



Luis Perez Sanz

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**Luis Perez Sanz**

Surname(s): **Perez Sanz**
 Name: **Luis**
 Spanish ID number: **05379987B**
 Date of birth: **23/09/1961**
 Sex: **Man**
 Nationality: **Spain**
 Country of birth: **Spain**
 Autonomous Community /Region of birth: **Otros**
 City of birth: **Otra**
 Postcode: **28040**
 Contact city: **Madrid**
 Contact country: **Spain**
 Autonomous Community /Contact region: **Community of Madrid**
 Land line phone: **910675973**
 Email address: **l.perez@upm.es**
 Mobile phone: **639686745**

Current professional situation only if working (not if unemployed)

Name of the entity: Universidad Politécnica de Madrid **Type of body:** University
Category / Title of position or responsibility: Profesor Titular de Universidad **Educational management:** Yes
City of job: Madrid, Community of Madrid, Spain
Start date: 15/03/2013
Modality of the contract: Civil servant **Type of dedication:** Full time

Positions held before current job

	Name of the entity	Category / position or responsibility	Start date
1	Escuela Universitaria de Ingeniería Técnica Aeronáutica, UPM	Subdirector de Investigación y Postgrado	20/12/2010
2	Universidad Politécnica de Madrid	Subdirector de Escuela Universitaria de Grado, Postgrado e Investigación	20/12/2006
3	Universidad Politécnica de Madrid	Profesor Titular de Escuela Universitaria	15/11/1993
4	Universidad Politécnica de Madrid	Profesor Titular de Escuela Universitaria	05/09/1990
5	Universidad Politécnica de Madrid	Profesor Titular de Escuela Universitaria Interino	01/10/1987
6	Universidad Politécnica de Madrid	Profesor Encargado de Curso	01/10/1985
7	Universidad Politécnica de Madrid	Profesor Encargado de Curso	01/03/1985
8	Universidad Politécnica de Madrid	Profesor Encargado de Curso	16/11/1984



- 1** **Name of the entity:** Escuela Universitaria de Ingeniería Técnica Aeronáutica, UPM **Type of body:** University
City of job: Madrid, Community of Madrid, Spain
Category / position or responsibility: Subdirector de Investigación y Postgrado **Teaching Management:** No
Phone: 913367490 **Email address:** l.perez@upm.es
Start date: 20/12/2010 **Duration:** 4 years - 9 months
Type of dedication: Full time
- 2** **Name of the entity:** Universidad Politécnica de Madrid **Type of body:** University
City of job: Madrid, Community of Madrid, Spain
Category / position or responsibility: Subdirector de Escuela Universitaria de Grado, Postgrado e Investigación **Teaching Management:** No
Start date: 20/12/2006 **Duration:** 4 years
Type of dedication: Full time
- 3** **Name of the entity:** Universidad Politécnica de Madrid **Type of body:** University
City of job: Madrid, Community of Madrid, Spain
Category / position or responsibility: Profesor Titular de Escuela Universitaria **Teaching Management:** Yes
Start date: 15/11/1993 **Duration:** 19 years - 4 months
Type of dedication: Full time
- 4** **Name of the entity:** Universidad Politécnica de Madrid **Type of body:** University
City of job: Madrid, Community of Madrid, Spain
Category / position or responsibility: Profesor Titular de Escuela Universitaria **Teaching Management:** Yes
Start date: 05/09/1990 **Duration:** 3 years - 2 months
Type of dedication: Part time
- 5** **Name of the entity:** Universidad Politécnica de Madrid **Type of body:** University
City of job: Madrid, Community of Madrid, Spain
Category / position or responsibility: Profesor Titular de Escuela Universitaria Interino **Teaching Management:** Yes
Start date: 01/10/1987 **Duration:** 2 years - 11 months
Type of dedication: Part time
- 6** **Name of the entity:** Universidad Politécnica de Madrid **Type of body:** University
City of job: Madrid, Community of Madrid, Spain
Category / position or responsibility: Profesor Encargado de Curso **Teaching Management:** Yes
Start date: 01/10/1985 **Duration:** 2 years
Type of dedication: Full time

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Name of the entity: Universidad Politécnica de Madrid
Type of body: University
City of job: Madrid, Community of Madrid, Spain
Category / position or responsibility: Profesor Encargado de Curso
Teaching Management: Yes
Start date: 01/03/1985
Duration: 7 months
Type of dedication: Full time

8 **Name of the entity:** Universidad Politécnica de Madrid
Type of body: University
City of job: Madrid, Community of Madrid, Spain
Category / position or responsibility: Profesor Encargado de Curso
Teaching Management: Yes
Start date: 16/11/1984
Duration: 3 months
Type of dedication: Full time



Training received

University education

Diplomas, degrees and engineering degrees

- 1 Official University Qualification:** Higher degree
Name of qualification: Licenciado en Ciencias Físicas
City of qualification: Madrid, Community of Madrid, Spain
Entity issuing the qualification: Universidad Nacional de Educación a Distancia
Type of body: University
Date of qualification: 08/10/1993
- 2 Official University Qualification:** Higher degree
Name of qualification: Ingeniero Técnico Aeronáutico - Navegación y Circulación Aérea
City of qualification: Extra-Regio, Spain
Entity issuing the qualification: universidad politecnica de madrid
Type of body: University
Date of qualification: 02/11/1984

Doctorates

Doctorate: Doctor Ingeniero en Informática
University issuing the title: Universidad Nacional de Educación a Distancia
City of qualification: Madrid, Community of Madrid, Spain
Date of qualification: 04/07/2005
Thesis title: Modelo para la evaluación de los efectos multitraectoria producidos por un foco reflector en un receptor GPS
Director of thesis: Francisco Javier Sáez Nieto
Co-director of thesis: José Luis Fernández Marrón
Mark: Sobresaliente Cum Laude

Teaching experience

Teaching work

- 1 Type of teaching:** Official teaching
Name of subject/ name of course: Sistemas de Navegacion Aerea I
Type of programme: Technical engineering
Type of teaching: In person theory
Type of subject: Core
Title: Ingeniero Tecnico Aeronautico, Especialidad en Aeronavegacion
Course of the qualification taught: 2010-11
Hours/credits: Credits



Number of hours/credits: 9

Body where project took place: Universidad
Politécnica de Madrid

Type of body: University

Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)

2 Type of teaching: Official teaching

Name of subject/ name of course: Sistemas de Navegacion Aerea I

Type of programme: Technical engineering

Type of teaching: In person theory

Type of subject: Core

Title: Ingeniero Tecnico Aeronautico, Especialidad en Aeronavegacion

Course of the qualification taught: 2011-12

Hours/credits: Credits

Number of hours/credits: 9

Body where project took place: Universidad
Politécnica de Madrid

Type of body: University

Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)

3 Type of teaching: Official teaching

Name of subject/ name of course: Sistemas de Navegacion Aerea I

Type of programme: Technical engineering

Type of teaching: In person theory

Type of subject: Core

Title: Ingeniero Tecnico Aeronautico, Especialidad en Aeronavegacion

Course of the qualification taught: 2012-13

Hours/credits: Credits

Number of hours/credits: 9

Body where project took place: Universidad
Politécnica de Madrid

Type of body: University

Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)

4 Type of teaching: Official teaching

Name of subject/ name of course: Navegación Aérea y Cartografía

Type of programme: Others

Type of teaching: In person theory

Type of subject: Obligatory

Title: Grado en Gestión y Operaciones del Transporte Aéreo

Hours/credits: Credits

Number of hours/credits: 6

Body where project took place: Universidad
Politécnica de Madrid

Type of body: University

Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)

5 Type of teaching: Official teaching

Name of subject/ name of course: Desarrollo del Sistema de Navegación Aérea

Type of programme: Master's degree

Type of teaching: In person theory

Type of subject: Obligatory

Title: Master Universitario en Ingeniería Aeronáutica

Course of the qualification taught: 2014-17

Hours/credits: Credits

Number of hours/credits: 6

Body where project took place: Universidad
Politécnica de Madrid

Type of body: University

Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)



- 6** **Type of teaching:** Official teaching
Name of subject/ name of course: Desarrollo del Sistema de Navegación Aérea
Type of programme: Master's degree **Type of teaching:** In person theory
Type of subject: Obligatory
Title: Master Universitario en Ingeniería Aeronáutica
Course of the qualification taught: 2017-18
Hours/credits: Credits
Number of hours/credits: 6
Body where project took place: Universidad **Type of body:** University
Politécnica de Madrid
Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)
- 7** **Type of teaching:** Official teaching
Name of subject/ name of course: Gestión de la Separación en Atm
Type of programme: Master's degree **Type of teaching:** In person theory
Type of subject: Optional
Title: Master Universitario en Sistemas del Transporte Aéreo
Course of the qualification taught: 2014-15
Hours/credits: Credits
Number of hours/credits: 5
Body where project took place: Universidad **Type of body:** University
Politécnica de Madrid
Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)
- 8** **Type of teaching:** Official teaching
Name of subject/ name of course: Gestión de la Separación en Atm
Type of programme: Master's degree **Type of teaching:** In person theory
Type of subject: Optional
Title: Master Universitario en Sistemas del Transporte Aéreo
Course of the qualification taught: 2015-17
Hours/credits: Credits
Number of hours/credits: 5
Body where project took place: Universidad **Type of body:** University
Politécnica de Madrid
Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)
- 9** **Type of teaching:** Official teaching
Name of subject/ name of course: Gestión de la Separación en Atm
Type of programme: Master's degree **Type of teaching:** In person theory
Type of subject: Optional
Title: Master Universitario en Sistemas del Transporte Aéreo
Course of the qualification taught: 2017-18
Hours/credits: Credits
Number of hours/credits: 5
Body where project took place: Universidad **Type of body:** University
Politécnica de Madrid
Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)



- 10** **Type of teaching:** Official teaching
Name of subject/ name of course: Complementos de Introduccion a la Navegacion Aerea
Type of programme: Master's degree **Type of teaching:** In person theory
Type of subject: Others
Title: Master Universitario en Ingenieria Aeronautica
Course of the qualification taught: 2014-17
Hours/credits: Credits
Number of hours/credits: 2
Body where project took place: Universidad **Type of body:** University
Politécnica de Madrid
Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)
- 11** **Type of teaching:** Official teaching
Name of subject/ name of course: Sistemas de Navegacion Aerea
Type of programme: Others **Type of teaching:** In person theory
Type of subject: Optional
Title: Grado en Ingenieria Aeroespacial
Course of the qualification taught: 2012-14
Hours/credits: Credits
Number of hours/credits: 4,5
Body where project took place: Universidad **Type of body:** University
Politécnica de Madrid
Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)
- 12** **Type of teaching:** Official teaching
Name of subject/ name of course: Introduccion a la Navegacion Aerea
Type of programme: Others **Type of teaching:** In person theory
Type of subject: Optional
Title: Grado en Ingenieria Aeroespacial
Course of the qualification taught: 2012-13
Hours/credits: Credits
Number of hours/credits: 3
Body where project took place: Universidad **Type of body:** University
Politécnica de Madrid
Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)
- 13** **Type of teaching:** Official teaching
Name of subject/ name of course: Introduccion a la Navegacion Aerea
Type of programme: Others **Type of teaching:** In person theory
Type of subject: Optional
Title: Grado en Ingenieria Aeroespacial
Course of the qualification taught: 2016-18
Hours/credits: Credits
Number of hours/credits: 3
Body where project took place: Universidad **Type of body:** University
Politécnica de Madrid
Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)
- 14** **Type of teaching:** Official teaching
Name of subject/ name of course: Desarrollo y Explotacion del Sistema de Navegacion Aerea
Type of programme: Technical engineering **Type of teaching:** In person theory



Type of subject: Obligatory

Title: Ingeniero Tecnico Aeronautico, Especialidad en Aeronavegacion

Course of the qualification taught: 2010-11

Hours/credits: Credits

Number of hours/credits: 6

Body where project took place: Universidad
Politécnica de Madrid

Type of body: University

Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)

15 Type of teaching: Official teaching

Name of subject/ name of course: Desarrollo y Explotacion del Sistema de Navegacion Aerea

Type of programme: Technical engineering

Type of teaching: In person theory

Type of subject: Obligatory

Title: Ingeniero Tecnico Aeronautico, Especialidad en Aeronavegacion

Course of the qualification taught: 2011-12

Hours/credits: Credits

Number of hours/credits: 6

Body where project took place: Universidad
Politécnica de Madrid

Type of body: University

Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)

16 Type of teaching: Official teaching

Name of subject/ name of course: Gestion del Transito Aereo

Type of programme: Others

Type of teaching: In person theory

Type of subject: Optional

Title: Grado en Ingenieria Aeroespacial

Course of the qualification taught: 2013-14

Hours/credits: Credits

Number of hours/credits: 6

Body where project took place: Universidad
Politécnica de Madrid

Type of body: University

Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)

17 Type of teaching: Official teaching

Name of subject/ name of course: Gestion del Transito Aereo

Type of programme: Others

Type of teaching: In person theory

Type of subject: Optional

Title: Grado en Ingenieria Aeroespacial

Course of the qualification taught: 2014-16

Hours/credits: Credits

Number of hours/credits: 6

Body where project took place: Universidad
Politécnica de Madrid

Type of body: University

Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)

18 Type of teaching: Official teaching

Name of subject/ name of course: Gestion del Transito Aereo

Type of programme: Others

Type of teaching: In person theory

Type of subject: Optional

Title: Grado en Ingenieria Aeroespacial

Course of the qualification taught: 2016-17



Hours/credits: Credits

Number of hours/credits: 6

Body where project took place: Universidad
Politécnica de Madrid

Type of body: University

Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)

19 Type of teaching: Official teaching

Name of subject/ name of course: Gestion del Transito Aereo

Type of programme: Others

Type of teaching: In person theory

Type of subject: Optional

Title: Grado en Ingenieria Aeroespacial

Course of the qualification taught: 2017-18

Hours/credits: Credits

Number of hours/credits: 6

Body where project took place: Universidad
Politécnica de Madrid

Type of body: University

Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)

20 Type of teaching: Official teaching

Name of subject/ name of course: Gestion del Espacio Aereo

Type of programme: Technical engineering

Type of teaching: In person theory

Type of subject: Core

Title: Ingeniero Tecnico Aeronautico, Especialidad en Aeronavegacion

Course of the qualification taught: 2010-11

Hours/credits: Credits

Number of hours/credits: 7,5

Body where project took place: Universidad
Politécnica de Madrid

Type of body: University

Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)

21 Type of teaching: Official teaching

Name of subject/ name of course: Gestion del Espacio Aereo

Type of programme: Technical engineering

Type of teaching: In person theory

Type of subject: Core

Title: Ingeniero Tecnico Aeronautico, Especialidad en Aeronavegacion

Course of the qualification taught: 2011-12

Hours/credits: Credits

Number of hours/credits: 7,5

Body where project took place: Universidad
Politécnica de Madrid

Type of body: University

Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)

22 Type of teaching: Official teaching

Name of subject/ name of course: Introduccion a la Navegacion Aerea

Type of programme: Others

Type of teaching: In person theory

Type of subject: Optional

Title: Grado en Ingenieria Aeroespacial

Course of the qualification taught: 2013-15

Hours/credits: Credits

Number of hours/credits: 3

Type of body: University



Body where project took place: Universidad
Politécnica de Madrid

Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)

23 **Type of teaching:** Official teaching

Name of subject/ name of course: Introduccion a la Navegacion Aerea

Type of programme: Others

Type of teaching: In person theory

Type of subject: Optional

Title: Grado en Ingenieria Aeroespacial

Course of the qualification taught: 2015-18

Hours/credits: Credits

Number of hours/credits: 3

Body where project took place: Universidad
Politécnica de Madrid

Type of body: University

Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)

24 **Type of teaching:** Official teaching

Name of subject/ name of course: Desarrollo del Concepto de Espacio Aereo

Type of programme: Master's degree

Type of teaching: In person theory

Type of subject: Optional

Title: Master Universitario en Sistemas del Transporte Aereo

Course of the qualification taught: 2014-15

Hours/credits: Credits

Number of hours/credits: 5

Body where project took place: Universidad
Politécnica de Madrid

Type of body: University

Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)

25 **Type of teaching:** Official teaching

Name of subject/ name of course: Desarrollo del Concepto de Espacio Aereo

Type of programme: Master's degree

Type of teaching: In person theory

Type of subject: Optional

Title: Master Universitario en Sistemas del Transporte Aereo

Course of the qualification taught: 2015-17

Hours/credits: Credits

Number of hours/credits: 5

Body where project took place: Universidad
Politécnica de Madrid

Type of body: University

Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)

26 **Type of teaching:** Official teaching

Name of subject/ name of course: Desarrollo del Concepto de Espacio Aereo

Type of programme: Master's degree

Type of teaching: In person theory

Type of subject: Optional

Title: Master Universitario en Sistemas del Transporte Aereo

Course of the qualification taught: 2017-18

Hours/credits: Credits

Number of hours/credits: 5

Body where project took place: Universidad
Politécnica de Madrid

Type of body: University

Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)



- 27** **Type of teaching:** Official teaching
Name of subject/ name of course: Desarrollo y Validacion del Sistema Atm
Type of programme: Master's degree **Type of teaching:** In person theory
Type of subject: Optional
Title: Master Universitario en Ingenieria Aeronautica
Course of the qualification taught: 2015-17
Hours/credits: Credits
Number of hours/credits: 5
Body where project took place: Universidad **Type of body:** University
Politécnica de Madrid
Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)
- 28** **Type of teaching:** Official teaching
Name of subject/ name of course: Desarrollo y Validacion del Sistema Atm
Type of programme: Master's degree **Type of teaching:** In person theory
Type of subject: Optional
Title: Master Universitario en Ingenieria Aeronautica
Course of the qualification taught: 2017-18
Hours/credits: Credits
Number of hours/credits: 5
Body where project took place: Universidad **Type of body:** University
Politécnica de Madrid
Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)
- 29** **Type of teaching:** Official teaching
Name of subject/ name of course: Control y Gestion del Transito Aereo
Type of programme: Others **Type of teaching:** In person theory
Type of subject: Obligatory
Title: Grado en Ingenieria Aeroespacial
Course of the qualification taught: 2016-17
Hours/credits: Credits
Number of hours/credits: 3
Body where project took place: Universidad **Type of body:** University
Politécnica de Madrid
Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)
- 30** **Type of teaching:** Official teaching
Name of subject/ name of course: Control y Gestion del Transito Aereo
Type of programme: Others **Type of teaching:** In person theory
Type of subject: Obligatory
Title: Grado en Ingenieria Aeroespacial
Course of the qualification taught: 2017-18
Hours/credits: Credits
Number of hours/credits: 3
Body where project took place: Universidad **Type of body:** University
Politécnica de Madrid
Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)



- 31** **Type of teaching:** Official teaching
Name of subject/ name of course: Complementos de Gestion del Transito Aereo
Type of programme: Master's degree **Type of teaching:** In person theory
Type of subject: Others
Title: Master Universitario en Ingenieria Aeronautica
Course of the qualification taught: 2014-17
Hours/credits: Credits
Number of hours/credits: 4,5
Body where project took place: Universidad **Type of body:** University
Politécnica de Madrid
Department: Sistemas Aeroespaciales, Transporte Aéreo y Aeropuertos (N)

Directing of doctoral theses or final projects

- 1** **Title of: DT, ECP, ASD:** PLANIFICACIÓN DE TRAYECTORIAS 4D DE AERONAVES EN ENTORNOS MULTIOBJETIVO
Type of project: Doctoral thesis
Mark: Sobresaliente cum laude
Date of reading: 21/07/2017
- 2** **Title of: DT, ECP, ASD:** Análisis de algoritmos para el posicionamiento de aeronaves mediante respuestas SSR utilizando recepción omnidireccional
Type of project: Doctoral thesis
Mark: Sobresaliente cum laude
Date of reading: 27/11/2015
- 3** **Title of: DT, ECP, ASD:** IMPACTO EN LA SEGURIDAD OPERACIONAL POR LA INTRODUCCIÓN DE NUEVOS PROCEDIMIENTOS EN CABINA DEBIDO A LA IMPLANTACIÓN DE FUTUROS CONCEPTOS DE SEPARACIÓN ENTRE AERONAVES EN LA FASE DE VUELOS EN RUTA
Type of project: Doctoral thesis
Mark: Notable
Date of reading: 19/06/2015
- 4** **Title of: DT, ECP, ASD:** ANALYSIS OF THE GEOMETRIC ALTIMETRY TO SUPPORT AIRCRAFT OPTIMAL TRAJECTORIES WITHIN THE FUTURE 4D TRAJECTORY MANAGEMENT
Type of project: Doctoral thesis
Mark: Sobresaliente
Date of reading: 03/06/2015
- 5** **Title of: DT, ECP, ASD:** ANALYSIS OF THE GEOMETRIC ALTIMETRY TO SUPPORT AIRCRAFT OPTIMAL TRAJECTORIES WITHIN THE FUTURE 4D TRAJECTORY MANAGEMENT
Type of project: Doctoral thesis
Mark: Sobresaliente
Date of reading: 03/12/2014



Participation in projects for innovation in teaching (plans and research teams related with EEES).

- 1 **Name of the project:** Desarrollo de herramientas de simulación para navegación aérea y sistemas embarcados
Number of participants: 5
Funding body: Escuela Técnica Superior de Ingeniería Aeronáutica y del Espacio **Type of body:** University
Participation end date: 30/11/2015
- 2 **Name of the project:** Desarrollo colaborativo de herramientas de simulación de trayectorias de aeronaves
Number of participants: 5
- 3 **Name of the project:** Consolidación de entornos virtuales de simulación de Navegación aérea y migración hacia una plataforma e-lab como soporte a la docencia en el grado
Number of participants: 4
- 4 **Name of the project:** Integración de actividades docentes de asignaturas de Aeronavegación a través de entornos virtuales de simulación en internet
Number of participants: 4

Experience in Science and Technology

Participation in research, development or innovation groups / teams

Name (if applicable): Navegación Aérea
Name of the head researcher of the group (HR): Luis Perez Sanz
City: Madrid, Community of Madrid, Spain
Body the group belongs to: Universidad Politécnica de Madrid
Start date: 14/06/2005

Scientific or technological activity

Participation in R&D&I projects funded in competitive tenders by public or private bodies

- 1 **Name of the project:** Estudio aeronáutico sobre la afección del plan urbanístico Madrid Nuevo Norte sobre la operación del aeropuerto de Madrid Barajas Adolfo Suárez
City: Spain
Head(s) researcher(s): Luis Perez Sanz
Number of participating researchers: 2
Funding body or bodies: PROINTEC S.A.
Code according to the funding body: 43824820012
Start date: 05/04/2018 **Duration of the project:** 4 months
Total amount: 9.250



- 2** **Name of the project:** Relación de actividades para la implementación de operaciones instrumentales en el aeropuerto de la Seu de Urgel
City: Spain
Head(s) researcher(s): Luis Perez Sanz
Number of participating researchers: 3
Funding body or bodies: Aeroports de Catalunya
Code according to the funding body: 43824820004
Start date: 15/02/2018 **Duration of the project:** 11 months
Total amount: 32,18
- 3** **Name of the project:** Research Infrastructures, Needs Gaps and Overlaps (RINGO)
City: Unknown
Head(s) researcher(s): Luis Perez Sanz
Number of participating researchers: 2
Funding body or bodies: Comisión Europea
Code according to the funding body: EH1714100069
Start date: 01/03/2017 **Duration of the project:** 3 years
Total amount: 145.485
- 4** **Name of the project:** RINGO: Research Infrastructures - Needs, Gaps and Overlaps
City: Unknown
Head(s) researcher(s): Luis Perez Sanz
Number of participating researchers: 2
Start date: 03/02/2017
- 5** **Name of the project:** Definición del concepto operacional para la provisión de separación de aeronaves en ruta y TMA en el entorno de ¿Trajectory Based Operations¿.
City: Spain
Head(s) researcher(s): Luis Perez Sanz
Number of participating researchers: 1
Funding body or bodies: INECO
Code according to the funding body: P100115991
Start date: 01/01/2016
Total amount: 63.000
- 6** **Name of the project:** ACTIVIDADES LPV DENTRO DEL PROYECTO BEYOND
City: Unknown
Head(s) researcher(s): Luis Perez Sanz
Number of participating researchers: 1
Funding body or bodies: Unión Europea a través de Ineco
Code according to the funding body: P1514150372
Start date: 01/07/2015 **Duration of the project:** 2 years - 6 months
Total amount: 22.000
- 7** **Name of the project:** Definición del concepto operacional para la provisión de separación de aeronaves en ruta y TMA en el entorno de ¿Trajectory Based Operations¿.
City: Spain
Head(s) researcher(s): Luis Perez Sanz
Number of participating researchers: 1
Funding body or bodies: INECO
Code according to the funding body: P100115991



Start date: 01/01/2015

Total amount: 63.000

- 8** **Name of the project:** Consolidación de entornos virtuales de simulación de Navegación aérea y migración hacia una plataforma e-lab como soporte a la docencia en el grado de Ingeniería Aeroespacial.
City: Unknown
Head(s) researcher(s): Rosa Maria Arnaldo Valdes
Number of participating researchers: 4
Funding body or bodies: upm
Code according to the funding body: PIE 2011
Start date: 01/09/2011
Total amount: 4.700
- 9** **Name of the project:** INTEGRACION DE ACTIVIDADES DOCENTES DE ASIGNATURAS DE AERONAVEGACION A TRAVES DE ENTORNOS VIRTUALES DE SIMULACION EN INTERNET
City: Unknown
Head(s) researcher(s): Rosa Maria Arnaldo Valdes
Number of participating researchers: 4
Funding body or bodies: Universidad Politécnica de Madrid
Code according to the funding body: PIE 2010
Start date: 02/07/2010
Total amount: 5.800
- 10** **Name of the project:** DESARROLLO DEL PROGRAMA DE INVESTIGACION SOBRE LA IMPLANTACION DE PROCEDIMIENTOS INSTRUMENTALES DE VUELO EN EL AREA TERMINAL (TMA) BASADOS EN PRESTACIONES AVANZA
City: Unknown
Head(s) researcher(s): Luis Perez Sanz
Number of participating researchers: 1
Funding body or bodies: INECO
Code according to the funding body: P0801151048
Total amount: 0
- 11** **Name of the project:** Estudio preliminar de viabilidad para la operacion visual e instrumental de un aeropuerto en el t¿ino municipal de Huelva
City: Unknown
Head(s) researcher(s): Luis Perez Sanz
Number of participating researchers: 1
Funding body or bodies: PROINTEC
Code according to the funding body: 43721830043
Total amount: 0
- 12** **Name of the project:** Informe técnico sobre el aeropuerto internacional Región de Murcia, proyecto espacio aéreo, procedimientos operativos y coordinación.
City: Unknown
Head(s) researcher(s): Luis Perez Sanz
Number of participating researchers: 1
Funding body or bodies: PROINTEC
Code according to the funding body: 43721810136
Total amount: 0



- 13** **Name of the project:** Informe t cnico sobre valoraci n del dise o de espacio a ero del aer o de Getafe
City: Unknown
Head(s) researcher(s): Luis Perez Sanz
Number of participating researchers: 1
Funding body or bodies: SENASA
Code according to the funding body: 43721830044
Total amount: 0
- 14** **Name of the project:** PREPARACI N E IMPARTICI N DE UN CURSO TE RICO-PR CTICO DE 100 HORAS DE DURACI N SOBRE EL DISE O Y CONSTRUCCI N DE PROCEDIMIENTOS DE VUELO INSTRUMENTAL BASADOS EN
City: Unknown
Head(s) researcher(s): Luis Perez Sanz
Number of participating researchers: 2
Funding body or bodies: SENASA
Code according to the funding body: P100115505
Total amount: 0
- 15** **Name of the project:** SESAR WP-E HALA!NETWORK REF 10-220210-C1 (HALA)
City: Unknown
Head(s) researcher(s): Fco. Javier Saez Nieto
Number of participating researchers: 6
Funding body or bodies: EUROCONTROL
Code according to the funding body: E100115595
Total amount: 1.600.000
- 16** **Name of the project:** IMPLANTACI N DE PROCEDIMIENTOS INSTRUMENTALES DE VUELO EN EL AREA TERMINAL BASADOS EN PRESTACIONES AVANZADAS DE NAVEGACI N AEREA.
City: Unknown
Head(s) researcher(s): Luis Perez Sanz
Number of participating researchers: 1
Funding body or bodies: INECO
Code according to the funding body: P070115006
Total amount: 0
- 17** **Name of the project:** Realizaci n de Informe T cnico sobre el proyecto de Aeropuerto Internacional de la Regi n de Murcia. Proyecto de Espacio A ero, Procedimientos Operativos y Coordinaci n
City: Unknown
Head(s) researcher(s): Luis Perez Sanz
Number of participating researchers: 1
Funding body or bodies: UTE Prointec-Intemac
Code according to the funding body: 43721810136
Total amount: 0



Participation in R&D&I contracts, agreements or projects, not the result of competitive bidding, with companies (or internally in them) and/or governments

- 1** **Name of the project:** Convenio entre la Entidad Pública Empresarial ENAIRE y la Universidad Politécnica de Madrid
City: Spain
Head researcher: Luis Perez Sanz
Number of participating researchers: 2
Funding body: ENAIRE
Start date: 01/05/2019
Total amount: 120.000
Type of body: Business
Duration of project: 2 years
- 2** **Name of the project:** Diseño de procedimientos de vuelo instrumental PANS-OPS 2019_Convencional
City: Unknown
Head researcher: Luis Perez Sanz
Number of participating researchers: 5
Funding body: Curso de Inscripción Libre
Start date: 01/04/2019
Total amount: 28.000
Type of body: Body, others
Duration of project: 2 months
- 3** **Name of the project:** Convenio de colaboración entre Ingeniería y Economía del Transporte (INECO) y la Universidad Politécnica de Madrid
City: Spain
Head researcher: Luis Perez Sanz
Number of participating researchers: 2
Funding body: INECO
Start date: 19/02/2019
Total amount: 120.000
Type of body: Business
Duration of project: 2 years
- 4** **Name of the project:** Asesoramiento experto en los procesos de diseño de procedimientos de vuelo instrumental
City: Spain
Head researcher: Luis Perez Sanz
Number of participating researchers: 3
Funding body: INECO
Start date: 01/01/2018
Total amount: 52.500
Type of body: Business
Duration of project: 10 months
- 5** **Name of the project:** PROINTEC_ESTUDIO AERONAUTICO AFECCION PLAN PARCIA
City: Spain
Head researcher: Luis Perez Sanz
Number of participating researchers: 1
Funding body: PROINTEC
Start date: 14/11/2017
Total amount: 6.250
Type of body: Business
Duration of project: 3 months
- 6** **Name of the project:** Estudio aeronáutico sobre la afección del plan parcial de Escobares sobre la operación del aeropuerto de madrid Barajas Adolfo Suárez
City: Spain



Head researcher: Luis Perez Sanz
Number of participating researchers: 2
Funding body: Prointec S.A.
Start date: 14/11/2017
Total amount: 6.250

Type of body: Body, others
Duration of project: 3 months

7 Name of the project: APOYO EXPERTO EN LOS PROCESOS DEL DISEÑO DE PROCEDIMIENTO DE VUELO

City: Spain
Head researcher: Luis Perez Sanz
Number of participating researchers: 1
Funding body: Ineco
Start date: 01/03/2017
Total amount: 52.500

Type of body: Body, others
Duration of project: 10 months

8 Name of the project: Viabilidad operacional de procedimientos de vuelo instrumental en los aeropuertos de Jauja y Pichari (Perú)

City: Spain
Head researcher: Luis Perez Sanz
Number of participating researchers: 2
Funding body: Trazas Ingeniería S.L.
Start date: 24/01/2017
Total amount: 15.600

Type of body: Body, others
Duration of project: 5 months

9 Name of the project: Estudio aeronáutico relativo a la aproximación instrumental al aeropuerto de la Seu de Urgel

City: Spain
Head researcher: Luis Perez Sanz
Number of participating researchers: 2
Funding body: Aeroports Publics de Catalunya
Start date: 14/11/2016
Total amount: 14.875

Type of body: Body, others
Duration of project: 5 months

10 Name of the project: Viabilidad de implementar procedimientos de aproximación instrumental RWYs 12 y 30 en el Aeropuerto de Tenerife Norte con mínimos inferiores a los actuales

City: Spain
Head researcher: Luis Perez Sanz
Number of participating researchers: 3
Funding body: Navegación y Servicios Aéreos Canarios S.A.
Start date: 12/09/2016
Total amount: 15.000

Type of body: Body, others
Duration of project: 4 months

11 Name of the project: SDAD SALV Y SEG MARITIMA-VIABILIDAD OPERAC HELIPUE

City: Spain
Head researcher: Luis Perez Sanz
Number of participating researchers: 3
Funding body: Sociedad de Salvamento y Seguridad Marítima
Start date: 20/05/2016
Total amount: 14,25

Type of body: Body, others
Duration of project: 3 months



- 12** **Name of the project:** ANÁLISIS DE VIABILIDAD DE OPERACIONES INDEPENDIENTES ENTRE LAS ARRIBADAS A LA PISTA 18L Y LOS DESPEGUES POR LA 14R EN CONFIGURACIÓN SUR DEL AEROPUERTOS ADOLFO SUÁREZ-MADRID BARAJAS
City: Spain
Head researcher: Luis Perez Sanz
Number of participating researchers: 2
Funding body: Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria **Type of body:** Body, others
Start date: 30/09/2015
Total amount: 12.000
- 13** **Name of the project:** ANÁLISIS DE VIABILIDAD DE OPERACIONES INDEPENDIENTES ENTRE LAS ARRIBADAS A LA PISTA 18L Y LOS DESPEGUES POR LA 14R EN CONFIGURACIÓN SUR DEL AEROPUERTOS ADOLFO SUÁREZ-MADRID BARAJAS
City: Spain
Head researcher: Luis Perez Sanz
Number of participating researchers: 1
Funding body: Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria **Type of body:** Body, others
Start date: 10/09/2015 **Duration of project:** 3 months
Total amount: 12.000
- 14** **Name of the project:** ACTIVIDADES LPV DENTRO DEL PROYECTO BEYOND
City: Spain
Head researcher: Luis Perez Sanz
Number of participating researchers: 1
Funding body: INECO **Type of body:** Business
Start date: 01/07/2015 **Duration of project:** 2 years - 6 months
Total amount: 15.587,5
- 15** **Name of the project:** DISEÑO DE PROCEDIMIENTOS DE VUELO EN ENCOMIENDA DE ENAIRE
City: Spain
Head researcher: Luis Perez Sanz
Number of participating researchers: 1
Funding body: Ineco **Type of body:** Body, others
Start date: 01/07/2015 **Duration of project:** 1 year
Total amount: 44.500
- 16** **Name of the project:** DISEÑO Y CONSTRUCCIÓN DE PROCEDIMIENTOS DE VUELO INSTRUMENTAL BASADOS EN NAVEGACIÓN AÉREA (RNAV) PARA PERSONAL DE MINISTERIO DE TRANSPORTES Y COMUNICACIONES DEL SUSTANATO DE OMÁN
City: Spain
Head researcher: Luis Perez Sanz
Number of participating researchers: 2
Funding body: INECO **Type of body:** Business
Start date: 26/05/2015
Total amount: 28.000
- 17** **Name of the project:** DISEÑO Y CONSTRUCCIÓN DE PROCEDIMIENTOS DE VUELO INSTRUMENTAL BASADOS EN NAVEGACIÓN AÉREA (RNAV) PARA PERSONAL DE MINISTERIO DE TRANSPORTES Y COMUNICACIONES DEL SUSTANATO DE OMÁN



City: Spain

Head researcher: Luis Perez Sanz

Number of participating researchers: 1

Funding body: INECO

Start date: 02/03/2015

Total amount: 28.000

Type of body: Business

Duration of project: 1 year

18 Name of the project: Aeronautical Study on the Effect of the New Terminal Building and Aerodrome Control Tower on the ILS Localizer for RWYs 04C & 04L and Radar Facilities of Sharm El Sheikh International Airport

City: Spain

Head researcher: Luis Perez Sanz

Number of participating researchers: 1

Funding body: Prointec

Start date: 19/05/2014

Total amount: 0

Type of body: Body, others

19 Name of the project: Análisis de las propuestas realizadas por la Urbanización Ciudad de Santo Domingo para la modificación de la operación de aproximación a la pista 18R del aeropuerto Adolfo Suárez-Madrid Barajas

City: Spain

Head researcher: Luis Perez Sanz

Number of participating researchers: 1

Funding body: Aena

Start date: 24/04/2014

Total amount: 22.385

Type of body: Body, others

20 Name of the project: Realización de definición del modelo formativo del personal técnico que participa en la provisión de servicios de navegación aérea - CNS.

City: Spain

Head researcher: Luis Perez Sanz

Number of participating researchers: 9

Funding body: SAERCO

Start date: 20/01/2014

Total amount: 28.900

Type of body: Body, others

21 Name of the project: Aeronautical Study on the Effect of the New Terminal Building and Aerodrome Control Tower on the ILS Localizer for RWYs 04C & 04L and Radar Facilities of Sharm El Sheikh International Airport

City: Egypt

Head researcher: Luis Perez Sanz

Number of participating researchers: 1

Funding body: Prointec-Aviación civil Egiptia

Start date: 07/01/2014

Total amount: 4,84

Type of body: Body, others

22 Name of the project: definición del concepto operacional para la provisión de separación de aeronaves en ruta y TMA en el entorno de ¿Trajectory Based Operations

City: Belgium

Head researcher: Luis Perez Sanz

Number of participating researchers: 1

Funding body: SJU a través de Ineco

Type of body: Body, others



Start date: 01/01/2014

Total amount: 63.000

- 23 Name of the project:** Programa de Investigación para el Análisis del Impacto de la Nueva Terminal y la Nueva Torre de Control de Aeropuerto de Sharm el Sheik (Egipto) sobre la Señal Radioeléctrica del Localizador ILS RWY 04C/04L y del Radar SSR

City: Spain

Head researcher: Luis Perez Sanz

Number of participating researchers: 2

Funding body: Prointec

Type of body: Body, others

Start date: 28/11/2013

Total amount: 4.000

- 24 Name of the project:** MOHAMMED ABDULMOHSIN-ESTUDIO SEG. OPERACIONAL

City: Kuwait

Head researcher: Luis Perez Sanz

Number of participating researchers: 1

Funding body: Mohammed Abdulmohsin Al Kharafi & Sons

Type of body: Body, others

Start date: 18/06/2013

Total amount: 22.500

- 25 Name of the project:** 'Aeronautical Study on the Effect of Tower Cranes on the Aircraft Operations and Navaid's of the Kuwait International Airport'

City: Kuwait

Head researcher: Luis Perez Sanz

Number of participating researchers: 2

Funding body: Mohammed Abdulmohsin al Kharafi & Sons

Type of body: Body, others

Start date: 18/06/2013

Total amount: 22.500

- 26 Name of the project:** PROINTEC-OPTIM. ESP.AEREO AEROP. SHARM EL SHEIK

City: Spain

Head researcher: Luis Perez Sanz

Number of participating researchers: 1

Funding body: PROINTEC

Type of body: Business

Start date: 30/04/2013

Total amount: 0

- 27 Name of the project:** 2013 PROINTEC-OPTIM. ESP.AEREO AEROP. SH

City: Spain

Head researcher: Luis Perez Sanz

Number of participating researchers: 2

Funding body: Prointec

Type of body: Body, others

Start date: 30/04/2013

Total amount: 17.500

- 28 Name of the project:** DEFINICIÓN DEL CONCEPTO OPERACIONAL PARA LA PROVISIÓN DE SEPARACIÓN DE AERONAVES EN TMA EN UN ENTORNO DE TRAJECTORY BASED OPERATIONS

City: Spain



Head researcher: Luis Perez Sanz

Number of participating researchers: 1

Funding body: Ineco

Start date: 01/01/2013

Total amount: 63.000

Type of body: Body, others

- 29 Name of the project:** Definición del concepto operacional para la provisión de la separación de aeronaves en TMA en un entorno de Trajectory Based Operations

City: Spain

Head researcher: Luis Perez Sanz

Number of participating researchers: 1

Funding body: Ineco

Start date: 01/01/2012

Total amount: 63.000

Type of body: Body, others

- 30 Name of the project:** ANÁLISIS DEL MARCO NORMATIVO DE OACI EN SU APLICACIÓN EN LA REGLAMENTACIÓN ESPAÑOLA DEL TRÁNSITO AÉREO

City: Spain

Head researcher: Rosa Maria Arnaldo Valdes

Number of participating researchers: 2

Funding body: INECO

Start date: 01/02/2011

Total amount: 52.896

Type of body: Business

- 31 Name of the project:** DEFINICIÓN DEL CONCEPTO OPERACIONAL PARA LA PROVISIÓN DE SEPARACIÓN DE AERONAVES EN TMA EN UN ENTORNO DE "TRAJECTORY BASED OPERATIONS"

City: Spain

Head researcher: Luis Perez Sanz

Number of participating researchers: 1

Funding body: Ineco

Start date: 30/12/2010

Total amount: 63.000

Type of body: Body, others

- 32 Name of the project:** PREPARACIÓN E IMPARTICIÓN DE UN CURSO TEÓRICO-PRÁCTICO DE 100 HORAS DE DURACIÓN SOBRE EL DISEÑO Y CONSTRUCCIÓN DE PROCEDIMIENTOS DE VUELO INSTRUMENTAL BASADOS EN

City: Spain

Head researcher: Luis Perez Sanz

Number of participating researchers: 1

Funding body: Agencia Estatal de Seguridad Aérea **Type of body:** Body, others

Start date: 19/07/2010

Total amount: 3.700

- 33 Name of the project:** Diseño de procedimientos de vuelo instrumental basados en navegación convencional.

City: Spain

Head researcher: Luis Perez Sanz

Number of participating researchers: 1

Funding body: AESA

Start date: 19/07/2010

Type of body: Body, others



- 34** **Name of the project:** DESARROLLO DEL PROGRAMA DE INVESTIGACION SOBRE LA IMPLANTACION DE PROCEDIMIENTOS INSTRUMENTALES DE VUELO EN EL AREA TERMINAL (TMA) BASADOS EN PRESTACIONES AVANZA
City: Spain
Head researcher: Luis Perez Sanz
Number of participating researchers: 1
Funding body: Ineco **Type of body:** Body, others
Start date: 18/01/2010
Total amount: 60.853,52
- 35** **Name of the project:** DESARROLLO DEL PROGRAMA DE INVESTIGACION SOBRE LA IMPLANTACION DE PROCEDIMIENTOS INSTRUMENTALES DE VUELO EN EL AREA TERMINAL (TMA) BASADOS EN PRESTACIONES AVANZA
City: Spain
Head researcher: Luis Perez Sanz
Number of participating researchers: 1
Funding body: Ineco **Type of body:** Body, others
Start date: 01/01/2008 **Duration of project:** 1 year
Total amount: 0
- 36** **Name of the project:** Convenio específico entre AENA y la UPM
City: Spain
Head researcher: Fco. Javier Saez Nieto
Number of participating researchers: 7
Funding body: AENA **Type of body:** Business
Start date: 12/09/2007
Total amount: 122.960
- 37** **Name of the project:** Convenio específico entre la UPM e INDRA SISTEMAS S.A.
City: Spain
Head researcher: Luis Perez Sanz
Number of participating researchers: 6
Funding body: INDRA SISTEMAS S.A. **Type of body:** Body, others
Start date: 21/02/2007
Total amount: 6.666
- 38** **Name of the project:** Convenio específico entre AENA y la UPM para la realización de pruebas para la evaluación de técnicos del sistema de navegación aérea en la certificación técnica de instalaciones
City: Spain
Head researcher: Fco. Javier Saez Nieto
Number of participating researchers: 6
Funding body: AENA **Type of body:** Business
Start date: 26/01/2007
Total amount: 62.525
- 39** **Name of the project:** Programa de Investigación sobre la Implantación de Procedimientos Instrumentales de Vuelo en el Area Terminal (TMA) Basados en Prestaciones Avanzadas de Navegación Aérea.
City: Spain
Head researcher: Luis Perez Sanz
Number of participating researchers: 1
Funding body: INECO **Type of body:** Business



Start date: 01/01/2007

Total amount: 58.513

- 40 Name of the project:** DESARROLLO DEL PROGRAMA DE INVESTIGACION SOBRE MODELOS DE ESTIMACION DE CAPACIDAD DE PRESTACION DE SERVICIOS ATC.

City: Spain

Head researcher: Victor Fernando Gomez Comendador

Number of participating researchers: 4

Funding body: Ingeniería y Economía del Transporte (INECO)

Type of body: Business

Start date: 01/01/2005

Total amount: 97.522

- 41 Name of the project:** CDA-TMA. Investigación sobre capacidad de áreas terminales de maniobras utilizando aproximación en descenso continuo

City: Spain

Head researcher: Fco. Javier Saez Nieto

Number of participating researchers: 5

Funding body: Boeing RTD

Type of body: Body, others

Start date: 01/01/2003

- 42 Name of the project:** Contrato de colaboración entre Ineco y la UPM para la realización de estudios y actividades de soporte relacionadas con la Gestión del Tráfico Aéreo

City: Spain

Head researcher: Fco. Javier Saez Nieto

Number of participating researchers: 3

Funding body: Ingeniería y Economía del Transporte S.A.

Type of body: Body, others

Start date: 01/01/2003

- 43 Name of the project:** Contrato de colaboración entre Ineco y la UPM para la realización de estudios y actividades de soporte relacionadas con la Gestión del Tráfico Aéreo

City: Unknown

Head researcher: Fco. Javier Saez Nieto

Number of participating researchers: 3

Funding body: Ingeniería y economía del Transporte (INECO)

Type of body: Body, others

Start date: 01/01/2001

- 44 Name of the project:** Procedimientos e implantación: Desarrollo de estudios conducentes a la aplicación de nuevos procedimientos en la navegación y circulación aérea.

City: Unknown

Head researcher: Fco. Javier Saez Nieto

Number of participating researchers: 2

Funding body: ?

Type of body: Body, others

Scientific Activities and General Techniques

Scientific production

Publications, Scientific and Technical Documents and any other publication

- 1** Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador; Javier Alberto Perez Castan; Alvaro Rodriguez Sanz; Luis Perez Sanz; Francisco Javier Saez Nieto; Eduardo Sanchez Ayra. Bayesian inference in Safety Compliance Assessment under conditions of uncertainty for ANS providers. Safety Science. 116 - null, pp. 183 - 195. 01/2019. ISSN 0925-7535
Type of production: Article
Ranking among the total: 5
Index measuring impact: 2,835
- 2** Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador; Javier Alberto Perez Castan; Luis Perez Sanz; Eduardo Sanchez Ayra; Alvaro Rodriguez Sanz; Francisco Saez Nieto. Development of Safety Performance Functions (SPFs) to analyse and predict aircraft loss of separation in accordance with the characteristics of the airspace. Reliability Engineering & System Safety. pp. 1 - 1. 01/2019. ISSN 0951-8320
Type of production: Article
Ranking among the total: 4
Index measuring impact: 4,139
- 3** rosa arnaldo valdes; victor fernando gomez comendador; javier alberto perez castan; alvaro rodriguez sanz; luis perez sanz; eduardo sanchez aira; francisco javier saez nieto. Bayesian inference in Safety Compliance Assessment under conditions of uncertainty for ANS providers. SAFETY SCIENCE. 116 - null, pp. 183 - 195. 2019. ISSN 0925-7535
Type of production: Article
Ranking among the total: 5
Index measuring impact: 2,835
- 4** rosa maria arnaldo valdes; victor fernando gomez comendador; javier alberto perez castan; alvaro rodriguez sanz; luis perez sanz; eduardo sanchez ayra; francisco javier saez nieto. Development of safety performance functions (SPFs) to analyse and predict aircraft loss of separation in accordance with the characteristics of the airspace. RELIABILITY ENGINEERING & SYSTEM SAFETY. 186 - null, pp. 143 - 161. 2019. ISSN 0951-8320
Type of production: Article
Ranking among the total: 5
Index measuring impact: 4,139
- 5** Javier Alberto Perez Castan; Victor Fernando Gomez Comendador; Alvaro Rodriguez Sanz; Ana del Rocio Barragan Montes; Rosa Maria Arnaldo Valdes; Luis Perez Sanz. Impact of continuous climb operations on airport capacity. Transportation Research Part C-Emerging Technologies. 96 - null, pp. 231 - 250. 11/2018. ISSN 0968-090X
Type of production: Article
Ranking among the total: 6
Index measuring impact: 3,805
- 6** Ana del Rocio Barragan Montes; Victor Fernando Gomez Comendador; Francisco Javier Sáez Nieto; Luis Perez Sanz. Finding precursory Air Traffic Management Safety metrics using Exploration of Trajectory radar tracks. Journal of Aerospace Engineering. 31 - 1, pp. tbd - tbd. 01/2018. ISSN 0893-1321



Type of production: Article
Ranking among the total: 4
Index measuring impact: 1,107

- 7** rocio barragan montes; ana delcan rojas; victor fernando gomez comendador; rosa arnaldo valdes; luis perez sanz. A Novel Predictability Performance Metric and Its Forecast Using Machine Learning Techniques. 2018 IEEE/AIAA 37TH DIGITAL AVIONICS SYSTEMS CONFERENCE (DASC). pp. 730 - 739. 2018. ISSN 2155-7195
Type of production: Article
Ranking among the total: 5
Index measuring impact: 0
- 8** rocio barragan montes; fernando gomez comendador; luis perez sanz; francisco javier saez nieto. Finding Precursory Air Traffic Management Safety Metrics Using Exploration of Trajectory Radar Tracks. JOURNAL OF AEROSPACE ENGINEERING. 31 - 1, pp. 0 - 17. 2018. ISSN 0893-1321
Type of production: Article
Ranking among the total: 3
Index measuring impact: 1,107
- 9** j. a. perez-castan; f. gomez comendador; a. rodriguez-sanz; r. barragan montes; r. arnaldo valdes; l. perez sanz. Impact of continuous climb operations on airport capacity. TRANSPORTATION RESEARCH PART C-EMERGING TECHNOLOGIES. 96 - null, pp. 231 - 250. 2018. ISSN 0968-090X
Type of production: Article
Ranking among the total: 6
Index measuring impact: 0
- 10** rosa arnaldo; fernando gomez comendador; luis perez; alvaro rodriguez. Motor Imagery Brain-Computer Interface for RPAS Command and Control. ADVANCES IN HUMAN FACTORS AND SYSTEMS INTERACTION. 592 - null, pp. 325 - 335. 2018. ISSN 2194-5357
Type of production: Article
Ranking among the total: 3
Index measuring impact: 0
- 11** rosa maria arnaldo valdes; v. fernando gomez comendador; luis perez sanz; alvaro rodriguez sanz. Prediction of aircraft safety incidents using Bayesian inference and hierarchical structures. SAFETY SCIENCE. 104 - null, pp. 216 - 230. 2018. ISSN 0925-7535
Type of production: Article
Ranking among the total: 3
Index measuring impact: 2,246
- 12** Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador; Luis Perez Sanz; Alvaro Rodriguez Sanz. Motor Imagery Brain?Computer Interface for RPAS Command and Control. Proceedings of the AHFE 2017 International Conference on Human Factors and Systems Interaction, July 17?21, 2017,. pp. 325 - 339. 07/2017. ISSN 2194-5357
Type of production: Article
Ranking among the total: 3
- 13** Esther Calvo Fernandez; Luis Perez Sanz; José Manuel Cordero García; Rosa Maria Arnaldo Valdes. Conflict-Free Trajectory Planning Based on a Data-Driven Conflict-Resolution Model. Journal of Guidance Control And Dynamics. 40 - 3, pp. 615 - 627. 03/2017. ISSN 0731-5090
Type of production: Article
Ranking among the total: 2
Index measuring impact: 1,291



- 14** Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador; Luis Perez Sanz; Alvaro Rodriguez Sanz. Motor Imagery Brain?Computer Interface for RPAS Command and Control. Advances in Intelligent Systems and Computing. 592 - null, pp. 325 - 339. 01/2017. ISSN 2194-5357
Type of production: Article
Ranking among the total: 3
- 15** esther calvo-fernandez; luis perez-sanz; rosa maria arnaldo-valdes; jose manuel cordero-garcia. Conflict-Free Trajectory Planning Based on a Data-Driven Conflict-Resolution Model. JOURNAL OF GUIDANCE CONTROL AND DYNAMICS. 40 - 3, pp. 615 - 627. 2017. ISSN 0731-5090
Type of production: Article
Ranking among the total: 2
Index measuring impact: 1,291
- 16** Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador; Luis Perez Sanz; Alvaro Rodriguez Sanz. Motor Imagery Brain?Computer Interface for RPAS Command and Control. Advances in Human Factors and Systems Interaction Proceedings of the AHFE 2017 International Conference on Human Factors and Systems Interaction, July 17?21, 2017, The Westin Bonaventure Hotel, Los Angeles, California, USA. 325-339, Springer International Publishing, 2017. ISBN 978-3-319-60365-0
Type of production: Chapters of books
Ranking among the total: 3
- 17** rosa m. arnaldo; fernando gomez comendador; luis perez sanz; alvaro rodriguez sanz. Friendly Fatigue Alert Mobile Apps to Help Aviation Workers Prevent, Identify and Manage Alertness and Fatigue. ADVANCES IN SAFETY MANAGEMENT AND HUMAN FACTORS. 491 - null, pp. 421 - 432. 2016. ISSN 2194-5357
Type of production: Article
Ranking among the total: 3
Index measuring impact: 0
- 18** Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador; Luis Perez Sanz; Alvaro Rodriguez Sanz. Friendly Fatigue Alert Mobile Apps to Help Aviation Workers Prevent, Identify and Manage Alertness and Fatigue. Advances in Safety Management and Human Factors Proceedings of the AHFE 2016 International Conference on Safety Management and Human Factors,., 421-435, Springer, 2016. ISBN 978-3-319-41928-2
Type of production: Chapters of books
Ranking among the total: 3
- 19** Luis Perez Sanz; Rosa Maria Arnaldo Valdes; Fco. Javier Saez Nieto; Jorge Blanco Monge; Victor Fernando Gomez Comendador. Introducción al Sistema de Navegación Aérea. Garceta grupo editorial, 2013. ISBN 978-84-1545-281-2
Type of production: Book
Ranking among the total: 1
- 20** Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador; Luis Perez Sanz. Definición e Integración de Procedimientos de Descenso Continuo para la Mitigación de Ruido en la Operación del TMA y del Aeropuerto de Madrid - Barajas. Ingeniería del Transporte. 16 - 2, pp. 13 - 22. 01/2012. ISSN 0717-3482
Type of production: Article
Ranking among the total: 3
- 21** Victor Fernando Gomez Comendador; Rosa Maria Arnaldo Valdes; Luis Perez Sanz. Liberalisation of Air Traffic Services in Spain. Transport Policy. pp. 47 - 56. 01/2012. ISSN 0967-070X
Type of production: Article
Ranking among the total: 3
Index measuring impact: 1,719



- 22** fernando gomez comendador; rosa maria arnaldo valdes; luis perez sanz. Liberalisation of Air Traffic Services in Spain. TRANSPORT POLICY. 19 - 1, pp. 47 - 56. 2012. ISSN 0967-070X
Type of production: Article
Ranking among the total: 3
Index measuring impact: 1,171
- 23** Victor Fernando Gomez Comendador; Rosa Maria Arnaldo Valdes; Luis Perez Sanz. Evolution of Air Traffic Services Promoted by the One Single Sky Regulation in Spain. Ieee Aerospace And Electronic Systems Magazine. 26-7 - null, pp. 23 - 29. 01/2011. ISSN 0885-8985
Type of production: Article
Ranking among the total: 3
Index measuring impact: 0,297
- 24** Victor Fernando Gomez Comendador; Rosa Maria Arnaldo Valdes; Luis Perez Sanz. New Air Traffic Control Markets Promoted by Single Sky Regulation in Spain. Journal of Aircraft. 48-4 - null, pp. 1456 - 1465. 01/2011. ISSN 0021-8669
Type of production: Article
Ranking among the total: 3
Index measuring impact: 0,538
- 25** fernando gomez comendador; rosa arnaldo valdes; l. perez-sanz. Evolution of Air Traffic Services in Spain for the European Single Sky Regulation. IEEE AEROSPACE AND ELECTRONIC SYSTEMS MAGAZINE. 26 - 7, pp. 23 - 29. 2011. ISSN 0885-8985
Type of production: Article
Ranking among the total: 3
Index measuring impact: 0,179
- 26** f. gomez comendador; r. arnaldo; Luis Perez Rojas; l. perez; Luis Pérez Gallardo. New Air Traffic Control Markets Promoted by Single Sky Regulation in Spain. JOURNAL OF AIRCRAFT. 48 - 4, pp. 1456 - 1465. 2011. ISSN 0021-8669
Type of production: Article
Ranking among the total: 4
Index measuring impact: 0,535
- 27** rosa arnaldo valdes; luis perez sanz; jose felix alonso. The use of Flight Simulators for Airspace Design in Engineering Education. INTERNATIONAL JOURNAL OF ENGINEERING EDUCATION. 27 - 4, pp. 757 - 765. 2011. ISSN 0949-149X
Type of production: Article
Ranking among the total: 2
Index measuring impact: 0
- 28** Luis Perez Sanz; Rosa Maria Arnaldo Valdes. Sustainable Air Traffic Mangement System Developmetn Methodology. International Review of Aerospace Engineering. pp. 238 - 248. 10/2010. ISSN 1973-7459
Type of production: Article
Ranking among the total: 1
Index measuring impact: 0
- 29** Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador; Luis Perez Sanz. A Sustainable Air Traffic Management System Deveolpment Methodology. International Review of Aerospace Engineering (I.R.E.AS.E). 3 - 5 - null, pp. 238 - 248. 01/2010. ISSN 1973-7459
Type of production: Article

**Ranking among the total: 3**

- 30** Rosa Maria Arnaldo Valdes; Luis Perez Sanz. Modelling advanced descent approaches procedures in congested airports. International Review of Aerospace Engineering. pp. 304 - 314. 01/2010. ISSN 1973-7459
Type of production: Article
Ranking among the total: 2
Index measuring impact: 0
- 31** Luis Perez Sanz; Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador. Modelling Advanced Continuous Descent Approach Procedures in Congested Airports. International Review of Aerospace Engineering (IREASE). 2 - 6, pp. 304 - 314. 12/2009. ISSN 1973-7459
Type of production: Article
Ranking among the total: 1
Index measuring impact: 0
- 32** Fco. Javier Saez Nieto; Luis Perez Sanz; Victor Fernando Gomez Comendador. LA NAVEGACIÓN AÉREA Y EL AEROPUERTO. FUNDACION AENA, 2002. ISBN 84-95567-09-1
Type of production: Book
Ranking among the total: 2
- 33** Fco. Javier Saez Nieto; Fernando Gomez Comendador; Luis Perez Sanz. La navegación Aérea y el Aeropuerto. Fundación Aena, 2002. ISBN 978-84-95567-09-3
Type of production: Book
Ranking among the total: 3

Work presented in conferences at the national or international level

- 1** **Title:** A Novel Predictability Performance Metric and Its Forecast Using Machine Learning Techniques
Name of the conference: 37th AIAA/IEEE Digital Avionics Systems Conference (DASC)
Your role: Speaker
Date of the event: 24/09/2018
City: Londres,
Ana del Rocio Barragan Montes; Victor Fernando Gomez Comendador; Rosa Maria Arnaldo Valdes; Luis Perez Sanz. "Proceedings 37th AIAA/IEEE Digital Avionics Systems Conference (DASC)".pp. 730 - 739. ISBN 978-1-5386-4112-5
- 2** **Title:** Computerized Brain Interfaces for Adaptive Learning and Assessment
Name of the conference: 1st International Conference on Intelligent Human Systems Integration (IHSI 2018): Integrating People and Intelligent Systems, January 7th, 2018, Dubai, United Arab Emirates
Your role: Speaker
Date of the event: 07/01/2018
City: Dubai, United Arab Emirates,
Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador; Luis Perez Sanz; Javier Crespo Moreno; Jose Felix Alonso Alarcon. "Proceedings of the 1st International Conference on Intelligent Human Systems Integration (IHSI 2018): Integrating People and Intelligent Systems, January 7th, 2018, Dubai, United Arab Emirates".pp. 237 - 242. ISBN 978-3-319-73887-1
- 3** **Title:** Computerized Brain Interfaces for Adaptive Learning and Assessment
Name of the conference: 1st International Conference on Intelligent Human Systems Integration (IHSI 2018): Integrating People and Intelligent Systems, January 7th, 2018, D
Your role: Speaker



Date of the event: 07/01/2018

City: Dubai, United Arab Emirates,

Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador; Javier Crespo Moreno; Luis Perez Sanz; Jose Felix Alonso Alarcon; Alvaro Rodriguez Sanz. "Proceedings of the 1st International Conference on Intelligent Human Systems Integration (IHSI 2018): Integrating People and Intelligent Systems, January 7-9, 2018, Dubai, United Arab Emirates".pp. 237 - 242. ISBN 978-3-319-73887-1

4 Title: EUROPEAN AIR NAVIGATION SERVICE PROVIDERS EFFICIENCY EVALUATION THROUGH DATA ENVELOPMENT ANALYSIS (DEA)

Name of the conference: 29th Congress of the International council of the Aeronautical Sciences

Your role: Speaker

Date of the event: 07/09/2014

City: San Petersburgo, Rusia,

Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador; Luis Perez Sanz. "29th Congress of the International council of the Aeronautical Sciences proceedings".pp. 465 - 475. ISBN 3-932182-80-4

5 Title: European Air Navigation Service Providers' efficiency evaluation through Data Envelopment Analysis (DEA)

Name of the conference: 29th Congress of the International Council of the Aeronautical Sciences ICAS 2014

Your role: Speaker

Date of the event: 07/09/2014

City: St. Petesbourg (Russia),

Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador; Ana del Rocio Barragan Montes; Luis Perez Sanz; Cristina Cuerno Rejado.

6 Title: Aplicación de técnicas de Análisis de Envoltente de Datos (DEA) para la medida de la eficiencia de los proveedores de servicios de navegación aérea en el marco del Cielo Único Europeo.

Name of the conference: XI Congreso de Ingeniería del Transporte CIT 2014

Your role: Speaker

Date of the event: 09/06/2014

City: Santander,

Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador; Luis Perez Sanz. "Actas del XI Congreso de Ingeniería del Transporte CIT 2014".pp. 340 - 350. ISBN 978-84-338-5402-5

7 Title: Análisis DEA de los proveedores de los servicios de Navegación Aérea en el marco del Cielo Único Europeo.

Name of the conference: 4º Congreso de la Red Iberoamericana de Investigación en el Transporte Aéreo RIDITA 2013

Your role: Speaker

Date of the event: 27/11/2013

City: Buenos Aires, Argentina,

Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador; Luis Perez Sanz. "4º Congreso de la Red Iberoamericana de Investigación en el Transporte Aéreo RIDITA 2013".pp. 10 - 20. ISBN 978-84-8181-227-5

8 Title: Aircraft flight trajectory deviation in the satnadar instrument departure. Operator penalties.

Name of the conference: ICAS 2012. 28TH INTERNATIONAL CONGRESS OF THE AERONAUTICAL SCIENCES

Your role: Speaker

Date of the event: 23/09/2012

City: Brisbane, Australia,



Luis Perez Sanz; Eduardo Jose Garcia Gonzalez; Victor Fernando Gomez Comendador; Rosa Maria Arnaldo Valdes. "Proceedings of the 28TH CONGRESS OF THE INTERNATIONAL COUNCIL OF THE AERONAUTICAL SCIENCES".pp. 0 - 0. ISBN 978-0-9565333-1-9

- 9** **Title:** AIRCRAFT FLIGHT TRAJECTORY DEVIATION IN THE STANDARD INSTRUMENT DEPARTURES. OPERATORS PENALTIES
Name of the conference: 28TH INTERNATIONAL CONGRESS OF THE AERONAUTICAL SCIENCES (ICAS 2012)
Your role: Speaker
Date of the event: 23/09/2012
City: Brisbane, Australia,
Luis Perez Sanz; Eduardo Jose Garcia Gonzalez; Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador. "Proceedings 28TH CONGRESS OF THE INTERNATIONAL COUNCIL OF THE AERONAUTICAL SCIENCES".pp. 10102 - 101011. ISBN 978-0-9565333-1-9
- 10** **Title:** Análisis de las desviaciones de las trayectorias de aeronaves en despegues. Sanciones a los operadores.
Name of the conference: CIT 2012 X Congreso de Ingeniería del transporte
Your role: Speaker
Date of the event: 20/06/2012
City: Granada, España,
Luis Perez Sanz; Eduardo Jose Garcia Gonzalez; Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador. "Actas del X Congreso de Ingeniería del transporte".pp. 0 - 0. ISBN 978-84-338-5402-5
- 11** **Title:** Definición e integración de procedimientos de descenso continuo para la mitigación de ruido en la operación del TMA y del aeropuerto de Madrid - Barajas
Name of the conference: XV Congreso de Ingeniería del Transporte
Your role: Speaker
Date of the event: 04/10/2011
City: chile,
Rosa Maria Arnaldo Valdes; Luis Perez Sanz. "XV Congreso de Ingeniería del Transporte".pp. 500 - 510. ISBN 1136-5277
- 12** **Title:** Definición e integración de procedimientos de descenso continuo para la mitigación de ruido en la operación del TMA y del aeropuerto de Madrid - Barajas
Name of the conference: XV Congreso Chileno de Ingeniería del Transporte
Your role: Speaker
Date of the event: 03/10/2011
City: Santiago de Chile. Chile,
Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador; Luis Perez Sanz. "Actas del XV Congreso Chileno de Ingeniería del Transporte".pp. 1 - 1. ISBN XX
- 13** **Title:** The use of virtual flight simulation for airspace design in aeronautical
Name of the conference: Global Engineering Education Conference (EDUCON), 2011 IEEE
Your role: Speaker
Date of the event: 04/04/2011
City: Jordania,
Rosa Maria Arnaldo Valdes; Luis Perez Sanz; Javier Crespo Moreno; Jose Felix Alonso Alarcon. "Proceedings of the Global Engineering Education Conference (EDUCON), 2011 IEEE".pp. 543 - 551. ISBN 978-1-61284-642-2



- 14** **Title:** METODOLOGÍA PARA EL ANÁLISIS Y PLANIFICACIÓN DE LA RED ATC (CONTROL DE TRANSITO AÉREO)
Name of the conference: XVI Pan-American Conference of Traffic and Transportation Engineering and Logistic (PANAM 2010)
Your role: Speaker
Date of the event: 15/07/2010
City: Lisboa, Portugal,
Rosa Maria Arnaldo Valdes; Luis Perez Sanz; Victor Fernando Gomez Comendador. "Proceedings of the XVI Pan-American Conference of Traffic and Transportation Engineering and Logistic (PANAM 2010)".pp. 15 - 15. ISBN 9789899698628
- 15** **Title:** La Gestión de la Seguridad Operacional en el Transporte Aéreo
Name of the conference: IX Congreso de Ingeniería del Transporte
Your role: Speaker
Date of the event: 07/07/2010
City: Madrid, España,
Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador; Luis Perez Sanz. "Actas del IX Congreso de Ingeniería del Transporte".pp. 44 - 45. ISBN 978-84-96398-41-2
- 16** **Title:** La gestión de la seguridad operacional en el transporte aéreo
Name of the conference: Congreso Internacional de Transporte
Your role: Speaker
Date of the event: 07/07/2010
City: Madrid,
Luis Perez Sanz; Rosa Maria Arnaldo Valdes. "CIT 2010".pp. 44 - 45. ISBN 978-84-96-398-41-2
- 17** **Title:** Sustainable Air Traffic Management System Development Methodology
Name of the conference: 51st ANNUAL TRANSPORTATION RESEARCH FORUM
Your role: Speaker
Date of the event: 10/03/2010
City: Washington, Estados Unidos.,
Rosa Maria Arnaldo Valdes; Eduardo Jose Garcia Gonzalez; Fco. Javier Saez Nieto; Luis Perez Sanz; Victor Fernando Gomez Comendador. "Proceedings of the 51st Annual Transportation Research Forum 2010".pp. 717 - 735. ISBN 9781618394040

Work presented in Seminars, Workshops and/or Courses at the national or international level.

- 1** **Title:** Advanced Training II. Navegación Basada en Prestaciones (PBN). Diseño y publicación de procedimientos vuelo instrumental RNAV y RNP
Name of the event: Curso
Type of event: Course
City of the publishing body: Madrid, Spain
Date of the event: 04/11/2019
Organising body: Universidad Politécnica de Madrid **Type of body:** University
Luis Perez Sanz; Jose Felix Alonso Alarcon; Javier Alberto Perez Castan.
- 2** **Title:** Curso sobre diseño de procedimientos de vuelo instrumental basados en Navegación Convencional. (INITIAL TRAINING & ADVANCED TRAINING I)
Name of the event: Curso PANS-OPS_Convncional
Type of event: Course
City of the publishing body: Madrid, Spain



Date of the event: 16/09/2019

Organising body: Universidad Politécnica de Madrid **Type of body:** University
Luis Perez Sanz; Jose Felix Alonso Alarcon; Javier Alberto Perez Castan.

3 **Title:** Curso sobre diseño de procedimientos de vuelo instrumental basados en Navegación Convencional (INITIAL TRAINING & ADVANCED TRAINING I)

Name of the event: Curso PANS-OPS

Type of event: Course

City of the publishing body: Madrid, Spain

Date of the event: 27/05/2019

Organising body: Universidad Politécnica de Madrid **Type of body:** University
Luis Perez Sanz; Jose Felix Alonso Alarcon; Javier Alberto Perez Castan.

4 **Title:** El sistema de navegación por satélite GNSS, presente y futuro

Name of the event: Curso encargado por una empresa privada

Type of event: Course

City of the publishing body: Madrid, Spain

Date of the event: 19/11/2018

Organising body: Universidad Politécnica de Madrid **Type of body:** University
Luis Perez Sanz.

5 **Title:** Advanced Training II. Navegación Basada en Prestaciones (PBN). Diseño y publicación de procedimientos vuelo instrumental RNAV y RNP

Name of the event: Curso PBN

Type of event: Course

City of the publishing body: Madrid, Spain

Date of the event: 15/10/2018

Organising body: Universidad Politécnica de Madrid **Type of body:** University
Luis Perez Sanz; Javier Alberto Perez Castan; Jose Maria Colas Pulido.

6 **Title:** Course: Air Traffic Management. Air Navigation Systems (ILS, DVOR, DME)

Name of the event: Curso impartido por la UPM

Type of event: Course

City of the publishing body: Madrid, Spain

Date of the event: 10/09/2018

Organising body: UPM-Indra

Type of body: Body, others

Luis Perez Sanz; Javier Crespo Moreno; Victor Fernando Gomez Comendador; Jose Felix Alonso Alarcon; Alvaro Rodriguez Sanz; Rosa Maria Arnaldo Valdes; Ana del Rocio Barragan Montes.

7 **Title:** Curso sobre los sistemas de ayuda a la navegación ILS, VOR y DME

Name of the event: Curso encargada por INDRA SISTEMAS

Type of event: Course

City of the publishing body: Madrid, Spain

Date of the event: 10/09/2018

Organising body: Universidad Politécnica de Madrid **Type of body:** University

Luis Perez Sanz; Jose Felix Alonso Alarcon; Victor Fernando Gomez Comendador; Rosa Maria Arnaldo Valdes; Javier Alberto Perez Castan.

8 **Title:** Curso sobre diseño de procedimientos de vuelo instrumental basados en Navegación Convencional

Name of the event: Curso de inscripción abierta

Type of event: Course



City of the publishing body: Madrid, Spain

Date of the event: 28/05/2018

Organising body: Universidad Politécnica de Madrid **Type of body:** University

Luis Perez Sanz; Jose Felix Alonso Alarcon; Javier Alberto Perez Castan; Jose Maria Colas Pulido.

9 Title: Curso de actualización de las enmiendas 7 y 8 de los PANS-OPS de la OACI

Name of the event: Curso de actualización PANS-OPS

Type of event: Course

City of the publishing body: Madrid, Spain

Date of the event: 22/05/2018

Organising body: Universidad Politécnica de Madrid **Type of body:** University

Luis Perez Sanz; Javier Alberto Perez Castan; Jose Maria Colas Pulido.

10 Title: Curso sobre cartas aeronáuticas y diseño de procedimientos de vuelo (PANS-OPS)

Name of the event: Curso encargado por Guinea Ecuatorial

Type of event: Course

City of the publishing body: Malabo (Guinea Ecuatorial), Spain

Date of the event: 15/01/2018

Organising body: Universidad Politécnica de Madrid **Type of body:** University

Luis Perez Sanz.

11 Title: Advanced Training II. Navegación Basada en Prestaciones (PBN).Diseño y publicación de procedimientos vuelo instrumental RNAV y RNP

Name of the event: Curso impartido por departamento SATAA (UPM)

Type of event: Course

City of the publishing body: Madrid, Spain

Date of the event: 13/11/2017

Organising body: UMP

Type of body: Body, others

Luis Perez Sanz; Javier Alberto Perez Castan.

12 Title: Curso sobre sistemas de Comunicaciones, Navegación y Vigilancia (CNS)

Name of the event: Curso encargada por Guinea Ecuatorial

Type of event: Course

City of the publishing body: Madrid, Spain

Date of the event: 23/10/2017

Organising body: Universidad Politécnica de Madrid **Type of body:** University

Luis Perez Sanz; Jose Felix Alonso Alarcon; Victor Fernando Gomez Comendador; Javier Alberto Perez Castan; Javier Crespo Moreno; Rosa Maria Arnaldo Valdes.

13 Title: INITIAL TRAINING. Curso sobre diseño de procedimientos instrumentales de vuelo en el área Terminal (Navegación Convencional)

Name of the event: Curso PANS-OPS

Type of event: Course

City of the publishing body: Madrid, Spain

Date of the event: 11/09/2017

Organising body: Universidad Politécnica de Madrid **Type of body:** University

Luis Perez Sanz.

14 Title: Advanced Training II. Navegación basada en prestaciones (PBN). Diseño y publicación de procedimientos de vuelo instrumental RNAV y RNP.

Name of the event: Curso PANS-OPS PBN



Type of event: Course

City of the publishing body: Madrid, Spain

Date of the event: 14/11/2016

Organising body: Universidad Politécnica de Madrid **Type of body:** University
Luis Perez Sanz; Jose Felix Alonso Alarcon.

15 Title: Initial Training sobre el diseño de procedimientos de vuelo instrumental en el área terminal

Name of the event: Curso PANS-OPS convencional

Type of event: Course

City of the publishing body: Madrid, Spain

Date of the event: 12/09/2016

Organising body: Universidad Politécnica de Madrid **Type of body:** University

Luis Perez Sanz; Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador; Jose Felix Alonso Alarcon.

16 Title: Concepto generales de diseño de procedimientos de vuelo instrumental

Name of the event: El mismo

Type of event: Course

City of the publishing body: Salamanca, Unknown

Date of the event: 06/06/2016

Organising body: SENASA

Type of body: State agency

Jose Felix Alonso Alarcon; Luis Perez Sanz.

17 Title: Advanced Training II. Diseño de procedimientos de vuelo instrumental PBN. Edición 2015 (FGUPM 43841820007)

Name of the event: Curso

Type of event: Course

City of the publishing body: ETSIAE / Madrid, Spain

Date of the event: 01/12/2015

Organising body: Universidad Politécnica de Madrid **Type of body:** University

Luis Perez Sanz; Jose Felix Alonso Alarcon.

18 Title: Diseño de procedimientos instrumentales de vuelo en el área terminal (TMA)

Name of the event: Curso

Type of event: Course

City of the publishing body: Aeródromo Militar de Cuatro Vientos / Madrid, Spain

Date of the event: 19/10/2015

Organising body: Universidad Politécnica de Madrid **Type of body:** University

Luis Perez Sanz.

19 Title: Diseño de procedimientos de vuelo en el área terminal

Name of the event: Curso PANS-OPS convencional

Type of event: Course

City of the publishing body: Madrid, Spain

Date of the event: 13/10/2015

Organising body: Universidad Politécnica de Madrid **Type of body:** University

Luis Perez Sanz.

20 Title: Diseño de procedimientos de vuelo instrumental en el Area Terminal (TMA) Navegación Convencional

Name of the event: Curso

Type of event: Course



City of the publishing body: ETSIAE / Madrid, Spain

Date of the event: 07/09/2015

Organising body: Universidad Politécnica de Madrid **Type of body:** University
Luis Perez Sanz; Jose Felix Alonso Alarcon.

- 21** **Title:** Advanced Training II. Navegación Basada en Prestaciones (PBN). Diseño y publicación de procedimientos vuelo instrumental RNAV y RNP.
Name of the event: Curso PANS-OPS PBN
Type of event: Course
City of the publishing body: Madrid, Spain
Date of the event: 17/11/2014
Organising body: Universidad Politécnica de Madrid **Type of body:** University
Luis Perez Sanz.
- 22** **Title:** Advanced Training II. Navegación Basada en Prestaciones (PBN). Diseño y publicación de procedimientos vuelo instrumental RNAV y RNP.
Name of the event: Navegación Basada en Prestaciones (PBN). Diseño y publicación de procedimientos de vuelo instrumental RNAV y RNP.
Type of event: Course
City of the publishing body: Madrid, Spain
Date of the event: 20/10/2014
Organising body: Universidad Politécnica de Madrid **Type of body:** University
Luis Perez Sanz.
- 23** **Title:** Curso básico de diseño de procedimientos de vuelo instrumental en el Área Terminal (TMA), Navegación Convencional. Edición 2014.
Name of the event: Curso PANS-OPS convencional
Type of event: Course
City of the publishing body: Madrid, Spain
Date of the event: 15/09/2014
Organising body: Universidad Politécnica de Madrid **Type of body:** University
Luis Perez Sanz.
- 24** **Title:** Curso básico de diseño de procedimientos de vuelo instrumental en el Área Terminal (TMA), Navegación Convencional. Edición 2014.
Name of the event: NA
Type of event: Course
City of the publishing body: Madrid, Spain
Date of the event: 05/05/2014
Organising body: Universidad Politécnica de Madrid **Type of body:** University
Luis Perez Sanz; Jose Felix Alonso Alarcon; Rosa Maria Arnaldo Valdes.
- 25** **Title:** Curso básico para técnicos de mantenimiento en la provisión de servicios de Navegación Aérea - CNS.
Name of the event: NA
Type of event: Course
City of the publishing body: Unknown
Date of the event: 04/03/2014
Organising body: Universidad Politécnica de Madrid **Type of body:** University
Luis Perez Sanz; Fco. Javier Saez Nieto; Rosa Maria Arnaldo Valdes; Javier Crespo Moreno; Jose Felix Alonso Alarcon.



- 26** **Title:** Advanced Training II. Navegación Basada en Prestaciones (PBN). Diseño y Publicación de Procedimientos de Vuelo Instrumental RNAV y RNP.
Name of the event: Curso
Type of event: Course
City of the publishing body: Madrid, Spain
Date of the event: 16/09/2013
Organising body: Universidad Politécnica de Madrid **Type of body:** University
Luis Perez Sanz.
- 27** **Title:** Curso sobre la Importancia del Concepto PBN. Las Distintas Especificaciones de Navegación Aérea, la Diferencia entre ellas y Aplicación. Exposición de los Criterios Básicos de Diseño y Publicación de Procedimientos de Vuelo Instrumental RNAV y RNP.
Name of the event: Curso
Type of event: Course
City of the publishing body: Madrid, Spain
Date of the event: 15/04/2013
Organising body: Universidad Politécnica de Madrid **Type of body:** University
Luis Perez Sanz.
- 28** **Title:** Diseño y Construcción de Procedimientos de Vuelo en el Área Terminal (Procedimientos Basados en Navegación Convencional)
Name of the event: Curso
Type of event: Course
City of the publishing body: Madrid, Spain
Date of the event: 21/01/2013
Organising body: Universidad Politécnica de Madrid **Type of body:** University
Luis Perez Sanz; Rosa Maria Arnaldo Valdes; Jose Felix Alonso Alarcon.
- 29** **Title:** Segunda edicion del cursos on line de Navegación Aérea CEDET
Name of the event: Segunda edicion del curso on line de Navegación Aérea CEDET
Type of event: Course
City of the publishing body: on line, Spain
Date of the event: 08/10/2012
Organising body: CEDET- Aena **Type of body:** Body, others
Fco. Javier Saez Nieto; Jose Felix Alonso Alarcon; Luis Perez Sanz; Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador; Luis Negrete.
- 30** **Title:** Segunda edicion del cursos on line de Navegación Aérea CEDET
Name of the event: Segunda edicion del curso on line de Navegación Aérea CEDET
Type of event: Course
City of the publishing body: On line, Spain
Date of the event: 08/10/2012
Organising body: CEDET- Aena **Type of body:** Body, others
Fco. Javier Saez Nieto; Jose Felix Alonso Alarcon; Luis Perez Sanz; Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador; Luis Negrete.
- 31** **Title:** Basic course on safety assessment methodology
Name of the event: NA
Type of event: Course
City of the publishing body: Cairo, Egipto, Egypt



Date of the event: 02/09/2012

Organising body: Prointec - Aviación Civil Egipcia
Rosa Maria Arnaldo Valdes; Luis Perez Sanz.

Type of body: Body, others

32 Title: Performance-Based Navigation (PBN)

Name of the event: NA

Type of event: Course

City of the publishing body: Cairo, Egipto, Egypt

Date of the event: 02/09/2012

Organising body: Prointec - Aviación Civil Egipcia
Luis Perez Sanz; Rosa Maria Arnaldo Valdes.

Type of body: Body, others

33 Title: La Navegación Aérea: Técnicas y Procedimientos

Name of the event: Máster en Gestión y Dirección Aeroportuaria y Aeronáutica

Type of event: Course

City of the publishing body: Sevilla, Spain

Date of the event: 23/06/2012

Organising body: IT Aérea
Luis Perez Sanz.

Type of body: Body, others

34 Title: Curso básico sobre el diseño de procedimientos instrumentales de vuelo en el área terminal

Name of the event: NA

Type of event: Course

City of the publishing body: Madrid, Spain

Date of the event: 11/06/2012

Organising body: Universidad Politécnica de Madrid
Luis Perez Sanz.

Type of body: University

35 Title: La Navegación Aérea en el entorno aeroportuario

Name of the event: Master en Sistemas Aeroportuarios de la UPM

Type of event: Course

City of the publishing body: Madrid, Spain

Date of the event: 11/03/2012

Organising body: Universidad Politécnica de Madrid
Fco. Javier Saez Nieto; Luis Perez Sanz; Rosa Maria Arnaldo Valdes; Victor Fernando Gomez Comendador.

Type of body: University

36 Title: Curso on lline de Navegacion Aerea CEDET

Name of the event: CEDET

Type of event: Course

City of the publishing body: Spain

Date of the event: 03/10/2011

Organising body: CEDET
Fco. Javier Saez Nieto; Rosa Maria Arnaldo Valdes; Luis Perez Sanz; Jose Felix Alonso Alarcon.

Type of body: Body, others

37 Title: Diseño de procedimientos de vuelo instrumental en el área terminal. Navegación Convencional

Name of the event: Curso

Type of event: Course

City of the publishing body: EUIT Aeronáutica, Spain

Date of the event: 03/10/2011

Organising body: Universidad Politécnica de Madrid

Type of body: University



Luis Perez Sanz; Rosa Maria Arnaldo Valdes; Jose Maria Colas Pulido; Jose Felix Alonso Alarcon.

- 38** **Title:** Primera edicion del curso on lline de Navegacion Aerea CEDET
Name of the event: Primera edicion del curso on lline de Navegacion Aerea CEDET
Type of event: Course
City of the publishing body: On line, Spain
Date of the event: 03/10/2011
Organising body: CEDET y Aena **Type of body:** Body, others
Fco. Javier Saez Nieto; Rosa Maria Arnaldo Valdes; Jose Felix Alonso Alarcon; Luis Perez Sanz; Victor Fernando Gomez Comendador; Luis Negrete.
- 39** **Title:** Sistemas CNS
Name of the event: Curso Sistemas CNS
Type of event: Course
City of the publishing body: EUIT Aeronáutica, Spain
Date of the event: 06/06/2011
Organising body: Universidad Politécnica de Madrid **Type of body:** University
Luis Perez Sanz; Jose Felix Alonso Alarcon; Javier Crespo Moreno; Fco. Javier Saez Nieto; Victor Manuel Gordo Arias; Rosa Maria Arnaldo Valdes; Andres Lopez Morales.
- 40** **Title:** Sistemas de Ayuda a la Navegación Aérea
Name of the event: Curso Sistemas CNS
Type of event: Course
City of the publishing body: EUIT Aeronáutica, Spain
Date of the event: 04/04/2011
Organising body: Universidad Politécnica de Madrid **Type of body:** University
Luis Perez Sanz; Victor Manuel Gordo Arias; Javier Crespo Moreno; Fco. Javier Saez Nieto; Jose Felix Alonso Alarcon; Rosa Maria Arnaldo Valdes.
- 41** **Title:** Servidumbres Aeronáuticas
Name of the event: Curso de servidumbres aeronáuticas
Type of event: Course
City of the publishing body: Madrid, Unknown
Date of the event: 20/09/2010
Organising body: Grupo de Investigación en Navegación Aérea **Type of body:** Body, others
Luis Perez Sanz; Luis Pastor Botella.
- 42** **Title:** Diseño de procedimientos de vuelo instrumental basados en navegación convencional
Name of the event: Curso de Diseño de Procedimientos
Type of event: Course
City of the publishing body: Madrid, Unknown
Date of the event: 03/05/2010
Organising body: Universidad Politécnica de Madrid **Type of body:** University
Luis Perez Sanz.
- 43** **Title:** Diseño y Construcción de Procedimientos de vuelo instrumental
Name of the event: Curso de procedimientos de vuelo instrumental
Type of event: Course
City of the publishing body: Madrid, Unknown
Date of the event: 15/02/2010



Organising body: Grupo de Investigación en Navegación Aérea
Luis Perez Sanz.

Type of body: Body, others

- 44** **Title:** Performance Based Navigation
Name of the event: Curso Performance Based Navigation
Type of event: Course
City of the publishing body: Unknown
Date of the event: 02/02/2010
Organising body: Grupo de Investigación en Navegación Aérea
Luis Perez Sanz.

Type of body: Body, others

- 45** **Title:** Diseño de Procedimientos Instrumentales de Vuelo basados en Navegación Convencional
Name of the event: Diseño de Procedimientos Instrumentales de Vuelo basados en Navegación Convencional
Type of event: Course
City of the publishing body: E.U.I.T.Aeronáutica/Madrid, Unknown
Date of the event: 28/09/2009
Organising body: Curso de libre inscripción
Luis Perez Sanz; Víctor Fernando Gomez Comendador; Santiago Matas Utrilla; Jose Felix Alonso Alarcon; Jose Maria Colas Pulido; Javier Crespo Moreno.

Type of body: Body, others

- 46** **Title:** La Navegación Aérea y el Aeropuerto
Name of the event: Master de Sistemas Aeroportuarios
Type of event: Course
City of the publishing body: Unknown
Date of the event: 09/03/2009
Organising body: E.T.S.I.Aeronauticos
Luis Perez Sanz; Fco. Javier Saez Nieto; Rosa Maria Arnaldo Valdes.

Type of body: Body, others

Other publishing activities.

- 1** **Title or object:** La operación instrumental en el aeropuerto de la Seu de Urgel
Type of event: Conferences given
City of the publishing body: Andorra Park Hotel, Andorra la Vella, Andorra
Organising body: Empresa Familiar Andorrana (EFA) Aeroports de Catalunya
Luis Perez Sanz.
- 2** **Title or object:** Conformance monitoring, contract of objectives, tube in the sky
Type of event: Conferences given
City of the publishing body: Segovia, Unknown
Organising body: SESAR SJU
Luis Perez Sanz. ISBN NA
- 3** **Title or object:** Precision Trajectory Clearance (PTC). A New Separation Mode.
Type of event: Conferences given
City of the publishing body: Madrid, Unknown
Organising body: Universidad Politécnica de Madrid
Luis Perez Sanz. ISBN NA



Experiences transferred

Experience organising R&D activities

Title: Consolidación de entornos virtuales de simulación de Navegación Aérea y Migración hacia una plataforma e-lab como soporte a la docencia en el grado de Ingeniería Aeroespacial

Type of activity: Responsabilidades en cargos de gestión en I+D+i

City of the publishing body: Escuela Universitaria de Ingeniería Técnica Aeronáutica,

Start date: 09/01/2012

Other credits

Membership of thematic networks after selection processes

Name: Red de Infraestructuras y Transporte

Identification of the network: NA

Start date: 01/01/2012

Qualifications and awards accrediting professional quality

Description: Premio Luis Azcarraga. Fundación Aena

Body conferring the credit: Fundación Aena

Type of body: Body, others

City: Madrid,

Date of credit: 30/06/2006

Number of recognised research periods

Number of recognised research periods: 1

Issuing body: Universidad Politécnica de Madrid

Type of body: University

City: Madrid, Community of Madrid, Spain