1. PERSONAL INFORMATION

Family name, First name: Soler Arnedo, Manuel.

Identifier(s): WOS Researcher ID I-4656-2019; Scopus ID: 36161339100; Orcid 0000-0002-4664-1693.

Date of birth: 31/08/1982; Nationality: Spanish.

SEXENIOS: 1 under evaluation (2010-2016) with merits for a 2nd one (2017-2020) -List of papers in page 6-

URL for web site: http://www.aerospaceengineering.es

- **EDUCATION**

2013	Aerospace Engineering PhD, Universidad Rey Juan Carlos, Spain. Name of PhD Supervisor: Ernesto Staffetti and Alberto Olivares.
2011	Master's in aerospace science and Technology. School of Aeronautical Engineering. Polytechnic University of Madrid (UPM), Spain.
2007	Aerospace Engineering (5-year program; Master level). School of Aeronautical Engineering. Polytechnic University of Madrid (UPM), Spain.
2007	Aerospace Engineering (Erasmus Program Academic Year). Luft & Raumfahrt, TU Berlin.

- **CURRENT AND PREVIOUS POSITION(S)**

2019 –	Associate Professor (Profesor Titular). Bioengineering and Aerospace Department. Universidad Carlos III de Madrid, Spain. **Current Position.**
2014 – 2019	Assistant Professor. Bioengineering and Aerospace Department. Universidad Carlos III de Madrid, Spain.
2008 – 2013	PhD student. Universidad Rey Juan Carlos, Spain.
2008	Aerial transportation consultant at INECO.

- **FELLOWSHIPS AND AWARDS**

2019	Luis Azcárraga Award. Fundación EnAire: National level,12.000 Euros.
2019	UC3M's entrepreneurship student competition (acting as mentor). 1st position 10.000 Euro.
2016	Luis Azcárraga Award. Fundación EnAire: National level,12.000 Euros.
2013	SESAR Young Scientist Award. SESAR JTU: European level, 5000 Euros.
2008 – 2013	Pre-Doctoral Fellowship, including Pre-Doctoral burses for researcher stays.

- **INVITED TALKS AND SEMINARS**

2018	2nd Workshop on Meteorology and ATM.
2017	1st Workshop on Meteorology and ATM.
2014	SESAR Track at World ATM Congress (~400 attendees to the talk; ~7000 to the event).
2014	Seminar at NASA Ames Research Center, Moffet Field, CA (Usa).

- **INVITED RESEARCH STAYS**

2013	UC Berkeley. Hosted by Prof. Mark Hansen (5 months).
2010	ETH Zürich. Hosted by Prof. John Lygeros (3 months).

- **Competitive GRANTS as independent PI. (2 Plan Nacional; 5 H2020; 2 others: ~1.1 Mi. €)**

2020 – 2022	Recently granted 4 H2020 projects within SESAR (**FMP-Met, ISOBAR, START, FlyATM4E)**. Funded by the European Commission under call H2020-SESAR-2019-1.
2019 – 2021	**MetATS** "Managing meteorological uncertainty for a more efficient air traffic system". Funded by the Spanish Government (societal challenges program.)
2019– 2021	**STORMY** "A pilot/dispatcher support tool based on the enhanced provision of thunderstorm forecasts considering its inherent uncertainty". Funded by Engage, The SESAR H2020 Research Knowledge. Eduardo Andres' PhD co-funding grant.
2015 – 2018	**OPTMet** – "Analysis and optimization of aircraft trajectories under the effects of meteorological uncertainties". Funded by the Spanish Government (societal challenges).
2016 – 2018	**TBO-MET** "Meteorological Uncertainty Management for Trajectory Based Operations." Funded by the European Commission under call H2020-SESAR-2015-1.
2014 – 2017	"Stochastic Optimal Control towards Enhanced Predictability of four-dimensional Trajectories using of Weather Ensemble Prediction Forecasts." Financed by Eurocontrol through SESAR FP7 HALA! Research Network. Daniel González's PhD co-funding grant.

- **R&D Contracts as independent PI. (~200k. €)**

2019 Airbus R&D France
2014 – 2018 Boeing R&T Europe.
2014 – 2019 Others: Enaire, CRIDA, Innaxis

- **Independent SUPERVISION OF PhD STUDENTS (3 PhD Supervised; 2 PhD under supervision)**

2017 – 2019 Post-Doctoral Supervision. Javier García-Heras. UC3M (Spain), Spain.
2014 – 2019 PhD co-Supervision. Daniel González-Arribas with M. Sanjurjo. UC3M
2014 – 2020 PhD co-Supervision. David Morante with M. Sanjurjo. UC3M
2016 – 2019 PhD co-Supervision with L. Casalino. Daniele Mazzota. UC3M & Politecnico Torino (Italy)
2018 – PhD co-Supervision with M. Kamgarpour. Eduardo Andrés. UC3M and ETH Zürich (Swz)
2018 – PhD Supervision. Aniel Jardines. UC3M

- **TEACHING ACTIVITIES**

2019 – Associate Professor – Aerial Navigation, Air Transport, and Airports; UC3M (Spain)
2014 – 2019 Assistant Professor – Aerial Navigation, Air Transport, Airports, Flight Mechanics, Control, and Autonomous Systems; UC3M (Spain).
2014 Publication of the book *"Fundamentals of Aerospace Engineering (an Introductory course to Aeronautical Engineering)"*. Manuel Soler. Manuel Soler [Ed]. First Edition (2014), ISBN 978-14-937277-5-9. Second Edition (2017), ISBN 978-19-744573-4-5.

- **ORGANISATION OF SCIENTIFIC MEETINGS AND PANNELS**

2018 – 2021 Lead of the Challenge "Efficient provision and use of meteorological information in ATM" at SESAR network http://www.engagektn.com/. Moderating panels & attending to meetings.
2017 Organizer of "Workshop on Uncertainty and ATM" hosted at UC3M (~40 attendees)
2016 – 2018 Member of the organizing panel of the "Meteorology and ATM workshops series".

- **INSTITUTIONAL RESPONSIBILITIES**

2019 -- Leading the proposal to create a PhD Programme on Aerospace Engineering at UC3M.
2016 – 2018 Seat at the Academic Panel of the bachelor's in aerospace engineering. at UC3M.
2016 – Seat at the Academic Panel of the Master in Aeronautical Engineering at UC3M.

- **JURY MEMBER, REVIEWING AND EDITOR ACTIVITIES**

2015 Jury member in 3 PhD defences (R. Dalmau (UPC); I. Dhief (ENAC); J. García (UPM))
2013 – Reviewer for indexed WoS journals (20; ~4 per year since 2014): Aerospace Science and Technology; Journal of Guidance, control, and dynamics; IEEE Transactions on Intelligent transportation systems. IEEE Transactions on Control Systems Tech; Transportation Research, Part C; Transportation Research, Part D, among others.
2018 – Editor: IEEE IROS - IROS - IEEE Robotics and Automation Society- Conference 2018. Special Issue "Optimal Control Techniques in Aircraft Guidance and Control (OCTAG)". International Journal of Aerospace Engineering.

- **MAJOR COLLABORATIONS**

- **Damián Rivas**, University of Seville. Topic: meteorological uncertainty and ATM. 3 competitive projects (1 H2020 and 2 national). 2 Conference papers.
- **Maryam Kamgarpour**, ETH Zürich. Topic: stochastic optimal control. 3 WoS Papers; 1 MsC Thesis co-supervision; 1 PhD Thesis co-supervision; 4 Scop. Papers; 1 Competitive project.
- **Mark Hansen**, UC Berkeley. Topic: Environment. 1 WoS Paper; 1 Scop. paper.
- **Daniel Delahaye**, ENAC. Topic: meteorological uncertainty & ATM; 1 WoS Paper; 1 Scop. paper.
- **Roberto Casalino,** Politecnico de Torino. Topic: stochastic optimal control.
- **Juan Simarro**, AEMET. Topic: meteorological uncertainty and ATM. 2 competitive projects (1 H2020 & 1 National). 1 WoS paper, 1 book chapter, 1 Scop. paper.
- **Florent Teichteil,** Airbus R&D France. 1 contract R&D.

- **CAREER BREAKS**

Exact dates Paternity leave (2 months in 2018 – Aug. 23 to Oct 22)
Paternity leave (15 days in 2016 – July 6th to July 20th)

- **Ongoing Competitive Grants (1 Plan Nacional; 4 SESAR H2020; 1 PhD Co-funding)**

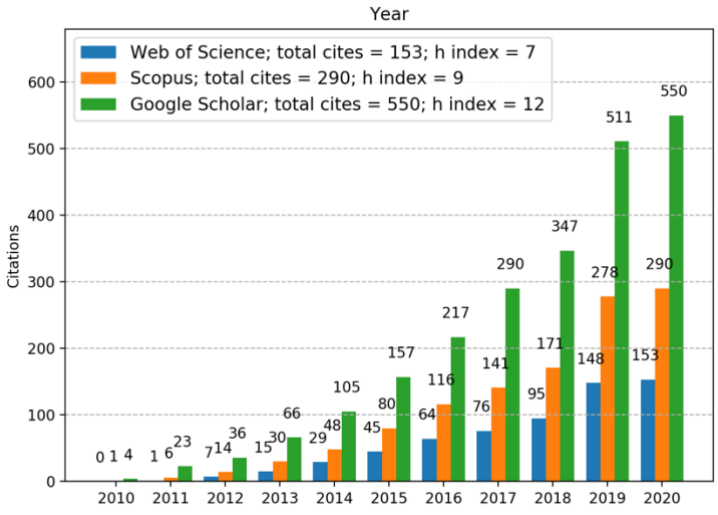
Project Title	*Funding source*	*Amount (Euros)*	*Period*	*Role of the PI*
MetATS "Managing meteorological uncertainty for a more efficient air traffic system."	Funded by the Spanish Government within societal challenges program	*44.000€*	*01/01/2019 31/12/2021*	*PI* at UC3M
STORMY "A pilot/dispatcher support tool based on the enhanced provision of thunderstorm forecasts considering its inherent uncertainty".	Funded by Engage, The SESAR H2020 Research Knowledge. Eduardo Andres' PhD co-funding grant.	*65000€*	*01/02/2019 31/012022*	*PI* at UC3M
FMP-Met "Meteorological uncertainty management for Flow Management Positions"	H2020-SESAR-2019-2 SESAR-RIA 885919	–100.000 €	01/05/2020 – 30/10/2022	PI at UC3M
START "a Stable and resilienT ATM by integrAting Robust airline operations into the neTwork"	H2020-SESAR-2019-2 SESAR-RIA 893204	–320.000 €	01/05/2020 – 30/10/2022	PI at UC3M and Consortium Coordinator
ISOBAR "Artificial Intelligence Solutions to Meteo-Based DCB Imbalances for Network Operations Planning"	H2020-SESAR-2019-2 SESAR-RIA 891965	–220.000 €	01/06/2020 – 30/11/2022	PI at UC3M
FlyATM4E "FLYING AIR TRAFFIC MANAGEMENT FOR THE ENVIRONMENT"	H2020-SESAR-2019-2 SESAR-RIA 891317	–110.000 €	01/06/2020 – 30/11/2022	PI at UC3M

- **Finished Competitive Grants (1 Plan Nacional; 1 SESAR H2020; 1 PhD Co-funding)**

Project Title	*Funding source*	*Amount (Euros)*	*Period*	*Role of the PI*
OptMet "Analysis and optimization of aircraft trajectories under the effects of meteorological uncertainties"	Funded by the Spanish Government within societal challenges program	*66.000€*	*01/01/2015 31/12/2019*	*PI* at UC3M
TBO-MET "Meteorological Uncertainty Management for Trajectory Based Operations"	H2020-SESAR-2015-1 SESAR-RIA	107.000 €	01/06/2016 – 30/05/2018	PI at UC3M
"Stochastic Optimal Control towards Enhanced Predictability of four-dimensional Trajectories using of Weather Ensemble Prediction Forecasts	Financed by Eurocontrol through SESAR FP7 HALA! Research Network.". Daniel González's PhD co-funding grant	35000€	*01/01/2014 31/12/2017*	PI at UC3M

- **Publication records and impact:**

I have a total of **47 scientific publications**: 2 book chapters with Springer; **16 WoS publications (11 are in Q1 journals);** 12 SCOPUS papers; 18 articles in international conference proceedings. Up to date publication record can be consulted at www.aerospaceengineering.es. As for **impact based on citations**, Figure 6 presents my citations of an accumulative basis for different sources, including h-index. I would like to remark the citations in 2019, which have more than doubled those in 2018. Moreover, note that the categories in which I have been publishing are not very active in terms of publications and citations: Aerospace Engineering (31 journals; position 182 out of 236 categories in published papers; position 193 out of 236 categories by number of cites) and Transportation Science and Technology (37 journals; position 166 out of 236 in published papers; position 167 out of 236 by number of cites). In addition, the teaching book



(Fundamental of Aerospace Engineering, published in 2014), self-edited and offered on an open-source basis via my website, has had the following impact: 2409 units sold via Amazon; 5886 downloads from my website (29300 visits in 5 years); 37038 reads in Research Gate. **Impact based on collaborations:** I have co-authored papers with researchers of 15 institutions, including ETH, UC Berkeley, U. Chicago, ENAC, U. Cranfield, U. Hannover.

2. **Early achievements track-record**

In my **Ph.D. thesis (2008-2013)**, I conceived a multiphase and mixed-integer optimization framework specifically tailored for the computation of deterministic, minimum fuel aircraft trajectories, including discrete events and decision-making. The **results of my Ph.D. thesis** were published in 3 WoS Journal papers and 5 Socopus papers. My Doctoral work was **recognized at the European level** with the **SESAR Young Scientist Award** 2013 *for its innovative modelling and interdisciplinary solution approach to the trajectory modelling problem, as well as strong engagement with European Research Centres and the USA.* This award provided me the opportunity to present my research within the SESAR Track at the World ATM Congress (~400 attendees to the talk; ~7000 to the event). Moreover, the last contribution of my Ph.D. Soler et al., (2015) was recognized with the **Luis Azcarraga award of the EnAire Foundation in 2016**, distinguishing yearly scientific studies with singular contributions to air transport. I was awarded two scholarships and enjoyed **research stays at ETH Zürich (3 months) and UC Berkeley (5 months)**, where I started to develop an **international and independent scientific career.** At UC Berkeley, hosted by Prof. Mark Hansen, we published (independently of my Ph.D. advisors) a joint WOS Journal paper, extending the theoretical contributions of my thesis to the consideration of contrails. At ETH, I was hosted by Prof. Lygeros (ERC AGr in 2018) and started a fruitful collaboration with M. Kamgarpour (Assistant Prof. at ETH and ERC SGr in 2015) on optimal control under uncertainty. Together (and independently of my Ph.D. advisors) we have co-authored 3 WOS papers, 4 Scopus papers, and currently co-supervising a Ph.D. student (Eduardo Andrés).

In 2014 I joined UC3M as a **tenure track Assistant Professor (2014-2019)**, where I developed an **early independent research career, starting a research line on meteorological uncertainty and ATM**. I incorporated meteorological uncertainty (turning to be a very impactful factor) into aircraft trajectory optimization problems. This independent research line provided me expertise in state-of-art and experimental meteorological products and stochastic optimization algorithms. I become one of the pioneers in Europe to use Ensemble Probabilistic Systems (EPS) weather forecasts in ATM-related problems. Within this research line: a) I got competitive grants (always as IP and independently of my Ph.D. advisors) that worth 500.000 €, (5 competitive project -3 European- and 14 R&D contracts -including Boeing R&T and Airbus R&D France-; b) I have established a research group independently (now formed by J. García-Heras -Senior Post-Doctoral fellow-, D. González-Arribas -junior Postdoc- and 3 junior Ph.D. students; c) I have independently supervised 3 Ph.D. thesis (plus currently 2 under supervision); d) I have published (always independently from my Ph.D. supervisors) 2 book chapters, 10 WoS papers, 8 Scopus papers; and more than 30 communications in conferences; e) I have organized a "workshop on uncertainty and ATM"; e) I'm currently one of the leaders of the Challenge "Efficient provision and use of meteorological information in ATM" of the network Engage http://www.engagektn.com/ within SESAR H2020; f) I'm part of the organizing panel of the "meteorology and ATM workshops" series; g) in co-work with a Ph.D. student under my supervision, we were recently awarded the 2019 Luis Azcárraga Award, becoming the only one to have won this award twice.

In January 2019 **I became an Associate Professor at UC3M** in the area of aerial transportation and air navigation. I continue consolidating the research line on "meteorological uncertainty and ATM**",** while I'm trying to open to additional research lines: "artificial Intelligence and data-driven algorithms and ATM" and "ATM and Climate change"**.** Indeed**,** I have been recently awarded with 4 SESAR H2020 projects (START, FlyATM4E, ISOBAR, and FMP-Met), which constitute a solid pillar on which to develop these two new lines of research. The 4 projects worth nearly 700k€ for UC3M (6 Mi.€ for the whole consortia), and I'm recruiting a team of 5 people (3 PhDs and 2 PostDocs). **My longer-term research goal is to establish a leading research group in Europe on topics related to ATM and climatic change.** I would like to transform my scientific background acquired throughout these last years into ground-breaking, scientifically and socially meaningful research; transferring research on ATM and climate into tangible, operational solutions with multidisciplinary impacts.

5 Highlighted WOS Journal Publications WITHOUT Ph.D. supervisors:

1. Valentin Courchelle, Manuel Soler, Daniel González-Arribas, and Daniel Delahaye. "Strategic Aircraft Deconfliction under Wind Uncertainties: A Simulated Annealing Metaheuristic Approach based on Speed Changes". *Transportation Research Part C: Emerging Technologies*. Volume 103, June 2019, Pages 194-210. [JCR 2018 Transp. Sci. & Tech.: IF 5.775; 3/37 Q1 Cites 0]. **Corresponding author, independent research, international collaboration (ENAC)**.
2. Daniel Hentzen, Daniel González-Arribas, Maryam Kamgarpour, and Manuel Soler. "On Maximizing Safety in Stochastic Aircraft Trajectory Planning with Uncertain Thunderstorm Development". *Aerospace Science and Technology*. Vol. 79, 2018, Pages 543-553. [JCR 2018 Eng. Aerospace: IF 2,829; 3/31 Q1, Cites 6 (GS); 4 (Scop); 3 (WoS)]. **Independent research, international collaboration (ETH)**.
3. D. González-Arribas, Manuel Soler, and Manuel Sanjrujo. "Robust Aircraft Trajectory Planning under Wind Uncertainty using Optimal Control". *Journal of Guidance, Control, and Dynamics*. Vol. 41, No. 3 (2018), pp. 673-688. [JCR 2018 Eng. Aerospace: IF 2.061; 8/31 Q2); Cites 21 (GS); 10 (Scop); 4 (WoS)]. **Independent research, main supervisor**. **Luis Azcárraga Award'19.**
4. M. Soler, B. Zou, M. Hansen "Flight Trajectory Design in the Presence of Contrails: Application of a Multiphase Mixed-Integer Optimal Control Approach". Transportation Research C: Emerging Tech. Vol. 48, 2014, pp 172–194. [JCR 2014 Transp. Sci. &Tech: IF 2.818; 5/33 Q1. Cites 29 (GS); 22 (Scop) 13 (WoS)]. **First author, independent research, international collaboration (UC Berkeley)**.
5. Soler, Manuel; Kamgarpour, Maryam; Lloret, Javier; Lygeros, John. "A Hybrid Optimal Control Approach to Fuel Efficient Aircraft Conflict Avoidance". *IEEE Transactions on Intelligent Transportation Systems*. Vol. 17. No. 7. pp. 1826-1838, July 2016. [JCR 2016 Transp. Sci. &Tech: IF 3.724; 7/34 Q1. Cites 20 (GS); 14 (Scop) 10 (WoS)]. **First author, independent research, International collaboration (ETH).**

1 Other highlighted WOS Journal Publications:

1. M. Soler, A. Olivares and E. Staffetti. "Multiphase Optimal Control Framework for Commercial Aircraft 4D Flight Planning Problems". *Journal of Aircraft*. Vol. 52, No. 1, pp. 274-286 2015. [JCR 2015 Eng. Aerospace: IF 0.7, 15/30 Q2. Cites 33 (GS); 24 (Scop) 15 (WoS)]. **Luis Azcárraga Award'16.**

Independent research: Since I joined UC3M as a Tenure Track Assistant Professor in 2014, I developed an independent and mature research track, **managing my own research** team and projects, establishing my own links with research scientists and aviation stakeholders, and with policymakers through involvement in SESAR, including the young scientist award in 2013. Other indicators of my independence are:

- I have **supervised 3 Ph.D.** students & I'm supervising 2 Ph.D. students, all without my Ph.D. supervisors.
- **~1.3 Mi. € granted as independent PI**: 2 competitive projects as PI at national level (100k€); 7 competitive projects as PI at European level -5 H2020- (~1Mi. €); 14 research contracts as PI with industry (180k€). Since 2014, I have been the PI in all projects I have been involved in.
- **Publications without my Ph.D. supervisors**: 2 books (100% of the total); 2 book chapters (100% of the total); 11 JCR journals (75% of the total); 7 Scopus papers (60% of the total); 15 conference papers (80%).

Invited talks and seminars

- I was invited to give a t**alk and moderate a panel discussion** at the 2nd workshop on "Efficient provision and use of meteorological information in ATM"**,** a challenge I'm leading within Engage Network - https://engagektn.com/thematic-challenges/- to be held on 05 Nov. 2019 in Brussels (SESAR Premises)
- I was invited to **moderate a panel discussion** at the 1st workshop on "Efficient provision and use of meteorological information in ATM" that was held on 13 Nov. 2018 in Brussels (SESAR Premises)
- As a result of the SESAR Young Scientist Award in 2013, I was **invited to give a talk at the SESAR Track within the World ATM Congress**, the largest forum for ATM (~400 attendees to the talk; ~7000 to the event) https://www.worldatmcongress.org/home The talk was given in the same track as (among others) the Executive Director of SESAR, Mr. Florian Guillermet,
- While at UC Berkeley, I was invited to give a **seminar at NASA Ames Research Centre**, CA (USA).

Influence on early careers of supervised (Ph.D.) students:

- Daniel González: Defended on July 4th, 2019. Co-authored 5 JCR papers, 2 book chapters. Stays at ENAC and ETH. He was involved in SESAR H2020 TBO-Met (I acted as PI). He was awarded with 2nd place at SESAR Young Scientist Award'18 and our joint work recognized with the Luis Azcárraga Award'19.
- David Morante: Defended on January 17th, 2020. Co-authored 1 JCR papers (+1 under review). Stays at ESA, NASA, and U. of Chicago at Urbana. He has started up *ienai space* using the algorithms we have jointly developed. https://ienai.space/ was awarded an airbus-bizlab (incubator) award (~50k€).
- Daniele Mazzota: Defended on September 19th, 2019. Thesis co-supervised together with Lorenzo Casalino (Politecnico di Torino). Co-authored 1 JCR papers (+1 under review). Stays at POLITO.

Appendix: List of Papers for Sexenio 1 and 2.

Sexenio 2 (2017-2022) → 6 JCR Tercil 1 (4Q1 and Q2)

1. **Robust aircraft trajectory planning under uncertain convective environments with optimal control and rapidly developing thunderstorms.** Daniel González-Arribas, Manuel Soler, Manuel Sanjurjo, Maryam Kamgarpour, and Juan Simarro. *Aerospace Science and Technology*. Volume 89, June 2019, Pages 445-459. https://doi.org/10.1016/j.ast.2019.03.051. JCR Q1
2. **Strategic Aircraft Deconfliction under Wind Uncertainties: A Simulated Annealing Metaheuristic Approach based on Speed Changes.** Valentin Courchelle, Manuel Soler, Daniel González-Arribas, and Daniel Delahaye. *Transportation Research Part C: Emerging Technologies*. Volume 103, June 2019, Pages 194-210. 10.1016/j.trc.2019.03.024. JCR Q1
3. **Multiobjective Low-Thrust Interplanetary Trajectory Optimization based on Generalized Logaritmic Spirals.** David Morante, Manuel Sanjrujo, and Manuel Soler. *Journal of Guidance, Control, and Dynamics*. 42(3), pp. 476-490, 2019 https://arc.aiaa.org/doi/abs/10.2514/1.G003702. JCR Q2 (T1)
4. **On Maximizing Safety in Stochastic Aircraft Trajectory Planning with Uncertain Thuderstorm Development.** Daniel Hentzen, Daniel González-Arribas, Maryam Kamgarpour, and Manuel Soler. *Aerospace Science and Technology*. Volume 79, August 2018, Pages 543-553. https://doi.org/10.1016/j.ast.2018.06.006 JCR Q1
5. **Robust Aircraft Trajectory Planning under Wind Uncertainty using Optimal Control.** D. González-Arribas, Manuel Soler, and Manuel Sanjrujo. *Journal of Guidance, Control, and Dynamics*. Vol. 41, No. 3 (2018), pp. 673-688. http://arc.aiaa.org/doi/abs/10.2514/1.G002928 JCR Q2 (T1)
6. Robust Aircraft Trajectory Planning under Wind Uncertainty using Optimal Control. D. González-Arribas, Manuel Soler, and Manuel Sanjrujo. Journal of Guidance, Control, and Dynamics. Accepted for publication (Sept. 2017). Articles in Advance. DOI: 10.2514/1.G002928. Thomson Reuters Journal Citation Report. - JCR Impact Factor: Engineering, Aerospace 2016: 1.856 5/31 Q1 (JIF percentile 85.84).

Sexenio 1 (2010-2012-2013-2014-2015-2016) → 5 JCR Tercil 1 (4Q1 y 1Q2)

1. **A Hybrid Optimal Control Approach to Fuel Efficient Aircraft Conflict Avoidance. Soler,** Manuel; Kamgarpour, Maryam; Lloret, Javier; Lygeros, John. IEEE Transactions on Intelligent Transportation. Vol. 17. No. 7. pp. 1826-1838, July 2016. DOI: 10.1109/TITS.2015.2510824. Thomson Reuters Journal Citation Report. - JCR Impact Factor: Engineering, Civil 2015: 8/126 Q1 (JIF Percentile 94.048); Engineering, Electrical and Electronic 2016: 39/257 Q1 (JIF Percentile 85.019); Transportation Science and technology 2016: 8/33 Q1 (JIF Percentile 77.273)
2. **Flight Trajectory Design in the Presence of Contrails: Application of a Multiphase Mixed-Integer Optimal Control Approach**. M. Soler, B. Zou, M. Hansen. Transportation Research Part C: Emerging Technologies. Volume 48, November 2014, Pages 172–194 DOI 10.1016/j.trc.2014.08.009 Thomson Reuters Journal Citation Report. - JCR Impact Factor: Transportation Science and technology 2014: 2.818 5/33 Q1 (JIF Percentile 86.364).
3. **Multiphase Mixed-Integer Optimal Control Approach to Aircraft Trajectory Optimization.** P. Bonami, A. Olivares, M. Soler, and E. Staffetti, Journal of Guidance, Control, and Dynamics. Vol. 36, No. 5 : pp. 1267-1277; September 2013. DOI 10.2514/1.60492 Thomson Reuters Journal Citation Report. - JCR Impact Factor: Engineering, Aerospace 2013: 1.151 4/28 Q1 (JIF percentile 87.5).
4. **Framework for Aircraft 4D Trajectory Planning Towards an Efficient Air Traffic Management**. M. Soler, D. Zapata, A. Olivares, E. Staffetti. Journal of Aircraft. Vol. 49, No. 1, pp. 341-348; January-February 2012. DOI: 10.2514/1.C031490. Thomson Reuters Journal Citation Report. - JCR Impact Factor: Engineering, Aerospace 2012: 0.632 11/28 Q2 (JIF percentile 62.5).
5. **Hybrid Optimal Control Approach to Commercial Aircraft Trajectory Planning. M. Soler, A. Olivares and E. Staffetti. Journal of Guidance,** Control, and Dynamics. Vol. 33, No. 3, pp. 985-991; May–June 2010. DOI: 10.2514/1.47458 Thomson Reuters Journal Citation Report. - JCR Impact Factor: Engineering, Aerospace 2010: 1.070 4/28 Q1 (JIF percentile 87.5).