the conference: Data Compression Conference (DCC 2015)
City of event: Snowbird, United States of America
Date of event: 2015
Gagie, T.; González-Nova, J.; Ladra, S.; Navarro, G.; Seco, D."Proceedings of the 2015 Data Compression Conference (DCC 2015), IEEE Computer Society". pp. 93 - 102.
- 9** **Title of the work:** Un índice espacio-temporal compacto para consultas time-slice y time-interval
Name of the conference: Jornadas de Ingeniería del Software y Bases de Datos
City of event: Santander, Spain
Date of event: 2015
End date: 2015
Brisaboa, N. R.; Casares, R.; Rodríguez, M. Andrea; Romero, M.; Seco, D.
- 10** **Title of the work:** Context-Based Algorithms for the List-Update Problem under Alternative Cost Models
Name of the conference: Data Compression Conference (DCC 2013)
City of event: Snowbird, United States of America
Date of event: 2013
Kamali, S.; Ladra, S.; López-Ortiz, A.; Seco, D."Proceedings of the 2013 Data Compression Conference (DCC 2013), IEEE Computer Society". pp. 361 - 370.
- 11** **Title of the work:** Efficient Wavelet Tree Construction and Querying for Multicore Architectures
Name of the conference: 5th Workshop on MASSIVE Data Algorithmics
City of event: Sophia Antipolis, France
Date of event: 2013
Fuentes-Sepúlveda, J.; Elejalde, E.; Ferres, L.; Seco, D.; Rodríguez, M. Andrea; Caro, D."Proc. of the 5th Workshop on MASSIVE Data Algorithmics". pp. 79 - 86.
- 12** **Title of the work:** Differentially Encoded Search Trees
Name of the conference: Data Compression Conference (DCC 2012)
City of event: Snowbird, United States of America
Date of event: 2012
Claude, F.; Nicholson, P. K.; Seco, D."Proceedings of the 2012 Data Compression Conference (DCC 2013), IEEE Computer Society". pp. 357 - 366.



- 13** **Title of the work:** Indexación mediante Arrays de Sufijos para Recuperación de Información Geográfica
Name of the conference: II Congreso Español de Recuperación de Información (CERI 2012)
City of event: Valencia, Spain
Date of event: 2012
Organising entity: Universitat Jaume I
Brisaboa, N. R.; Luaces, M. R.; Navarro, G.; Seco, D."Actas del II Congreso Español de Recuperación de Información (CERI 2012)". pp. 73 - 84.
- 14** **Title of the work:** An Integrated System for School Timetabling
Name of the conference: 3rd international Conference on Agents and Artificial Intelligence (ICAART 2011)
City of event: Roma, Italy
Date of event: 2011
Carpente R., M. Luisa; Cerdeira-Pena, A.; De Bernardo R., Guillermo; Seco, D."Proc. of the 3rd international Conference on Agents and Artificial Intelligence (ICAART 2011)". pp. 599 - 603. SciTePress – Science and Technology Publications,
- 15** **Title of the work:** Recuperación de Información Geográfica basada en una Descripción Semántica del Espacio
Name of the conference: I Congreso Español de Recuperación de Información
City of event: Madrid, Spain
Date of event: 2010
Brisaboa, N. R.; Luaces, M. R.; Seco, D."Actas del I Congreso Español de Recuperación de Información, Edición en Internet". pp. 113 - 124.
- 16** **Title of the work:** A Document Management System and Workflow to help at the Diagnosis of Hypertrophic Cardiomyopathy
Name of the conference: 2nd International Conference on Health Informatics (HEALTHINF 2009)
City of event: Porto, Portugal
Date of event: 2009
Montserrat, L.; Cotelo, J. A.; Luaces, M. R.; Seco, D."Proc. of the 2nd International Conference on Health Informatics (HEALTHINF 2009)". pp. 3 - 10.
- 17** **Title of the work:** Defining a Workflow process for textual and geographic indexing of documents
Name of the conference: International Conference on Enterprise Information Systems (ICEIS'09)
City of event: Milan, Italy
Date of event: 2009
Brisaboa, N. R.; Cerdeira-Pena, A.; Luaces, M. R.; Seco, D."Proc. of the 11th International Conference on Enterprise Information Systems". pp. 78 - 83.
- 18** **Title of the work:** Indexación espacial de puntos empleando wavelet trees
Name of the conference: XIV Jornadas de Ingeniería del Software y Bases de Datos (JISBD'09)
City of event: San Sebastián, Spain
Date of event: 2009
Brisaboa, N. R.; Luaces, M. R.; Navarro, G.; Seco, D."Actas de las XIV Jornadas de Ingeniería del Software y Bases de Datos (JISBD'09)".
- 19** **Title of the work:** SCRABBLE.GZ: A Web-Based Collaborative Game to Promote the Galician Language
Name of the conference: International Conferences on Advances in Computer-Human Interactions (ACHI'09)
City of event: Cancún, Mexico
Date of event: 2009



De Bernardo R., Guillermo; Cerdeira-Pena, A.; Pedreira, O.; Places, A. S.; Seco, D. "Proc. of the 2nd International Conferences on Advances in Computer-Human Interactions". pp. 142 - 147.

- 20 Title of the work:** A Web-based Collaborative Game To Promote Galician Culture
Name of the conference: 4th International Conference on Web Information Systems and Technologies (WEBIST)
City of event: Funchal, Madeira, Portugal
Date of event: 2008
Luaces, M. R.; Pedreira, O.; Places, A. S.; Seco, D. "Proceedings of the 4th International Conference on Web Information Systems and Technologies (WEBIST)". pp. 67 - 73.
- 21 Title of the work:** LBD LOCAL: Un sistema para la recuperación de documentos con referencias geográficas
Name of the conference: II Jornadas de SIG Libre
City of event: Girona, Spain
Date of event: 2008
Luaces, M. R.; Paramá, J. R.; Pedreira, O.; Seco, D. "Actas de las II Jornadas de SIG Libre".
- 22 Title of the work:** Los GIS y servicios IDE en la difusión de la cultura gallega. La Web Cultura Galega
Name of the conference: V Jornadas de la Infraestructura de Datos Espaciales de España IDE
City of event: Tenerife, Spain
Date of event: 2008
Lamas, J.I.; Luaces, M. R.; Places, A. S.; R. López, Eduardo; Seco, D. "Actas de las V Jornadas de la Infraestructura de Datos Espaciales de España IDE, aplicaciones al planeamiento y la gestión del territorio".
- 23 Title of the work:** New Approaches for the School Timetabling Problem
Name of the conference: 7th Mexican International Conference on Artificial Intelligence (MICA'I'08)
City of event: México DF, Mexico
Date of event: 2008
Cerdeira-Pena, A.; Carpenente R., M. Luisa; Fariña, A.; Seco, D. "Procs. of the 7th Mexican International Conference on Artificial Intelligence (MICA'I'08)". pp. 261 - 267.
- 24 Title of the work:** Un Servicio de Resolución de Topónimos siguiendo el estándar OGC WPS
Name of the conference: V Jornadas de la Infraestructura de Datos Espaciales de España IDE
City of event: Tenerife, Spain
Date of event: 2008
Cerdeira-Pena, A.; Luaces, M. R.; Pedreira, O.; Seco, D. "Actas de las V Jornadas de la Infraestructura de Datos Espaciales de España IDE, aplicaciones al planeamiento y la gestión del territorio".
- 25 Title of the work:** Un Sistema de Gestión Documental y Workflow con Indexación Temática y Geográfica de los Documentos
Name of the conference: V Jornadas de la Infraestructura de Datos Espaciales de España IDE
City of event: Tenerife, Spain
Date of event: 2008
Cerdeira-Pena, A.; Luaces, M. R.; Pedreira, O.; Seco, D. "Actas de las V Jornadas de la Infraestructura de Datos Espaciales de España IDE, aplicaciones al planeamiento y la gestión del territorio".
- 26 Title of the work:** An Index Structure to Retrieve Documents with Geographic Information
Name of the conference: 1st International Workshop on Multimedia Data Mining and Management (MDMM 2007) (DEXA Workshops 2007)
City of event: Regensburg, Germany
Date of event: 2007



Luaces, M. R.; Paramá, J. R.; Pedreira, O.; Seco, D. "Proceedings of the 1st International Workshop on Multimedia Data Mining and Management". pp. 64 - 68.

- 27 Title of the work:** SSSTree: búsqueda por similitud basada en clustering con centros espacialmente dispersos
Name of the conference: Jornadas Chilenas de Computacion (JCC 2007)
City of event: Iquique, Chile
Date of event: 2007
Uribe, R.; Solar, R.; Brisaboa, N. R.; Pedreira, O.; Seco, D. "Actas de las Jornadas Chilenas de Computacion (JCC 2007)". pp. 1 - 13.
- 28 Title of the work:** Servicio web de análisis de redes en sistemas de información geográfica
Name of the conference: I Jornadas de la IDE
City of event: Santiago de Compostela, Spain
Date of event: 2007
Luaces, M. R.; Paramá, J. R.; Seco, D. "La Infraestructura de Datos Espaciales de España en 2007. Proyectos, servicios y nodos". pp. 119 - 127.
- 29 Title of the work:** Una estructura de indexación para la recuperación de documentos con referencias geográficas
Name of the conference: Evolución de la Investigación y la Docencia en Bases de Datos (EIDBD 2007)
City of event: Zaragoza, Spain
Date of event: 2007
Luaces, M. R.; Paramá, J. R.; Pedreira, O.; Seco, D. "Actas del taller Evolución de la Investigación y la Docencia en Bases de Datos (EIDBD 2007)", pp. 19 - 26.
- 30 Title of the work:** Desarrollo de Webs interactivas con filosofía AJAX: El TRIVIAL.GZ
Name of the conference: XII Congreso Argentino de Ciencias de la Computación (CACIC'06)
City of event: San Luis, Argentina
Date of event: 2006
Brisaboa, N. R.; Places, A. S.; Luaces, M. R.; Seco, D. "Proc. del XII Congreso Argentino de Ciencias de la Computación (CACIC'06)".

Other dissemination activities

- 1 Title of the work:** Invited talk: "Estructuras de datos compactas para datos espacio-temporales"
Name of the event: Workshop CIWS - Future of Data
Type of event: Conferences given
City of event: Santiago, Chile
Date of event: 11/01/2018
Organising entity: Center for Semantic Web Research
Type of entity: R&D Centre
Diego Seco Naveiras.
- 2 Title of the work:** Invited talk: "Casos de buenas prácticas del país, presentados por un beneficiario chileno de un proyecto H horizonte 2020"
Name of the event: InfoDay Horizon 2020
Type of event: Conferences given
City of event: Concepción, Chile
Date of event: 01/12/2017
Organising entity: European Commission



Diego Seco Naveiras.

- 3** **Title of the work:** Invited talk: "Procesamiento eficiente para análisis en la Web social. Una aproximación basada en estructuras de datos compactas"
Name of the event: 6° Encuentro Regional de Software Libre UCM 2016
Type of event: Conferences given
City of event: Talca, Chile
Date of event: 06/10/2016
Organising entity: Universidad Católica del Maule
Diego Seco Naveiras.
- 4** **Title of the work:** Invited talk: "Oportunidades y retos de investigación en la Web social"
Name of the event: VII Congreso de Estudiantes de Computación e Informática Zona Sur
Type of event: Conferences given
City of event: Concepción, Chile
Date of event: 03/12/2015
Organising entity: Universidad del Bío-Bío **Type of entity:** University
- 5** **Title of the work:** Invited talk: "¿Qué podemos aprender en la Web social?"
Name of the event: La Revolución de los Datos II
Type of event: Conferences given
City of event: Segovia,
Date of event: 19/02/2015
Organising entity: Data Web Research - Universidad de Valladolid
- 6** **Title of the work:** Invited talk: "Indexación de Datos en Recuperación de Información Geográfica"
Name of the event: La Revolución de los Datos
Type of event: Conferences given
City of event: Valladolid,
Date of event: 24/05/2012
Organising entity: Data Web Research - Universidad de Valladolid

R&D management and participation in scientific committees

Scientific, technical and/or assessment committees

- 1** **Committee title:** Comisión Nacional de Investigación Científica y Tecnológica (CONICYT-Chile): Programa de Formación de Capital Humano Avanzado
Geographical area: Non EU International
City: Chile
Start date: 01/04/2018
- 2** **Committee title:** Comisión Nacional de Acreditación: CNA-Chile
Geographical area: Non EU International
City: Chile
Start date: 01/12/2017



Organization of R&D activities

- 1** **Title of the activity:** JCC 2019
Type of activity: Conference
Convening entity: Universidad de Concepción
City convening entity: Concepción, Chile
Type of participation: Chairman
N° assistants: 300
Start-End date: 04/11/2019 - 10/11/2019
Geographical area: National
Type of entity: University
- 2** **Title of the activity:** JCIS 2011
Type of activity: Conference
Convening entity: Universidad de La Coruña
City convening entity: A Coruña, Spain
Start date: 05/09/2011
Geographical area: National
Type of entity: University
Duration: 3 days

R&D management

- 1** **Name of the activity:** Chair of the Department of Computer Science
Type of management: Management of body
Entity: Universidad de Concepción
Start date: 19/06/2018
Type of entity: University
- 2** **Name of the activity:** Chair of the PhD and Master Programs in Computer Science
Type of management: Programme management
Entity: Universidad de Concepción
Start date: 24/10/2016
Type of entity: University
Duration: 1 year - 8 months
- 3** **Name of the activity:** Vice-chair of the Department of Computer Science
Type of management: Management of body
Entity: Universidad de Concepción
Start date: 24/10/2016
Type of entity: University
Duration: 1 year - 8 months
- 4** **Name of the activity:** Grupo de Sistemas de Procesamiento de la Información
Type of management: Group management
Performed tasks: Management
Entity: Universidad de Concepción
Start date: 2013
Type of entity: University
Duration: 3 years
- 5** **Name of the activity:** A&C Group: Open problems meetings
Type of management: Management of organised events
Performed tasks: Organizer
Entity: University of Waterloo
Start date: 2011
Type of entity: University
Duration: 1 year



Evaluation and revision of R&D projects and articles

- 1** **Name of the activity:** International Colloquium on Automata, Languages and Programming (ICALP 2020)
Performed tasks: Auxiliary reviewer
Entity where activity was carried out: Springer
Start-End date: 2020 - 2020
- 2** **Name of the activity:** EPIA conference on Artificial Intelligence (EPIA'20) - GeoAI - GeoSpatial Artificial Intelligence
Performed tasks: Program Committee
Entity where activity was carried out: Instituto Superior de Engenharia do Porto: ISEP
Start-End date: 2020 - 2020
- 3** **Name of the activity:** International Conference on Geographical Information Systems Theory, Applications and Management (GISTAM'20)
Performed tasks: Program Committee
Entity where activity was carried out: INSTICC **Type of entity:** Technological Centre
Start-End date: 2020 - 2020
- 4** **Name of the activity:** Revista de Informática Teórica e Aplicada
Performed tasks: Reviewer
Entity where activity was carried out: Federal University of Rio Grande do Sul - UFRGS, Brazil
Start-End date: 2020 - 2020
- 5** **Name of the activity:** International Conference on Data Science, Technology and Applications (DATA '15, '16, '17, '18, '19, and '20)
Performed tasks: Program Committee
Entity where activity was carried out: INSTICC **Type of entity:** Technological Centre
Start-End date: 2015 - 2020
- 6** **Name of the activity:** International Symposium on String Processing and Information Retrieval (SPIRE)
Performed tasks: Program Committee
Entity where activity was carried out: Universidad de La Coruña **Type of entity:** University
City of entity: Segovia, Castile and León, Spain
Start-End date: 2019 - 2019
- 7** **Name of the activity:** Congreso Argentino de Ciencias de la Computación (CACIC'16,'17,'18,'19)
Performed tasks: Program Committee
Entity where activity was carried out: RedUNCI
Start-End date: 2016 - 2019
- 8** **Name of the activity:** Premio a la Tesis de Maestría y/o Doctorado en Cartografía, Geodesia y áreas afines
Performed tasks: Scientific Committee
Entity where activity was carried out: Instituto Panamericano de Geografía e Historia (IPGH) **Type of entity:** Foundation
Start-End date: 2015 - 2019



- 9** **Name of the activity:** International Conference of the Chilean Computer Science Society (SCCC'13, '14, '15, '18, 19)
Performed tasks: Program Committee
Entity where activity was carried out: Sociedad Chilena de Ciencias de la Computación
Type of entity: Associations and Groups
Start-End date: 2013 - 2019
- 10** **Name of the activity:** Latin American Theoretical INformatics Symposium (LATIN 2018)
Performed tasks: Auxiliary reviewer
Entity where activity was carried out: Springer
Start-End date: 2018 - 2018
- 11** **Name of the activity:** European Symposium on Algorithms (ESA'18)
Performed tasks: Auxiliary reviewer
Entity where activity was carried out: Aalto University
Type of entity: University
City of entity: Helsinki,
Start-End date: 2018 - 2018
- 12** **Name of the activity:** Web and Wireless Geographical Information Systems (W2GIS)
Performed tasks: Program Committee
Entity where activity was carried out: Universidad de La Coruña
Type of entity: University
City of entity: A Coruña, Galicia, Spain
Start-End date: 2018 - 2018
- 13** **Name of the activity:** International Symposium on String Processing and Information Retrieval (SPIRE'18)
Performed tasks: Program Committee
Entity where activity was carried out: Sociedad Peruana de Computación
Type of entity: Foundation
City of entity: Lima, Peru
Start-End date: 2018 - 2018
- 14** **Name of the activity:** Entropy
Performed tasks: Reviewer
Entity where activity was carried out: MDPI
Start-End date: 2018 - 2018
- 15** **Name of the activity:** Information Systems
Performed tasks: Reviewer
Entity where activity was carried out: Elsevier
Start-End date: 2018 - 2018
- 16** **Name of the activity:** Ingeniare
Performed tasks: Reviewer
Entity where activity was carried out: Universidad de Tarapacá
Start-End date: 2018 - 2018
- 17** **Name of the activity:** Data Compression Conference (DCC'17)
Performed tasks: Auxiliary reviewer
Entity where activity was carried out: IEEE



Start-End date: 2017 - 2017

- 18 Name of the activity:** 15th Scandinavian Symposium and Workshops on Algorithm Theory (SWAT'16)
Performed tasks: Auxiliary reviewer
Entity where activity was carried out: Reykjavík University
City of entity: Reykjavík, Iceland
Start-End date: 2016 - 2016
- 19 Name of the activity:** 9th International Conference on Similarity Search and Applications (SISAP'16)
Performed tasks: Auxiliary reviewer
Entity where activity was carried out: National Institute of Informatics
City of entity: Tokyo, Japan
Start-End date: 2016 - 2016
- 20 Name of the activity:** Information Retrieval
Performed tasks: Reviewer
Entity where activity was carried out: Springer
Start-End date: 2016 - 2016
- 21 Name of the activity:** WIRES journal
Performed tasks: Reviewer
Entity where activity was carried out: Wiley
Start-End date: 2016 - 2016
- 22 Name of the activity:** Symposium on String Processing and Information Retrieval (SPIRE'15)
Performed tasks: Auxiliary reviewer
Entity where activity was carried out: King's College London
City of entity: London, United Kingdom
Start-End date: 2015 - 2015
Type of entity: University
- 23 Name of the activity:** International ACM SIGIR Conference of R&D in Information Retrieval (SIGIR '14 and '15)
Performed tasks: Auxiliary reviewer
Entity where activity was carried out: ACM
Start-End date: 2014 - 2015
Type of entity: Associations and Groups
- 24 Name of the activity:** Internal research projects call
Performed tasks: External reviewer
Entity where activity was carried out: Universidad de Los Lagos
City of entity: Osorno, Chile
Start date: 2018
- 25 Name of the activity:** Data Compression Conference (DCC'14)
Performed tasks: Auxiliary reviewer
Entity where activity was carried out: IEEE
Start date: 2014



- 26** **Name of the activity:** Internal research projects call
Performed tasks: External reviewer
Entity where activity was carried out: Universidad del Bío-Bío **Type of entity:** University
City of entity: Concepción, Chile
Start date: 2014
- 27** **Name of the activity:** Fondecyt iniciación 2014
Performed tasks: Reviewer
Entity where activity was carried out: Conicyt - Fondecyt program
City of entity: Chile
Start date: 2014
- 28** **Name of the activity:** Annual Symposium on Combinatorial Pattern Matching (CPM'13)
Performed tasks: Auxiliary reviewer
Entity where activity was carried out: Karlsruhe Institute of Technology
Start date: 2013
- 29** **Name of the activity:** Latin American Remote Sensing Week
Performed tasks: Program Committee
Entity where activity was carried out: SAF - Chile
Start date: 2013
- 30** **Name of the activity:** Computer Standards & Interfaces
Performed tasks: Reviewer
Entity where activity was carried out: Elsevier
Start date: 2013
- 31** **Name of the activity:** European Symposium on Algorithms (ESA'12)
Performed tasks: Auxiliary reviewer
Entity where activity was carried out: ALGO
Start date: 2012
- 32** **Name of the activity:** 4th International Workshop on Semantic and Conceptual Issues in GIS (SeCoGIS 2010)
Performed tasks: Program Committee
Entity where activity was carried out: International Conference on Conceptual Modeling (ER 2010)
Start date: 2010
- 33** **Name of the activity:** International Conference on Enterprise Information Systems
Performed tasks: Auxiliary reviewer
Entity where activity was carried out: INSTICC
Frequency of the activity: 4
Start date: 2007
- 34** **Name of the activity:** Jornadas de Ingeniería del Software y Bases de Datos (JISBD)
Performed tasks: Auxiliary reviewer
Entity where activity was carried out: Sistedes, SCI
Frequency of the activity: 3
Start date: 2007

Other achievements

Stays in public or private R&D centres

- 1** **Entity:** Universidad de La Coruña **Type of entity:** University
City of entity: A Coruña, Spain
Start-End date: 14/07/2018 - 11/08/2018
Goals of the stay: Guest
- 2** **Entity:** Universidad de La Coruña **Type of entity:** University
City of entity: A Coruña, Spain
Start-End date: 25/01/2017 - 24/02/2017
Goals of the stay: Guest
- 3** **Entity:** University of Helsinki **Type of entity:** University
Faculty, institute or centre: Department of Computer Science
City of entity: Helsinki, Finland
Start-End date: 01/07/2014 - 16/07/2014
Goals of the stay: Guest
- 4** **Entity:** Aristotle University **Type of entity:** University
Faculty, institute or centre: Data Engineering Lab. Department of Informatics
City of entity: Thessaloniki, Greece
Start-End date: 25/09/2012 - 26/10/2012
Goals of the stay: Post-doctoral
- 5** **Entity:** University of Waterloo **Type of entity:** University
Faculty, institute or centre: David R. Cheriton School of Computer Science
City of entity: Waterloo, Canada
Start-End date: 01/01/2011 - 30/04/2012
Goals of the stay: Post-doctoral
- 6** **Entity:** University of Waterloo **Type of entity:** University
Faculty, institute or centre: David R. Cheriton School of Computer Science
City of entity: Waterloo, Canada
Start-End date: 15/09/2010 - 15/12/2010
Goals of the stay: Post-doctoral
- 7** **Entity:** Universidad de Chile **Type of entity:** University
Faculty, institute or centre: Departamento de Ciencias de la Computación
City of entity: Santiago de Chile, Chile
Start-End date: 25/02/2010 - 15/06/2010
Goals of the stay: Post-doctoral
- 8** **Entity:** Universidad de Chile **Type of entity:** University
Faculty, institute or centre: Departamento de Ciencias de la Computación
City of entity: Santiago de Chile, Chile
Start-End date: 01/10/2009 - 17/12/2009



Goals of the stay: Post-doctoral

- 9** **Entity:** Universidad de Chile **Type of entity:** University
Faculty, institute or centre: Departamento de Ciencias de la Computación
City of entity: Santiago de Chile, Chile
Start-End date: 17/06/2009 - 17/09/2009
Goals of the stay: Doctorate

Obtained grants and scholarships

- 1** **Name of the grant:** Short-Term Scientific Mission (STSM)
Aims: Research stay
Awarding entity: Action Cost - EU **Type of entity:** State agency
Conferral date: 2012 **Duration:** 1 month
Entity where activity was carried out: Aristotle University (Greece)
- 2** **Name of the grant:** Ángeles Alvariño
Aims: Post-doctoral
Awarding entity: XUNTA DE GALICIA
Conferral date: 2010 **Duration:** 3 years
Entity where activity was carried out: Universidad de La Coruña
Faculty, institute or centre: Facultad de Informática
- 3** **Name of the grant:** María Barbeito
Aims: Pre-doctoral
Awarding entity: XUNTA DE GALICIA
Conferral date: 2009 **Duration:** 1 year
Entity where activity was carried out: Universidad de La Coruña
Faculty, institute or centre: Facultad de Informática
- 4** **Name of the grant:** Tercer ciclo
Aims: Pre-doctoral
Awarding entity: XUNTA DE GALICIA
Conferral date: 2006 **Duration:** 2 years
Entity where activity was carried out: Universidad de La Coruña
Faculty, institute or centre: Facultad de Informática

Co-operation networks

Name of the network: Red Gestión de Datos
Identification of the network: TIN2008-04453-E/TIN
Start date: 03/2009 **Duration:** 1 year



Prizes, mentions and distinctions

- 1** **Description:** Distinction awarded for the contribution to the improvement of public education
Awarding entity: Municipality of Concepción **Type of entity:** Municipality
City awarding entity: Concepción, Chile
Conferral date: 06/09/2019
- 2** **Description:** Asignación Académica
Awarding entity: Universidad de Concepción
City awarding entity: Concepción, Chile
Conferral date: 01/03/2019
Recognition linked: The University of Concepción assigns a 20% extra salary for three years to those academics with outstanding performance. This performance is measured in terms of research activities (publications, projects, etc.), teaching (courses, evaluations of the students, seminars, etc.) and academic extension activities.
- 3** **Description:** Asignación Académica
Awarding entity: Universidad de Concepción
City awarding entity: Concepción, Chile
Conferral date: 29/12/2015
Recognition linked: The University of Concepción assigns a 20% extra salary for three years to those academics with outstanding performance. This performance is measured in terms of research activities (publications, projects, etc.), teaching (courses, evaluations of the students, seminars, etc.) and academic extension activities.

Summary of other achievements

- 1** **Description of the achievement:** Torneo de Programación UdeC
Accrediting entity: Universidad de Concepción **Type of entity:** University
City accrediting entity: Concepción,
Conferral date: 06/07/2019
- 2** **Description of the achievement:** ICPC (programming contest). Local teams coach
Accrediting entity: ICPC Foundation
Conferral date: 2019
- 3** **Description of the achievement:** OCI (programming contest). National coordinator
Accrediting entity: Sociedad Chilena de Ciencias de la Computación
City accrediting entity: Chile
Conferral date: 2019
- 4** **Description of the achievement:** Torneo de Programación UdeC
Accrediting entity: Universidad de Concepción **Type of entity:** University
City accrediting entity: Concepción,
Conferral date: 16/06/2018



- 5** **Description of the achievement:** ACM-ICPC (programming contest). Local teams coach
Accrediting entity: ACM
Conferral date: 2018
- 6** **Description of the achievement:** OCI (programming contest). National coordinator
Accrediting entity: Sociedad Chilena de Ciencias de la Computación
City accrediting entity: Chile
Conferral date: 2018
- 7** **Description of the achievement:** Torneo de Programación UdeC
Accrediting entity: Universidad de Concepción **Type of entity:** University
City accrediting entity: Concepción,
Conferral date: 30/06/2017
- 8** **Description of the achievement:** ACM-ICPC (programming contest). Local teams coach
Accrediting entity: ACM
Conferral date: 2017
- 9** **Description of the achievement:** OCI (programming contest). National coordinator
Accrediting entity: Sociedad Chilena de Ciencias de la Computación
City accrediting entity: Chile
Conferral date: 2017
- 10** **Description of the achievement:** ACM-ICPC (programming contest). Local teams coach
Accrediting entity: ACM
Conferral date: 2016
- 11** **Description of the achievement:** OCI (programming contest). National coordinator
Accrediting entity: Sociedad Chilena de Ciencias de la Computación
City accrediting entity: Chile
Conferral date: 2016
- 12** **Description of the achievement:** ACM-ICPC (programming contest). Local teams coach
Accrediting entity: ACM
Conferral date: 2015
- 13** **Description of the achievement:** OCI (programming contest). National team coach
Accrediting entity: Sociedad Chilena de Ciencias de la Computación
City accrediting entity: Chile
Conferral date: 2015
- 14** **Description of the achievement:** ACM-ICPC (programming contest). Local teams coach
Accrediting entity: ACM
Conferral date: 2014
- 15** **Description of the achievement:** OCI (programming contest). Local team coach
Accrediting entity: Sociedad Chilena de Ciencias de la Computación
Conferral date: 2014



- 16** **Description of the achievement:** Dagstuhl Seminar 13232 on Indexes and Computation over Compressed Structured Data
Accrediting entity: Schloss Dagstuhl **Type of entity:** R&D Centre
City accrediting entity: Saarbrücken, Germany
Conferral date: 02/06/2013
- 17** **Description of the achievement:** ACM-ICPC (programming contest). Local teams coach
Accrediting entity: ACM
Conferral date: 2013
- 18** **Description of the achievement:** OCI (programming contest). Local team coach
Accrediting entity: Sociedad Chilena de Ciencias de la Computación
Conferral date: 2013
- 19** **Description of the achievement:** Partner
Accrediting entity: Enxenio S.L. **Type of entity:** Business
City accrediting entity: A Coruña, Galicia, Spain
Conferral date: 2008