



DELIVERABLE D2.4

Grant Agreement:
Project acronym:
Project title:
Funding Scheme:
Start date of project:
Duration:

OSCAR <u>Open ScienCe</u> <u>Aeronautic & Air Transport</u> <u>Research</u> Coordination and support action 2019-01-01 30 Months

Date of latest version of Annex I against which the assessment will be made: V.1.0.0 dated 2018-11-08

Identification and adaption of suitable tools to facilitate Open Science

Due date of deliverable: 2020-09-30 Actual submission date: 2021-01-13 Deliverable version: Final V.1.0

Lead partner for this deliverable: Panepistimio Patron (UPAT)

824350

Lead partner for the related work package: Panepistimio Patron (UPAT)

Name, title and organisation of the scientific representative of the project's coordinator:

Dipl.-Ing. Gerhard Pauly Fraunhofer Institute for Manufacturing Technology and Advanced Materials IFAM Fraunhofer-Gesellschaft zur Förderung der Angewandten Forschung e.V.

	Project co-funded by the European Commission within Horizon 2020, the EU Framework Programme for Research and Innovation (2014-2020)				
	Dissemination Level				
PU	Public	х			
СО	Confidential, restricted under conditions set out in Model Grant Agreement				
CI	Classified, information as referred to in Commission Decision 2001/844/EC.				





Report Approval Status

	Name	Organisation Short Name, Department, Function	Date	Signature	Comments
Author(s)	Prof. Spiros Pantelakis	UPAT Professor	2020-10-26		
Autror(s)	Dr. Panagiota Polydoropoulou	UPAT researcher	2020-10-26		
Contributor(a)	Christina Breitzke	Fraunhofer IFAM	2020-11-04		
Contributor(s)	Valerie Hachette	SAFRAN	2020-12-22		
Approval(s)					
Authorization(s)					





List of Distribution

			on ¹	Distributed Report Parts ²		
Name	Organisation Short Name, Department	Date	Type of Distribution ¹	Cover Page and Summary ²	Main Report²	Annexes ²
All researchers of the OSCAR consortium who access the OSCAR Content Server			D	Х	х	х
EC Services via the relevant portal (currently the funding & tender opportunities portal)			D	Х	х	Х

Explanation of notes and list of distribution:

- ¹ Type of Distribution: please use only the following codes
 - **S** = Originally signed print-out
 - **P** = Paper copy
 - **D** = Digital file
- ² Distributed Report Parts: please cross mark if applicable

Cover Page and Summary

Main Report = The whole report including cover page and summary with details, but no annexes or appendices

Annexes = All annexed separate documents





Content list

1	Object	ives and task	5
1.1	Obje	ctives of the related OSCAR WP2 and OSCAR task T2.4	5
1.2	Rele	vance and contribution of the deliverable to the objectives of OSCAR	5
2	Approa	ach and procedure	5
2.1	Worl	<pre>c performed</pre>	5
3	Result	S	6
3.1	Com	munication and networking tools	6
	3.1.1	Forums and blogs	7
	3.1.2	Multimedia channels	10
3.2	Data	management and repositories	17
	3.2.1	Publications	17
	3.2.2	Repositories	19
	3.2.3	Cloud Storage	34
4	Issues	related to adaption of e-tools for Open Science	36
4.1	Secu	irity concerns	36
4.2	Nove	el and/or adapted funding schemes for Open Science	36
4.3	Asse	essment and validation of provided information and data	37
4.4	Agile	e collaboration methodologies	37
5 6 Арј	Conclı Refere pendix	isions and Recommendations nces	39 40 41





1 Objectives and task

1.1 Objectives of the related OSCAR WP2 and OSCAR task T2.4

The overall objective of the WP2 is to capture the current extend that Open Science principles are applicable in the AAT research performed in Europe.

The objectives of Task 2.4 is the identification and adaption of suitable tools to facilitate Open Science. These tools will have to be adapted, based on the specific interests, constraints and sensitivities compiled in T2.2. Such tools could be, but are not restricted to:

- Forums and blogs (e.g. iMechanica, ResearchGate)
- Multimedia channels (e.g. YouTube, Instagram)
- Publications, data and methods repositories dedicated to aeronautics
- Cloud storage.

Several issues related to adaption of such tools for Open Science have to be examined, including:

- · Security concerns related to handling of "sensitive" information
- Novel and/or adapted funding schemes for Open Science
- Assessment and validation of provided information and data
- Agile collaboration methodologies.

1.2 Relevance and contribution of the deliverable to the objectives of OSCAR

The project OSCAR – <u>Open ScienCe Aeronautic & air transport Research</u> – addresses the current perception, acceptance, and implementation of Open Science in the field of European AAT research and in those fields where European AAT research issues interact with e.g. other transport modes and technology exchange. The main goal of the OSCAR project is to initiate and deliver an optimized Open Science concept to European transport with special focus on AAT research with triggering an implementation in aeronautics and air transport.

Current communication utilizes web-based technologies to create highly interactive platforms. Through these platforms individuals and communities share, co-create, discuss and modify usergenerated content. As social media, multimedia channels, forums, blogs, wikis, etc. have built the today's communication landscape, efficient implementation of Open Science relies on the communication strategy that will be used.

2 Approach and procedure

2.1 Work performed

A comprehensive study, exploiting relevant publications, Internet database, etc. has been performed. The aim of the study has been to investigate which tools are more efficient to facilitate implementation of Open Science principles and elaborate an appropriate strategy.

A thorough research has been performed through the communication and networking tools in order to provide the most appropriate forums, blogs and multimedia channels that could be adapted aiming to boost Open Science in AAT sector. The selected tools presented here have been chosen among others as they meet the following criteria set by this study:





- Relevance to the AAT research
- Openness
- Accessibility
- Impact (number of users, posts, etc.)
- Professional exploitation by the participants
- Scientific orientation of the forum
- Reliability of the content
- Activity

In addition, open access repositories as well as clouds that could be adapted in the AAT research landscape have been identified. The criteria set for the repositories have been the following:

- Relevance to the AAT research
- Openness
- Accessibility
- Compliance to Fair Principles
- Impact (number of users)
- Professional exploitation by the participants
- Reliability of the content
- Protection of sensitive data
- Activity

Moreover, a comprehensive list of journals relevant to aviation has been created. For the classification of these journals the following criteria have been implemented:

- Relevance to the AAT research
- Type of publication (explicitly open access or option for open access)
- Impact Factor/Cite Score
- Article Processing Charge

Last but not least, the aspects related to the adaption of the above described tools for Open Science have been investigated, namely:

- Security concerns related to handling of "sensitive" information
- Novel and/or adapted funding schemes for Open Science
- Assessment and validation of provided information and data
- Agile collaboration methodologies.

3 Results

3.1 Communication and networking tools

A big number of forums and blogs as well as multimedia channels are available in the worldwide web. The selected tools presented here have been chosen among others as they meet most of the following criteria set by this study:

- Relevance to the AAT research
- Openness
- Accessibility

OSCAR GA 824350 D2.4_Identification and adaption of suitable tools to facilitate Open Science Page 6 of 79 pages Printed 2021-01-130





- Impact (number of users, posts, etc.)
- Professional exploitation by the participants
- Scientific orientation of the forum
- Reliability of the content
- Activity

3.1.1 Forums and blogs

iMechanica

According to their definition the forum iMechanica aims "to use the Internet to enhance communication among mechanicians and to pave a way to evolve online all knowledge of mechanics". The forum is free for everyone, either for the contributors or the readers provided that they have a registered account. Comments on the uploaded posts are available providing a sort of evaluation to the content of the post. The main advantage of the forum iMechanica is that its contents are freely open to everyone, however no evaluation of the contents is made before the uploading. Table 1 summarizes the strong and weak points of the forum iMechanica.

Table 1: Strong and weak points of the forum iMechanica

	High	Moderate	Low
Relevance to the AAT research			General-purpose forum
Openness	\checkmark		
Accessibility	\checkmark		
Impact (number of users, posts, etc.)		~	
Professional exploitation by the participants		√	
Scientific orientation of the forum		√	
Reliability of the content			✓
Activity in iMechanica		✓	

The related forum is provided through the following link: <u>https://imechanica.org/</u>





ResearchGate

ResearchGate is one of the most recognized and widely accepted academic social media for scientists and researchers (Bhardwaj, 2017; Van Noorden, 2014) with more than 17 million members. ResearchGate is a forum where its members can share papers, ask and answer questions as well as find collaborations. Furthermore, many features are enabled such as privacy settings on posts, following other researchers' works, many filters of sorting, etc. Registered members can make their work available or request full publications from other members. However, ResearchGate might be a too generic forum. Table 2 summarizes the strong and weak points of the forum ResearchGate.

Table 2: Strong and weak points of the forum ResearchGate

	High	Moderate	Low
Relevance to the AAT research			General-purpose forum
Openness	Members can make their work available or request full publications from other members		
Accessibility	\checkmark		
Impact (number of users, posts, etc.)	\checkmark		
Professional exploitation by the participants	\checkmark		
Scientific orientation of the forum	\checkmark		
Reliability of the content		✓	
Activity in ResearchGate	\checkmark		

The related forum is provided through the following link: <u>https://www.researchgate.net/</u>

Academia.edu

Academia.edu is another platform for sharing knowledge among scientists and researchers with more than 137 million registrations. It is one of the most recognized academic social media platform after ResearchGate (Bhardwaj, 2017) with great impact to the scientific community. Academia.edu promotes open access to publications for free world wide ("Academia.edu," 2020). However, Academia.edu might be too generic and the publications directly to Academia.edu are not peer-reviewed which might lead to a limited confidence of the quality of the content. Furthermore, Academia.edu is not as interactive as ResearchGate among its users. ResearchGate has special sections that enable its users to interact with each other. Table 3 summarizes the strong and weak points of the forum Academia.edu.





	High	Moderate	Low
Relevance to the AAT research			General- purpose forum
Openness	Promotes open access		
Accessibility	\checkmark		
Impact (number of users, posts, etc.)		\checkmark	
Professional exploitation by the participants	\checkmark		
Scientific orientation of the forum	\checkmark		
Reliability of the content		\checkmark	
Activity in Academia.edu		\checkmark	

 Table 3: Strong and weak points of the forum Academia.edu

The related forum is provided through the following link:

https://www.academia.edu/

Zotero

In addition to the above mentioned scientific forums, Zotero, an open source non-profit tool has been developed for research management, namely for the collection, organization and citation of the research sources. Moreover, Zotero enables the collaboration and sharing your work with other researchers on the same topics, features that support the implementation of Open Science. Yet currently Zotero is used primarily as citation manager. Table 4 summarizes the strong and weak points of the tool Zotero.

Table 4: Strong and weak points of the tool Zotero

	High	Moderate	Low
Relevance to the AAT research			General- purpose forum and tool
Openness	\checkmark		
Accessibility	\checkmark		
Impact (number of users, posts, etc.)			\checkmark





	High	Moderate	Low
Professional exploitation by the participants	\checkmark		
Scientific orientation of the forum	\checkmark		
Reliability of the content		√	
Activity in Zotero			\checkmark

The related forums is provided through the following link: https://www.zotero.org/

3.1.2 Multimedia channels

Twitter and LinkedIn are assumed to be two of the most influential professional social media (goleman, daniel; boyatzis, Richard; Mckee & Perdana, 2018; Jarrahi & Sawyer, 2013; Kietzmann, Hermkens, McCarthy, & Silvestre, 2011; Thelwall, Haustein, Larivière, & Sugimoto, 2013). Their users are able to post news, events, interact with other users and also communicate with stakeholders. However, it should be noticed that most of Twitter users have no professional orientation. On the other side, LinkedIn has professional orientation and great impact. OSCAR project has already account in both of them aiming to share posts, disseminate news and events as well as to interact with stakeholders. Tables 5-6 summarize the strong and weak points of Twitter and LinkedIn. The accounts of the OSCAR project in Twitter and LinkedIn are shown in Figures 1-2, respectively.

	High	Moderate	Low
Relevance to the AAT research			General- purpose social media
Openness		\checkmark	
Accessibility	\checkmark		
Impact (number of users, posts, etc.)	\checkmark		
Professional exploitation by the participants		√	
Scientific orientation of Twitter			\checkmark
Reliability of the content			\checkmark

Table 5: Strong and weak points of Twitter





	High	Moderate	Low
Activity in Twitter	\checkmark		

Table 6: Strong and weak points of LinkedIn

	High	Moderate	Low
Relevance to the AAT research			General-purpose professional social media
Openness	\checkmark		
Accessibility	\checkmark		
Impact (number of users, posts, etc.)	\checkmark		
Professional exploitation by the participants	~		
Scientific orientation of LinkedIn			✓
Reliability of the content			\checkmark
Activity in LinkedIn	\checkmark		











in	ति Home	路 My Network	e Jobs	ि Messaging
OSCAR EU project			Ŕ	₽
🖄 Start a conversation in this g	group	ති		Ē
All Recommended				

Figure 2: OSCAR account in LinkedIn (https://www.linkedin.com/groups/13732936/)

ARCPORT

A promising and challenging effort is in progress to create a platform dedicated to the European Aeronautics research. In the framework of the European Union's Horizon 2020 Coordination & Support Action RADIAN, the ARCPORT platform has been created. ARCPORT is an online platform promoting collaboration and providing networking among its users. This online tool consists mainly of three elements:

- a community,
- a collaboration workspace,
- searchable information

In this context, the OSCAR project has already an account in the ARCPORT platform (Figure 3) as it meets the criteria for openness and professionality, it is dedicated to the Aeronautics research and it is expected to have a promising impact. As there is no peer review of the published content, the reliability of the platform is considered as moderate and not low due to the professional exploitation of the platform and its scientific orientation by the users. Table 7 summarizes the strong and weak points of ARCPORT.

	High	Moderate	Low
Relevance to the			
AAT research	\checkmark		





	High	Moderate	Low
Openness	\checkmark		
Accessibility	\checkmark		
Impact (number of users, posts, etc.)			\checkmark
Professional exploitation by the participants	\checkmark		
Scientific orientation of ARCPORT	\checkmark		
Reliability of the content		√	
Activity in ARCPORT			\checkmark

	OPPORTUNITIES MEMBERS GROUPS EVENTS DISCUSSION TOPICS AI	воит 🖪 📇 🖾 ф 🕒
	A.	Fostering Innovation in European Aeronautics
	Fundin	g • Search
	OSCAR 14 members	
	Stream About Events Topics Members	
	Group managers	Upcoming events in the group
Marie-Claire Coët	Cécile André	No upcoming events in this group All Upcoming events
Gerhard Pauly	Irene Pantelaki	Newest Discussion Topics in the group
		OSCAR Big Survey
of the European Commission that address Open Science in the field of European Aero European AAT research covers the scale of	ansport Research) is a H2020 Coordination and Support Action es the current perception, acceptance, and implementation of mautics and Air Transport (AAT) research. Technology Readiness Levels (TRL) from level 1 to level 6, goes with more strict protection of Intellectual Property Rights	Open Science and Intellectual Property 22 Nov All topics
(IPR) which contradicts the concept of Ope	en Science. However, IPR protection is a central pillar of of Open Science requires a transparent trade-off with IPR	Newest Members in the group
	ed mix of 7 relevant expert organizations: Fraunhofer niversity of Patras, SAFRAN and Thelsys.	Afroditi Anagnostopoulou
		Martin Maga

Figure 3: OSCAR account in ARCPORT (https://arcport.eu/group/12/stream)

Youtube

Youtube is a multimedia reproducer that enables sharing, saving, searching and reproducing videos. Registration to Youtube enables uploading video or even creating a specific channel on a specific field. Table 8 summarizes the strong and weak points of Youtube.





Table 8: Strong and weak points of Youtube

	High	Moderate	Low
Relevance to the AAT research			General-purpose social media
Openness	\checkmark		
Accessibility	\checkmark		
Impact (number of users, posts, etc.)	\checkmark		
Professional exploitation by the participants		~	
Scientific orientation of Youtube			✓
Reliability of the content			√
Activity in Youtube	\checkmark		

A video about Open Science has been uploaded on Youtube by ONERA in order to achieve the highest possible visibility, Presenter of the video is Marin Dacos who is the Open Science Advisor to the General Director of Research and Innovation at the French Ministry of Higher Education, Research and Innovation. M. Dacos is also the founder of Open Edition (<u>www.openedition.org</u>), which brings together four platforms dedicated to electronic resources and academic information in the humanities and social sciences. Three simple questions are answered in this video about Open Science:

What is Open Science.

How to do Open Science.

How far should we go.

For more information please see Deliverable D3.1 Report on identified national and European partners.

The link of the respective video which is subtitled in English is given below: https://www.youtube.com/watch?v=e3N7wBNPzcU

Instagram

Through Instagram users are able to publish and share photos and videos. It is a mean of social media mostly oriented for personal use. Lately it has been also used for scientific purposes. It may be proved to a valuable tool to communicate scientific related issues to public, as it has a strong impact to public (currently it has more than 1 billion users https://about.instagram.com/about-us) as well as to businesses (about 25 million https://www.omnicoreagency.com/instagram-statistics/). Table 9 summarizes the strong and weak points of Instagram.





Table 9: Strong and weak points of Instagram

	High	Moderate	Low
Relevance to the AAT research			General-purpose social media
Openness	\checkmark		
Accessibility	\checkmark		
Impact (number of users, posts, etc.)	\checkmark		
Professional exploitation by the participants		\checkmark	
Scientific orientation of Instagram			√
Reliability of the content			✓
Activity in Instagram	\checkmark		

The respective link is given below:

https://www.instagram.com/





3.2 Data management and repositories

3.2.1 Publications

The majority of the most relevant publications to Aeronautics have been recorded and analyzed based on the most comprehensive database, Scopus. The explicitly or supporting open access Journals have been classified. For the classification of these journals the following criteria have been implemented:

- Relevance to the AAT research
- Type of publication (explicitly open access or option for open access)
- Impact Factor/Cite Score
- Article Processing Charge

Scopus turned 188 results for Journals under the term "Aerospace Engineering". From them 19 were found as explicitly open access journals. Directory of open access Journals (DOAJ) has turned only four results which are included in the Scopus list. Therefore, the research has been made based on Scopus. Table 10 shows the 19 open access journals.

Table 10: Explicitly open access Journals under the term "Aerospace"

Source title	Publisher	CiteScore
Chinese Journal of Aeronautics	Press of Acta Aeronautica et Astronautica Sinica	4.3
Propulsion and Power Research	Elsevier	4.3
Curved and Layered Structures	Walter de Gruyter	3.2
Aerospace	Multidisciplinary Digital Publishing Institute (MDPI)	2.6
Aviation	Vilnius Gediminas Technical University	2.5

OSCAR GA 824350 D2.4_Identification and adaption of suitable tools to facilitate Open Science

Printed 2021-01-130





Source title	Publisher	CiteScore
International Journal of Micro Air Vehicles	SAGE	2.5
Latin American Journal of Solids and Structures	Argentinean Association of Computational Mechanics	2.5
Theoretical and Applied Mechanics Letters	Elsevier	1.9
International Journal of Aerospace Engineering	Hindawi	1.8
Metal Powder Report	Elsevier	1.8
Journal of Aerospace Technology and Management	Instituto de Aeronautica e Espaco-IAE	1.5
Open Engineering	Walter de Gruyter	1.5
Cailiao Gongcheng/Journal of Materials Engineering	Beijing Hangkong Cailian Yanjiuyuan/Beijing Institute of Aeronautical Meterials	1.2
Hangkong Cailiao Xuebao/Journal of Aeronautical Materials	Chinese Society of Aeronautics and Astronautics	1.2
International Journal of Aeronautical and Space Sciences	The Korean Society for Aeronautical & Space Sciences	1.1
INCAS Bulletin	INCAS - National Institute for Aerospace Research Elie Carafoli	0.8
Advances in Military Technology	University of Defence	0.6
International Journal of Aviation, Aeronautics, and Aerospace	Embry-Riddle Aeronautical University	0.5
Fatigue of Aircraft Structures	Walter de Gruyter	0.3

A list including most of the available Journals which support open access under the term "Aerospace" according to Scopus can be found in Appendix. This list also provides many details for these journals such as the impact factor and the cite score, their link, relevant subjects, scope, open access type and fees (in euro, otherwise stated).





3.2.1.1 Open Research Europe

Last but not least, a new platform dedicated to publishing services has been introduced by the European Commission. It is called "Open Research Europe". Through this platform, beneficiaries from EU programmes, the Horizon 2020 and the Horizon Europe, will be able to publish free their research results following open peer review in open access and in compliance with open access policies. (https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/other/comm/open-research-europe horizonh2020 en.pdf). Formal launching is expected to be in early 2021. The publication policies can be found in the following link: https://openreseurope.s3.amazonaws.com/resources/ORE-publishing-policies.pdf

Open Research Europe can be found in the following link:

https://open-research-europe.ec.europa.eu/

3.2.2 Repositories

Repositories allow researchers to deposit data sets, research software, reports, and any other research related digital artifacts supporting Open Science principles. As the number of published data and data repositories is constantly growing, the need for efficient data management becomes stronger. To this end, FAIR principles for data management were established in 2016 (Wilkinson et al., 2016). The goal of these principles, the FAIR principles, has been to serve as guidelines for those who are the owners of data, who upload or manage data aiming to exploit as much as possible the reusability of the published data. The four principles are briefly presented underneath ("Fair principles," 2020; "What are the fair principles," 2020; Wilkinson et al., 2016):

- Findability: Data and metadata can be easily traced by possessing a unique and persistent identifier, e.g. DOI. Furthermore, metadata is indexed in a relevant database.
- Accessibility: Data and metadata can be retrieved by using their identifier. Metadata can be always accessible.
- Interoperability: Data and metadata are associated with standard language which is broadly accepted and vocabularies that follow FAIR principles.
- Reusability: A clear usage license is attributed to data and metadata. Relevant standards have been met.





A number of repositories that could be adapted for the implementation of Open Science in Aeronautics are presented below. The implementation of FAIR principles as well as a number of criteria is investigated. The criteria that are investigated are the following:

Relevance to the AAT research Openness Accessibility Compliance to Fair Principles Impact (number of users) Professional exploitation by the participants Reliability of the content Protection of sensitive data Activity

Zenodo

Through the OpenAIRE project in the frame of promoting Open Science in Europe, CERN a partner of the OpenAIRE project developed Zenodo, a digital library. Zenodo was launched in 2013. The code of the Zenodo is also an open source code which has been based on another open source library("Zenodo," 2020). Zenodo is an open access repository which welcomes all fields of research.

Zenodo is an excellent candidate to serve as an open access repository in the field of AAT research as it may deposits a wide range of scientific fields.

For the protection of sensitive data, Zenodo asks from the author to ensure that the provided data are anonymized or to provide the corresponding consents.

The responsibility for the assessment and validation of the data lies with the authors.

Zenodo is fully in compliance with the FAIR principles as it meets the requirements for findability, accessibility, interoperability and reusability. More specifically, data published in Zenodo is assigned with a DOI, metadata follow the terms and conditions of DataCite's Metadata Schema ("DataCite Metadata Schema," 2020), data and metadata are indexed in relative searchable resources, etc. Table 11 shows the implementation of the FAIR principles by Zenodo and Table 12 summarizes the strong and weak points of Zenodo.

OSCAR GA 824350 D2.4 Identification and adaption of suitable tools to facilitate Open Science

Printed 2021-01-130





For more information please visit <u>https://about.zenodo.org/principles/</u> The related repository is provided through the following link: <u>https://zenodo.org/</u>

Table	11: FAIR	principles	and Zenodo	

Zenodo						
FAIR principles	FAIR principles Yes No Partially N/A					
Findability	\checkmark					
Accessibility	\checkmark					
Interoperability	\checkmark					
Reusability	\checkmark					

Table 12: Strong and weak points of Zenodo

	High	Moderate	Low	N/A
Relevance to the AAT research			General purpose repository	
Openness	\checkmark			
Accessibility	\checkmark			
Compliance to Fair Principles	\checkmark			
Impact (number of users)	\checkmark			

OSCAR GA 824350 D2.4_Identification and adaption of suitable tools to facilitate Open Science Printed 2021-01-130





	High	Moderate	Low	N/A
Professional exploitation by the participants	\checkmark			
Reliability of the content	Peer reviewed research is promoted			
Protection of sensitive data	\checkmark			
Activity in Zenodo	\checkmark			

SKYbrary

SKYbrary is a digital repository ("About SKYbrary," 2020) on the topics of:

- Flight operations
- Air traffic management and
- Aviation safety

SKYbrary repository is under the umbrella of Eurocontrol. The following organizations are also involved: International Civil Aviation Organisation (ICAO)

- The Flight Safety Foundation
- The UK Flight Safety Committee and
- The European Strategic Safety Initiative (closed in 2016)

Part of the SKYbrary content is controlled by:

- The Honourable Company of Air Pilots
- Royal Meteorological Society (RMetS)

OSCAR GA 824350 D2.4_Identification and adaption of suitable tools to facilitate Open Science

Printed 2021-01-130





Even though SKYbrary establishment has been set up based on Wiki philosophy, SKYbrary content is controlled by SKYbrary partners who ensure the high quality of the contents by performing a peer review process. Furthermore, additions and restrictions as compared to the WIKI set up have been implemented ("SKYbrary," 2020) (https://www.skybrary.aero/index.php/Skybrary_Content_Management#Content_Quality_Assurance)

SKYbrary may serves as a high quality open access repository in the fields of flight operations, air traffic management and aviation safety. Yet as SKYbrary is a wiki-type repository does not provide the published articles with a DOI and does not meet specific standards and protocols, thus SKYbrary is not in compliance with FAIR principles. Table 13 shows the implementation of the FAIR principles by SKYbrary and Table 14 summarizes the strong and weak points of SKYbrary.

The related repository is provided through the following link:

https://www.skybrary.aero/index.php/Main Page#operational-issues

Skybrary					
FAIR principles	Yes	No	Partially	N/A	
Findability		\checkmark			
Accessibility		\checkmark			
Interoperability		\checkmark			
Reusability		\checkmark			

Table 13: FAIR principles and SKYbrary

Table 14: Strong and weak points of SKYbrary

	High	Moderate	Low	N/A
Relevance to the AAT research	\checkmark			
Openness	\checkmark			

OSCAR GA 824350 D2.4_Identification and adaption of suitable tools to facilitate Open Science Printed 2021-01-130





	High	Moderate	Low	N/A
Accessibility			Poor metadata	
Compliance to Fair Principles			√	
Impact (number of users)				✓
Professional exploitation by the participants	~			
Reliability of the content	~			
Protection of sensitive data				√
Activity in SKYbrary			\checkmark	

Harvard Dataverse

Harvard Dataverse is an open general-purpose Repository. Up to now it counts almost 8 thousands dataverses with more than 120 thousands datasets. Yet, most of the data belongs to other scientific fields as Harvard Dataverse welcomes research from any scientific field. According to their metrics ("Harvard Dataverse-Metrics," 2020), from 2016 up to now it has been observed a constantly growing amount of data deposited in Dataverse Repository. Dataverse uses standard procedures to make datasets findable and accessible, interoperable and reusable so as to be in compliance with FAIR principles (Crosas, 2019; "Harvard Datavers- Data Citation," 2020). Furthermore, Dataverse implement a number of security control and requirement in order to handle sensitive data by introducing multiple levels; at first level, there is no sensitive data and can be open while on the top level information is confidential and maximally restricted (Sweeney, Crosas, & Bar-Sinai, 2015). Table 15 shows the implementation of the FAIR principles by Harvard Dataverse and Table 16 summarizes the strong and weak points of Harvard Dataverse.

The related repository is provided through the following link:

https://dataverse.harvard.edu/





Table 15: FAIR principles and Harvard Dataverse

Harvard Dataverse					
FAIR principles	Yes	No	Partially	N/A	
Findability	\checkmark				
Accessibility	\checkmark				
Interoperability	\checkmark				
Reusability	\checkmark				

Table 16: Strong and weak points of Harvard Dataverse

	High	Moderate	Low	N/A
Relevance to the AAT research			General purpose repository	
Openness	Supports openness when possible			
Accessibility	\checkmark			
Compliance to Fair Principles	\checkmark			
Impact (number of users)	Constantly growing			





	High	Moderate	Low	N/A
Professional exploitation by the participants	Researchers, Journals and Organizations			
Reliability of the content				√
Protection of sensitive data	\checkmark			
Activity in Dataverse	\checkmark			

IEEE DataPort

IEEE DataPort has been developed by IEEE and has currently more than 400K users globally. Researchers have the option to store their data freely (for data up to 2TB!) or publish their data. Furthermore, users have access to open data; currently there are more than 1500 datasets from many technological fields. IEEE DataPort has a great impact and reliability as it is managed by IEEE organization. A registration account to IEEE is required so as the users can upload their data. Uploading open access data might requires a charge, yet IEEE sometimes may provide a coupon discount code offering free uploading for open access data. IEEE DataPort provides all published data with a DOI and rich metadata are linked to them ("IEEE Dataport principles," 2020). Table 17 shows the implementation of the FAIR principles by IEEE Dataport and Table 18 summarizes the strong and weak points of IEEE Dataport.

The related port is provided through the following link:

https://ieee-dataport.org/

IEEE Dataport					
FAIR principles Yes No Partially N/A					
Findability	\checkmark				

Table 17: FAIR principles and IEEE Dataport

Printed 2021-01-130





Accessibility	\checkmark		
Interoperability	\checkmark		
Reusability	\checkmark		

Table 18: Strong and weak points of IEEE Dataport

	High	Moderate	Low	N/A
Relevance to the AAT research			General purpose repository	
Openness	Standard and open access data			
Accessibility	\checkmark			
Compliance to Fair Principles	\checkmark			
Impact (number of users)	\checkmark			
Professional exploitation by the participants	\checkmark			
Reliability of the content			√	
Protection of sensitive data				\checkmark
Activity in IEEE Dataport	✓			

OSCAR GA 824350 D2.4_Identification and adaption of suitable tools to facilitate Open Science Printed 2021-01-130





GitHub

GitHub is an open access platform that hosts source codes regarding software development and welcomes all fields of research. It has launched in February 2008 and it has more than 50 million users today. Furthermore, basic services are free of charge. The great success of Github is that serves a central repository for developers that can easily collaborate in order to release a high value and reliable end product which is for example an application, a source code etc.

A developer releases the first version of an application. The assessment and the validation of the data is continuous as the developers work on the already uploaded content and revise it before releasing the next version of this application. A basic feature of GitHub is creating repositories which can be cited and obtain a DOI through linking to Zenodo. Agile collaborations through this Github are boosted, as many developers work together to develop a final product. Table 19 shows the implementation of the FAIR principles by Github and Table 20 summarizes the strong and weak points of Github.

The related repository is provided through the following link:

https://github.com/

Github					
FAIR principles	FAIR principles Yes No Partially N/A				
Findability				\checkmark	
Accessibility				\checkmark	
Interoperability				\checkmark	
Reusability				\checkmark	

Table 19: FAIR principles and Github





Table 20: Strong and weak points of Github

	High	Moderate	Low	N/A
Relevance to the AAT research			General purpose source code development	
Openness	\checkmark			
Accessibility	\checkmark			
Compliance to Fair Principles				\checkmark
Impact (number of users)	\checkmark			
Professional exploitation by the participants	\checkmark			
Reliability of the content	\checkmark			
Protection of sensitive data				√
Activity in GitHub	✓			

GitLab

An alternative of GitHub is GitLab which has been released in 2011 and is a completely open-source platform for software development and IT-operations (DevOps). It counts more than 100K organizations and more than 3000 contributors. It has already a great impact as it counts more than 30 million registered users. Significant principles for their work is Collaboration, Results, Efficiency, Diversity, Inclusion and Belonging, Iteration, and Transparency. Similarly with GitHub, one of the features of GitLab is the creation of repositories which can

OSCAR GA 824350 D2.4_Identification and adaption of suitable tools to facilitate Open Science





be linked to a Repository like Zenodo and hence obtain a DOI and FAIR principles become feasible. Furthermore, GitLab makes Agile collaboration feasible as through GitLab platform Agile practices and principles are facilitated. Table 21 shows the implementation of the FAIR principles by Gitlab and Table 22 summarizes the strong and weak points of Gitlab.

The relative link can be found underneath:

https://about.gitlab.com/

Gitlab				
FAIR principles	Yes	No	Partially	N/A
Findability				\checkmark
Accessibility				✓
Interoperability				\checkmark
Reusability				\checkmark

Table 21: FAIR principles and Gitlab

Table 22: Strong and weak points of Gitlab

	High	Moderate	Low	N/A
Relevance to the AAT research			General purpose source code development	
Openness	\checkmark			
Accessibility	√			
Compliance to Fair Principles				\checkmark

OSCAR GA 824350 D2.4_Identification and adaption of suitable tools to facilitate Open Science Printed 2021-01-130





	High	Moderate	Low	N/A
Impact (number of users)	\checkmark			
Professional exploitation by the participants	\checkmark			
Reliability of the content				\checkmark
Protection of sensitive data				\checkmark
Activity in GitLab	\checkmark			

Other tools

Open Knowledge Maps

Open Knowledge Maps is an innovative search-engine for scientific content which visualizes the results. Under a specific topic, Open Knowledge Maps creates directories and subdirectories with relevant papers and concepts. Furthermore, it identifies which papers or content is openly available. It is a charitable non-profit organization, which supports Open Science, and one of its principles is that data and content are open. Figure 4 shows a schematic representation of the concept of the Open Knowledge Maps. Large and small circles represent directories and subdirectories dedicated to a topic, respectively. The open content is marked with an open lock and is available for direct downloading.





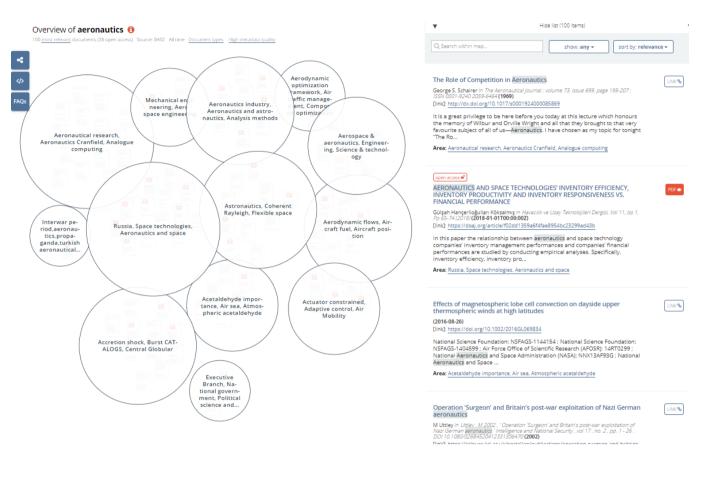


Figure 4: Schematic representation of the concept of the Open Knowledge Maps on the topic "aeronautics" (Image Source: https://openknowledgemaps.org/map/a0b06957a2d608ef42b4043fe323aae4)

The relative link can be found underneath:

https://openknowledgemaps.org

OSCAR GA 824350 D2.4_Identification and adaption of suitable tools to facilitate Open Science

Printed 2021-01-130





Entities supporting the implementation of Open Science in Europe

It is worth noticing that there is a number of entities that might not be included in the tools mentioned above. Nevertheless, their objectives are aligned with the aims of Open Science. They are focused explicitly on Aeronautics and furthermore they use tools that could be adapted in order to facilitate the implementation of Open Science such as forums, newsletters, dissemination through events, etc. Such entities could be IFAR and EASN.

IFAR

The International Forum for Aviation Research (IFAR), is an established network for the Community of the Aviation research globally. Through its summits, meeting and other events IFAR promotes the information exchange and communication in the Aviation research landscape. The dissemination of knowledge is achieved through its webpage, publications etc. Some of its members are ATI (UK), TsAGI (Russia), CIRA (Italy), CAE (China), VZLU (Czech Republic), ONERA (France), DLR (Germany), etc. IFAR could service as an excellent forum for the Aviation research as its objectives are aligned with the aims of Open Science, it has a strong structure and significant players as members from all over the world.

The related forum is provided through the following link:

https://www.ifar.aero/

EASN

The European Aeronautics Science Network (EASN) has been established in 2008 and is coordinated and run by a board of directors. The main aim of the EASN Association is the advancement of the aeronautics sciences and technologies. EASN strongly supports the Open Science principles. It promotes very actively the information exchange and knowledge dissemination within the Aeronautics community through its regular newsletters as well as the annual conferences where stakeholders from all sectors namely Universities, Research Establishments and Industries are gathered. Its active members are 300 individuals and entities from the Aviation sector while its contacts are more than 10K researchers and staff related to Aviation.

The website of EASN is provided through the following link:

https://easn.net/





3.2.3 Cloud Storage

Cloud storages are digital platforms which provide seamless access to data and interoperable services that address the whole research data cycle, from discovery and mining to storage, management, analysis and re-use across borders and scientific disciplines.

To implement Open Science, tremendous requirements in data storage are needed which is beyond the traditional data storing such as hard drives or USB drives. Aiming to facilitate the implementation of Open Science, European Open Science Cloud (EOSC) ("European Open Science Cloud," 2020) provides a digital platform that includes services for data management and storing, analysis and reuse based on FAIR principles. EOSC platform has been first launched in late 2018 supported by a number of EU projects. Currently there are EU projects that contribute to the further advancement and improvement of EOSC.

Public-funded as well as commercial organizations participate in EOSC to provide their services. The provided services include networking, computing, storage, sharing, data management and other services. Training services or consultancy can be also provided. EOSC portal is free of charge and might be used by everyone. A number of the available services through the EOSC portal is free of cost and they can be ordered through the EOSC portal by sending an access request. Yet, some services are subject to the billing policy of the providers and hence the access to them may include fees. These fees may be covered by public or even private funds, e.g. through national or EU programmes, through their institutions, etc. To order a service, EOSC users should create an account based on their academic or social account by choosing one of the available options (e.g. OpenAIRE, openMINDED, Google, ORCID, etc.) or by selecting their institute from an extended list. To this list a large number of institutes from all over the world are included.

In this context, a number of general-purpose platforms for storage are provided ("EOSC-Storage," 2020). Some of them that could be adapted for Aeronautics research are provided in Table 23.

In addition, some commercial cloud storages may be used for personal use or business storage usually have a free available storage, however there are some limitations regarding the free storage capacity as well as their features, such as Google Drive, DropBox, pCloud, OneDrive, etc. Table 23 provides some representative clouds listed in EOSC as well as some commercial clouds and their basic features.





Table 23: Some representative clouds listed in EOSC as well as some commercial clouds and their basic features

	eTDR - European Trusted Digital Repository	Zenodo	EUDAT Collaborative Data Infrastructure (EUDAT CDI)	Google Drive	OneDrive
Provider	CINES	OpenAire, CERN	Eudat	Google	Microsoft
Research area	Engineering and Technology, Digital archives, Infrastructure development	Interdisciplinar y	Interdisciplinar y	Interdisciplinary	Interdisciplinary
Free storage	N/A	50GB per dataset (or more)	Up to 20GB	Up to 15 GB	Up to 15 GB
Users	Researchers, Research organisations, Research group	Any	Researchers and Scientists	Any	Any
Address	https://www.cines.fr/en/europe/eu dat-cdi/etdr/	https://zenodo.org/	https://eudat.eu/eud at-cdi	https://www.google.com/intl/en/dri ve/	https://www.microsoft.com/en/micros oft-365/onedrive/online-cloud- storage





4 Issues related to adaption of e-tools for Open Science

The adaption of e-tools for facilitating Open Science in the AAT sector requires for addressing a number of issues including privacy concerns, the funding schemes for Open Science, the assessment and validation of provided information and data as well as agile collaboration methodologies. The paragraphs below describe these issues, in brief.

4.1 Security concerns

The topic has been addressed in **D4.4 Recommendation for implementing the OSCAR open science code of conduct.** For information on the relation between open science, privacy, security and data see deliverable **D4.4 Recommendation for implementing the OSCAR open science code of conduct**.

4.2 Novel and/or adapted funding schemes for Open Science

The funding issue remains as one of the major concerns for the implementation in Open Science. However, it is acknowledged that the development of approved funded mechanisms is a matter of current concern for the Commission (see chapters 3.2.1.1 and 3.2.3). Funding for Open Science is coming so far either from own funds from the institutions concerned (Universities, Departments, etc.) or from research funding, mostly public, entities (European Commission, European Research Council, national entities, etc.).

Funding from Institutions

The standard practice for publishing in an open access journal is that the authors might be funded by their own Institutions or Departments, etc. However, several Institutions as big Universities have contracts with Publishers in order to provide them with a discount on Article Processing Charge or even for fully waiving fees.

Funding from research funding entities

In the last decades, the European Commission and the European Research Council as well as national public entities have already adopted policies and provide funds for boosting Open Science policies aiming to make project results freely available. In this context, European Union has granted a budget for publishing in Open Access Journals. More specifically:

In the frame of FP7 the Commission operated a mechanism of funding the publications of results derived in the frame of research projects in open access journals. Furthermore, in Horizon 2020 FP8 the costs of publishing results of projects in open access journals remains an eligible cost. In addition, recently the Commission accepted a support action called Open Cloud for Research Environment (OCRE). This support action aims to advance the implementation of cloud services in the European Research Community by giving vouchers to access commercial cloud services (<u>https://www.ocre-project.eu/</u>). It will start in spring 2021 and it will be for researchers from any discipline.

Last but not least the Commission has established the Open Research Europe which publishes free of charge results from European projects. For more information on the matter please refer to the chapter 3.2.1.1.





To our knowledge, alternative methods for funding schemes are limited. The establishment of a fund supporting the implementation of Open Science could be proved a useful tool. In addition, another alternative method of funding for Open Science could be crowdfunding. Crowdfunding has been lately developed and it is based on the financial contributions of the Internet users. However, crowdfunding is not directly linked with Open Science so far.

Crowdfunding

Crowdfunding is a funding alternative that has been emerged lately in many research fields. Through internet platforms, people can make monetary donations to projects of their choice. Through crowdfunding, projects can be accomplished. In return donators receive non-monetary benefits. Some non-European sites enabling crowdfunding are given below:

1. Kickstarter.com– General-field purpose site for funding. It has all types of projects.

2. IndieGoGo.com – General-field purpose site for funding. It has also a lot of aeronautics-related projects

3. Fundly.com – General-field purpose site for funding. It has also a small number of aeronautics-related projects

4. Experiment.com– It is focused on scientific research funding.

5. Fundable.com – General-field purpose site for funding. It has also a small number of aeronautics-related projects

4.3 Assessment and validation of provided information and data

The results from T2.2 have shown that researchers will trust only peer reviewed data or data from trustful sources. The implementation of Open Science in the AAT research might lead to an extremely high amount of data needed to be assessed and validated. Some open structures have already implemented a review process which results to high quality contents, i.e. SKYbrary. The success and the acceptance of these structures mainly lies on the quality level of the data provided.

Nikiforova has studied the assessment and the quality of open data. The author has found that even data from trustful sources have quality issues. Therefore it is suggested that the quality of open data should be detected. The identification of the quality level of open data would aid in the elimination of the problem.

4.4 Agile collaboration methodologies

Agile collaboration methodology is a process suggesting that a working group divides a project in many simple tasks. The participants are closely cooperating with each other and the contactor through an iterative procedure aiming to an optimized final result. The Agile Manifesto has been firstly proposed in 2001 and referred mainly to software development. Its main principles are the following:

- Flexibility
- Productivity
- High quality

OSCAR GA 824350 D2.4_Identification and adaption of suitable tools to facilitate Open Science Page 37 of 79 pages Printed 2021-01-130





Strong collaborations

Agile methodologies are attractive mainly for contactors aiming at more disruptive approaches and solutions. Through agility and knowledge-sharing, different entities closely working together can develop new ideas and innovative solutions.





5 Conclusions and Recommendations

Current communication utilizes web-based technologies to create highly interactive platforms. Through these platforms individuals and communities share, co-create, discuss and modify usergenerated content. As social media, multimedia channels, forums, blogs, wikis, etc. have built the today's communication landscape, efficient dissemination of Open Science relies on the communication strategy that will be used. The OSCAR project has already engaged the main players of social media and communication platforms in order to interact with stakeholders and public. In this context, Deliverable 2.4 provides a remarkable number of tools, namely communication tools, open access publications in Aerospace domain, repositories and cloud storages aiming to facilitate Open Science.

The adaption of these tools might involve numerous possible risks. The majority of the open access Journals, which publishes reliable and high quality publications, are expensive. On the other side the free of charge Journals provide limited confidence on the validity and quality of their content. However, validity and reliability are of vital importance in Open Science. Therefore the elaboration of concepts that would combine free of charge or low cost publications and at same time reliability and high quality of the content would represent a significant step forward toward implementing Open Science in the AAT sector.

Possible safety issues are also crucial. Therefore, it has to be ensured that unfair accessibility to these tools will be prevented. In this context, concepts or tools that would allow accessibility not horizontally but in the form of layers regarding the different type of information would might represent an acceptable solution. Repositories and Clouds with layered structures would allow openness under constraints. Each layer could be associated to a certain level of protection and requirements.

This work has shown that there is a long list of tools ranging from general purpose tools to purely scientific tools. They could be exploited to facilitate the implementation of Open Science in Aeronautics, yet all of them include constraints and limitations to a varying extent. A number of tools is in compliance with the FAIR principles, yet most of them are not aeronautics oriented. Others are exhibiting low reliability as their content is not subjected to a strong peer review process. On the other side, platforms focussed on Aeronautics exhibit high exploitation by professional and scientific orientation and are compliant to the Fair principles yet they seem to attract a limited audience and a limited activity. Currently it seems that there are no tools that meet all criteria set by this study. Yet, there is evidence that the adaption of some existing platforms dedicated to Aeronautics seems promising.





6 References

About SKYbrary. (2020). Retrieved from https://www.skybrary.aero/index.php/About_SKYbrary

- Academia.edu. (2020). Retrieved from https://www.ewa.org/press-release/academiaedu-reaches-75-million-user-milestone-launches-new-mobile-app
- Bhardwaj, R. K. (2017). Academic social networking sites: Comparative analysis of ResearchGate, Academia.edu, Mendeley and Zotero. *Information and Learning Science*, *118*(5–6), 298–316. https://doi.org/10.1108/ILS-03-2017-0012
- Crosas, M. (2019). *The FAIR Guiding Principles : Implementation in Dataverse*. Retrieved from https://scholar.harvard.edu/files/mercecrosas/files/fairdata-dataverse-mercecrosas.pdf

DataCite Metadata Schema. (2020). Retrieved from https://support.datacite.org/docs/schema-40

EOSC-Storage. (2020). Retrieved from https://marketplace.eoscportal.eu/services/c/storage?sort=_score&scientific_domains-filter=&scientific_domainsall=&scientific_domains%5B%5D=1&providers-filter=&providers-all=&target_usersall=&related_platforms-filter=&related_platforms-all=&rating=&order_type=&location=

European Open Science Cloud. (2020). Retrieved from https://www.eosc-portal.eu/

Fair principles. (2020). Retrieved from https://www.go-fair.org/fair-principles/

goleman, daniel; boyatzis, Richard; Mckee, A., & Perdana. (2018). *Understanding Social Media*. *Journal of Chemical Information and Modeling* (Vol. 53). https://doi.org/10.1017/CBO9781107415324.004

- Harvard Datavers- Data Citation. (2020). Retrieved from https://dataverse.org/best-practices/datacitation
- Harvard Dataverse-Metrics. (2020). Retrieved from https://dataverse.org/metrics
- IEEE Dataport principles. (2020). Retrieved from https://ieee-dataport.org/introducing-ieee-dataport
- Jarrahi, M. H., & Sawyer, S. (2013). Social Technologies, Informal Knowledge Practices, and the Enterprise. *Journal of Organizational Computing and Electronic Commerce*, *23*(1–2), 110–137. https://doi.org/10.1080/10919392.2013.748613
- Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business Horizons*, 54(3), 241–251. https://doi.org/10.1016/j.bushor.2011.01.005
- SKYbrary. (2020). Retrieved from https://www.skybrary.aero/index.php/About_SKYbrary
- Sweeney, L., Crosas, M., & Bar-Sinai, M. (2015). Sharing Sensitive Data with Confidence: the Datatags System. *Technology Science*, 1–34. Retrieved from http://techscience.org/a/2015101601/

Thelwall, M., Haustein, S., Larivière, V., & Sugimoto, C. R. (2013). Do Altmetrics Work? Twitter and Ten Other Social Web Services. *PLoS ONE*, *8*(5), 1–7. https://doi.org/10.1371/journal.pone.0064841

- Van Noorden, R. (2014). Online collaboration: Scientists and the social network. *Nature*, *512*(7513), 126–129. https://doi.org/10.1038/512126a
- What are the fair principles. (2020). Retrieved from https://www.openaire.eu/what-are-the-fairprinciples
- Wilkinson, M. D., Dumontier, M., Aalbersberg, Ij. J., Appleton, G., Axton, M., Baak, A., ... Mons, B. (2016). The FAIR Guiding Principles for scientific data management and stewardship. *Scientific Data*, *3*, 1–9. https://doi.org/10.1038/sdata.2016.18
- Zenodo. (2020). Retrieved from https://about.zenodo.org/





Appendix

Most of the available Journals in the field of aerospace providing the option for open access

Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Progress in Aerospace Sciences	Elsevier	8.940 (2019)	9.27	https:// www.sc iencedir ect.com /journal /progre ss-in- aerosp ace- science s/	The coverage of the journal includes timely reviews in aeronautics and astronautics, especially in important aerospace areas such as aero- and gas dynamics, aero-and space structures, flight mechanics of air and space vehicles, materials, vibrations, aeroelasticity, acoustics, aero- and space propulsion, avionics, and occasionally some related areas as well, such as wind engineering and hydrodynamics. "While the emphasis is on reviews of current developments, papers providing historical perspectives on important past developments and their pioneers are also welcome. Occasionally, the journal also publishes reviews of new books on aerospace topics."	Progress in Aerospace Sciences is an invitation only international review journal designed to be of broad interest and use to all those concerned with research in aerospace sciences and their applications in research establishments, industry and universities. The journal is devoted primarily to the publication of specially commissioned review articles designed to bring together under one cover current advances in the ever-broadening field of aerospace sciences. No artificial limits are imposed on the length of papers and authors are encouraged to provide specialist readers with an orderly and concise summary of recent work, including sufficient detail for more general aerospace readers to be informed of recent developments in fields other than their own.	Option to publish open access	3830

OSCAR GA 824350 D2.4_Identification and adaption of suitable tools to facilitate Open Science

¹ The description of the column "Papers selection" is according to the self-description of the journals, no assessment of the journals has been made by the authors.

² The description of the column "Scope" is according to the self-description of the journals, no assessment of the journals has been made by the authors.





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
IEEE Transactions on Vehicular Technology	IEEE	5.379 (2019)	6.29	https://i eeexplo re.ieee. org/xpl/ aboutJ ournal.j sp?pun umber= 25	The use of mobile radio on land, sea, and air, including cellular radio, two-way radio, and one-way radio, with applications to dispatch and control vehicles, mobile radiotelephone, radio paging, and status monitoring and reporting. Related areas include spectrum usage, component radio equipment such as cavities and antennas, compute control for radio systems, digital modulation and transmission techniques, mobile radio circuit design, radio propagation for vehicular communications, effects of ignition noise and radio frequency interference, and consideration of the vehicle as part of the radio operating environment. The use of electronic technology for the control of ground transportation systems including, but not limited to, traffic aid systems; traffic control systems; automatic vehicle identification, location, and monitoring systems; automated transport systems, with single and multiple vehicle control; and moving walkways or people-movers. The use of electronic or electrical components and systems for control, propulsion, or auxiliary functions, including but not limited to, electronic controls for engineer, drive train, convenience, safety, and other vehicle systems; vehicle electrical components and systems; electronic fuel control systems; collision avoidance systems; electromagnetic compatibility in the vehicle environment; and electric vehicles and controls.	The scope of the Transactions is threefold and is published on the journal website as follows: Communications, Transportation Systems and Vehicular Electronics.	Hybrid (Open Choice)	\$1,750





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Mechanical Systems and Signal Processing	Elsevier	6.471 (2019)	6.11	https:// www.sc iencedir ect.com /journal /mecha nical- system s-and- signal- process ing	 Actuation, Sensing and Control Measurement & Signal Processing Nonlinearity Rotating Machines, Machinery Diagnostics & SHM Uncertainty Quantification Vibrations, Modal Analysis & Structures 	Mechanical Systems and Signal Processing (MSSP) is an interdisciplinary journal in Mechanical, Aerospace and Civil Engineering with the purpose of reporting scientific advancements of the highest quality arising from new techniques in sensing, instrumentation, signal processing, modelling and control of dynamic systems. MSSP papers are expected to make a demonstrable original contribution to engineering knowledge, which should be significant in terms of advancement over established methods. Especially sought are papers that include both theoretical and experimental aspects, or that include theoretical material of high relevance to practical applications.	Option to publish open access	3420
Nonlinear Dynamics	Springer Nature	4.54 (2019)	5.05	https:// www.sp ringer.c om/jour nal/110 71	The journal examines such topics as perturbation and computational methods, symbolic manipulation, dynamic stability, local and global methods, bifurcations, chaos, and deterministic and random vibrations. The journal also investigates Lie groups, multibody dynamics, robotics, fluid-solid interactions, system modeling and identification, friction and damping models, signal analysis, and measurement techniques.	Nonlinear Dynamics provides a forum for the rapid publication of original research in the field. The journal's scope encompasses all nonlinear dynamic phenomena associated with mechanical, structural, civil, aeronautical, ocean, electrical, and control systems. Review articles and original contributions are based on analytical, computational, and experimental methods.	Hybrid (Open Choice)	3060
International Journal of Robust and Nonlinear Control	Wiley- Blackwell	3.503 (2019)	4.81	https:// onlineli brary.wi lev.com /journal /10991 239	The physical modelling, simulation and identification of systems that may be uncertain or nonlinear is of interest. Papers are also welcome in the area of multi-agent systems considering coordinated control problems. Papers dealing with the general problem of consensus and synchronization that fail to demonstrate an application and/or include significant novelty will not be considered.	The International Journal of Robust and Nonlinear Control aims to encourage the development of analysis and design techniques for uncertain linear and nonlinear systems. The main focus of the journal is on the theory and design of regulating and tracking systems, but related areas such as linear and nonlinear filtering, condition monitoring and fault estimation are included.	Option to publish open access	2500





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
International Journal of Impact Engineering	Elsevier	3.642 (2019)	3.95	https:// www.sc iencedir ect.com /journal /interna tional- journal- journal- of- impact- engine ering	Areas relevant to the journal encompass the following general topics and those associated with them: Behaviour and failure of structures and materials under impact and blast loading Systems for protection and absorption of impact and blast loading Terminal ballistics Dynamic behaviour and failure of materials including plasticity and fracture Stress waves Structural crashworthiness High-rate mechanical and forming processes Impact, blast and high-rate loading/measurement techniques and their applications	The International Journal of Impact Engineering, established in 1983 publishes original research findings related to the response of structures, components and materials subjected to impact, blast and high-rate loading.	Option to publish open access	3100
Experimental Thermal and Fluid Science	Elsevier	3.444 (2019)	3.92	https:// www.sc iencedir ect.com /journal /experi mental- thermal -and- fluid- science	In addition to the principal areas of research, the journal covers research results in related fields, including combined heat and mass transfer, flows with phase transition, micro- and nano-scale systems, multiphase flow, combustion, radiative transfer, porous media, cryogenics, turbulence, and novel experimental techniques.	Experimental Thermal and Fluid Science provides a forum for research emphasizing experimental work that enhances fundamental understanding of heat transfer, thermodynamics, and fluid mechanics.	Option to publish open access	2990





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Aerospace Science and Technology	Elsevier	4.499 (2019)	3.7	https:// www.sc iencedir ect.com /journal /aerosp ace- science -and- technol ogy	Authors are invited to submit papers on new advances in the following topics to aerospace applications: • Fluid dynamics • Energetics and propulsion • Materials and structures • Flight mechanics • Navigation, guidance and control • Acoustics • Optics • Electromagnetism and radar • Signal and image processing • Information processing • Data fusion • Decision aid • Human behaviour • Robotics and intelligent systems • Complex system engineering.	Aerospace Science and Technology publishes articles of outstanding scientific quality. Each article is reviewed by two referees. The journal welcomes papers from a wide range of countries. This journal publishes original papers, review articles and short communications related to all fields of aerospace research, fundamental and applied, potential applications of which are clearly related to: • The design and the manufacture of aircraft, helicopters, missiles, launchers and satellites • The control of their environment • The study of various systems they are involved in, as supports or as targets.	Option to publish open access	2750
IEEE Transactions on Aerospace and Electronic Systems	IEEE	3.672 (2019)	3.5	https://i eeexplo re.ieee. org/xpl/ mostRe centlss ue.jsp? punum ber=7	These systems include, but are not limited to, navigation, avionics, spacecraft, aerospace power, radar, sonar, telemetry, defense, transportation, automated testing, and command and control.	IEEE Transactions on Aerospace and Electronic Systems focuses on the organization, design, development, integration, and operation of complex systems for space, air, ocean, or ground environment.	Hybrid (Open Choice)	\$2045





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Journal of Intelligent Transportation Systems	Taylor & Francis	3.269 (2019)	3.29	https:// www.ta ndfonlin e.com/t oc/gits2 0/curre nt	The journal is inter-disciplinary, and accepts work from fields of engineering, economics, planning, policy, business and management, as well as any other disciplines that contribute to the scientific understanding of intelligent transportation systems. The journal is also multi-modal, and accepts work on intelligent transportation for all forms of ground, air and water transportation. Example topics include the role of information systems in transportation, traffic flow and control, vehicle control, routing and scheduling, traveler response to dynamic information, planning for ITS innovations, evaluations of ITS field operational tests, ITS deployment experiences, automated highway systems, vehicle control systems, diffusion of ITS, and tools/software for analysis of ITS.	The Journal of Intelligent Transportation Systems is devoted to scholarly research on the development, planning, management, operation and evaluation of intelligent transportation systems. Intelligent transportation systems are innovative solutions that address contemporary transportation problems. They are characterized by information, dynamic feedback and automation that allow people and goods to move efficiently. They encompass the full scope of information technologies used in transportation, including control, computation and communication, as well as the algorithms, databases, models and human interfaces. The emergence of these technologies as a new pathway for transportation is relatively new. The Journal of Intelligent Transportation Systems is especially interested in research that leads to improved planning and operation of the transportation system through the application of new technologies. The journal is particularly interested in research that adds to the scientific understanding of the impacts that intelligent transportation systems can have on accessibility, congestion, pollution, safety, security, noise, and energy and resource consumption.	Option to publish open access	2495 (For research anticle and most of the Europea n Countrie s),





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
International Journal of Computer Integrated Manufacturing	Taylor & Francis	2.861 (2019)	3.08	https:// www.ta ndfonlin e.com/t oc/tcim 20/curr ent	The journal is intended for senior managers and researchers in manufacturing engineering management, industrial engineering, computer science, and systems integration as well as mechanical engineers, automation & control engineers and software engineers intending to benefit from the increasingly connected manufacturing environments.	International Journal of Computer Integrated Manufacturing (IJCIM) reports new research in theory and applications of computer integrated manufacturing. The scope spans mechanical and manufacturing engineering, software and computer engineering as well as automation and control engineering with a particular focus on today's data driven manufacturing. Terms such as industry 4.0, intelligent manufacturing, digital manufacturing and cyber-physical manufacturing systems are now used to identify the area of knowledge that IJCIM has supported and shaped in its history of more than 30 years.	Authors can choose to publish gold open access in this journal.	€2495 (For original manuscr ipt and most of the Europea n Countrie s),
Journal of Guidance, Control, and Dynamics	American Institute of Aeronautics and Astronautics	3.07 (2019- 2020)	3.03	https:// arc.aia a.org/lo i/jgcd	The Journal publishes qualified papers on dynamics, stability, guidance, control, navigation, optimization, electronics, avionics, and information processing related to aeronautical, astronautical, and marine systems. Papers are sought which demonstrate the application of recent research to practical engineering problems. Papers that describe aspects of the dynamics and control of significant recent developments, such as a new or different aircraft or spacecraft, also are desired.	This Journal is devoted to the advancement of the science and technology of guidance, control, and dynamics through the dissemination of original archival papers disclosing significant technical knowledge, exploratory developments, design criteria, and applications in aeronautics, astronautics, celestial mechanics, and related fields.	Subscripti on based Journal (Not OA)	Subscrip tion of member s: \$155 , non- member s: \$1430





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Probabilistic Engineering Mechanics	Elsevier	2.411 (2019)	3.01	https:// www.sc iencedir ect.com /journal /probab ilistic- engine ering- mecha nics	Fields Covered: Aerospace engineering: • Damage-tolerant and durability design of aircraft • Load spectra characterisation • Random vibration of aerospace structures Mechanical engineering: • Fatigue design • Mechanical systems response/control • Vehicle vibration • Vibration isolation etc.	This journal provides a forum for scholarly work dealing primarily with probabilistic and statistical approaches to contemporary solid/structural and fluid mechanics problems encountered in diverse technical disciplines such as aerospace, civil, marine, mechanical, and nuclear engineering. The journal aims to maintain a healthy balance between general solution techniques and problem-specific results, encouraging a fruitful exchange of ideas among disparate engineering specialities.	Option to publish open access	2790
Experimental Mechanics	Springer Nature	2.655 (2019)	2.88	https:// www.sp ringer.c om/jour nal/113 40	Coverage extends from research in solid and fluids mechanics to fields at the intersection of disciplines including physics, chemistry and biology. Development of new devices and technologies for metrology applications in a wide range of industrial sectors (e.g., manufacturing, high-performance materials, aerospace, information technology, medicine, energy and environmental technologies) is also covered.	Experimental Mechanics is the official journal of the Society for Experimental Mechanics that publishes papers in all areas of experimentation including its theoretical and computational analysis. The journal covers research in design and implementation of novel or improved experiments to characterize materials, structures and systems. Articles extending the frontiers of experimental mechanics at large and small scales are particularly welcome.	Hybrid (Open Choice)	2570





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
AIAA Journal	American Institute of Aeronautics and Astronautics	2.72 (2019- 2020)	2.87	https:// www.ai aa.org/ about	The topics include aeroacoustics, aerodynamics, combustion, fundamentals of propulsion, fluid mechanics and reacting flows, fundamental aspects of the aerospace environment, hydrodynamics, lasers and associated phenomena, plasmas, research instrumentation and facilities, structural mechanics and materials, optimization, and thermomechanics and thermochemistry.	This Journal, that started it all back in 1963, is devoted to the advancement of the science and technology of astronautics and aeronautics through the dissemination of original archival research papers disclosing new theoretical developments and/or experimental result.	Subscripti on based Journal (Not OA)	Subscrip tion of member s: \$165 , non- member s: \$2575
Chinese Journal of Aeronautics	Press of Acta Aeronautica et Astronautica Sinica	2.215 (2019)	2.86	https:// www.sc iencedir ect.com /journal /chines e- journal- of- aerona utics	1.Fluid mechanics and flight mechanics 2.Solid mechanics and vehicle conceptual design 3.Avionics and autocontrol 4.Material engineering and mechanical manufacturing	The Journal reports the scientific and technological achievements and frontiers in aeronautic engineering and astronautic engineering, in both theory and practice, such as theoretical research articles, experiment ones, research notes, comprehensive reviews, technological briefs and other reports on the latest developments and everything related to the fields of aeronautics and astronautics, as well as those ground equipment concerned.	Full open access	500\$





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
International Journal of Engine Research	SAGE		2.84	https://j ournals .sagep ub.com /home/j er	In-cylinder flow Mixture distribution Ignition and combustion Exhaust emissions Combustion and emissions chemistry Combustion engine performance Fuel injection systems Fuel spray technology Fuels and lubricants Conventional and alternative fuels Piston-ring lubrication etc.	The International Journal of Engine Research publishes only the highest quality original and review papers on experimental and analytical studies of engine technology. The journal is intended to serve as the premier source of long-term reference information about all aspects of engines and related technologies, including the latest research and developments affecting the automotive, railway, marine and aerospace industries as well as engines used for stationary power generation.	It offers optional open access publishing via the SAGE Choice programm e	3,000 \$
JVC/Journal of Vibration and Control	SAGE		2.66	https://j ournals .sagep ub.com /aims- scope/J VC	Vibration and control of structures · Vibration and control of machinery · Vibration absorbers · Signal analysis · Aeroelasticity · Neural networks · Identification · Random vibrations · Structural control · Structural acoustics · Adaptive and smart structures · Noise and noise control · Waves in solids and fluids · Shock waves · Shock waves and sound abatement · Modal analysis · Anti-noise technology · Acoustics: aero, electro, medical, building, auto, aeroplane, underwater · Electromagnetic waves and shielding · Earthquake engineering	Aims and Scope The Journal of Vibration and Control is a peer-reviewed journal of analytical, computational and experimental studies of vibration phenomena and their control. The Journal of Vibration and Control is published in association with the Society of Experimental Mechanics (SEM).	It offers optional open access publishing via the SAGE Choice programm e	3000 \$





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Multibody System Dynamics	Springer Nature	2.211 (2019)	2.61	https:// www.sp ringer.c om/jour nal/110 44	The research reported addresses computational and experimental aspects and their application to classical and emerging fields in science and technology. Both development and application aspects of multibody dynamics are relevant, in particular in the fields of control, optimization, real- time simulation, parallel computation, workspace and path planning, reliability, and durability. The journal also publishes articles covering application fields such as vehicle dynamics, aerospace technology, robotics and mechatronics, machine dynamics, crashworthiness, biomechanics, artificial intelligence, and system identification if they involve or contribute to the field of Multibody System Dynamics.	The journal Multibody System Dynamics treats theoretical and computational methods in rigid and flexible multibody systems, their application, and the experimental procedures used to validate the theoretical foundations.	Hybrid (Open Choice)	2570
International Journal of Structural Stability and Dynamics	World Scientific	NA	2.28	https:// www.w orldscie ntific.co m/world scinet/ij ssd	Papers devoted to all aspects of structural stability and dynamics (both transient and vibration response), ranging from mathematical formulations, novel methods of solutions, to experimental investigations and practical applications in civil, mechanical, aerospace, marine, bio- and nano- engineering will be published.	The aim of this journal is to provide a unique forum for the publication and rapid dissemination of original research on stability and dynamics of structures. Papers that deal with conventional land-based structures, aerospace structures, marine structures, as well as biostructures and micro- and nano-structures are considered.	open access option	NA





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Propulsion and Power	American Institute of Aeronautics and Astronautics	2.17 (2019- 2020)	2.13	https:// arc.aia a.org/jp p/about	Papers in the fields of advanced propulsion; solid and liquid rockets; fuels and propellants; power generation and conversion for aerospace vehicles; and the application of aerospace science and technology to terrestrial energy devices and systems are welcome. It is intended to provide readers of the Journal, with primary interests in propulsion and power, access to papers spanning the range from research through development to applications. Papers in these disciplines and the sciences of combustion, fluid mechanics, and solid mechanics as directly related to propulsion and power are solicited.	This Journal is devoted to the advancement of the science and technology of aerospace propulsion and power through the dissemination of original archival papers contributing to advancements in airbreathing, electric, and advanced propulsion; solid and liquid rockets; fuels and propellants; power generation and conversion for aerospace vehicles; and the application of aerospace science and technology to terrestrial energy devices and systems. It is intended to provide readers of the Journal, with primary interests in propulsion and power, access to papers spanning the range from research through development to applications. Papers in these disciplines and the sciences of combustion, fluid mechanics, and solid mechanics as directly related to propulsion and power are solicited.	Subscripti on based Journal (Not OA)	Subscrip tion of member s: \$145 , non- member s: \$1550





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Mechanics Based Design of Structures and Machines	Taylor & Francis	2.286 (2019)	2.12	https:// www.ta ndfonlin e.com/t oc/Imbd 20/curr ent	In addition to classical applications such as structures and machine analysis and design, the journal encourages submission of new fundamental and interdisciplinary contributions of mechanics and mechanics-based design in emerging application areas such as robotics, automotive, space structures, smart structures, and micromachines. Other technical areas of interest include high-speed computing, numerical methods, structural optimization, variational methods, stability, fatigue and fracture mechanics, plasticity, and related basic applied mechanics and mechanics-based design.	Emphasizing contemporary research of immediate and potential application to mechanical, civil, aerospace, and automotive engineering as well as naval architecture, Mechanics Based Design of Structures and Machines contains analytical, numerical, and experimental contributions of permanent interest to research engineers.	Authors can choose to publish gold open access in this journal.	€2495 (For research article and most of the Europea n Countrie s)





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Optimization and Engineering	Springer Nature	1.880 (2019)	2.11	https:// www.sp ringer.c om/jour nal/110 81	Optimization: All methods and algorithms of mathematical optimization, including blackbox and derivative-free optimization, continuous optimization, discrete optimization, global optimization, linear and conic optimization, multiobjective optimization, PDE-constrained optimization & control, and stochastic optimization. Numerical and implementation issues, optimization software, benchmarking, and case studies. Engineering Sciences: Aerospace engineering, biomedical engineering, chemical & process engineering, electrical engineering, financial engineering, geosciences, healthcare engineering, industrial & systems engineering, mechanical engineering & MDO, and robotics.	Optimization and Engineering is a multidisciplinary journal; its primary goal is to promote the application of optimization methods in the general area of engineering sciences. Submissions to OPTE are expected not only to make a significant optimization contribution but also to impact a specific engineering application.	Hybrid (Open Choice)	2170
Navigation, Journal of the Institute of Navigation	Wiley- Blackwell	1.7 (2019)	2.01	https:// onlineli brary.wi ley.com /journal /21614 296	PNT technologies of interest encompass navigation satellite systems (both global and regional), inertial navigation, electro-optical systems including LiDAR and imaging sensors, and radio-frequency ranging and timing systems, including those using signals of opportunity from communication systems and other non-traditional PNT sources. Articles about PNT algorithms and methods, such as for error characterization and mitigation, integrity analysis, PNT signal processing and multi-sensor integration, are welcome. The journal also accepts articles on non-traditional applications of PNT systems, including remote sensing of the Earth's surface or atmosphere, as well as selected historical and survey articles.	NAVIGATION is a quarterly journal published by The Institute of Navigation. The journal publishes original, peer- reviewed articles on all areas related to the science, engineering and art of Positioning, Navigation and Timing (PNT) covering land (including indoor use), sea, air and space applications.	option to publish open access	2700





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
International Journal of Micro Air Vehicles	SAGE		2	https://j ournals .sagep ub.com /home/ mav	Fast-response non-linear controls, nano-structures, integrated propulsion and lift mechanisms, highly flexible structures, and low Reynolds aerodynamics are just a few of the important considerations which may be combined in the execution of MAV research.	The demand for small unmanned air vehicles, commonly termed micro air vehicles, is rapidly increasing. Driven by applications ranging from civil search-and-rescue missions to military surveillance missions, there is a rising level of interest and investment in better vehicle designs, and miniaturized components are enabling many rapid advances. The need to better understand fundamental aspects of flight for small vehicles has spawned a surge in high quality research in the area of micro air vehicle, or MAV research. These aircraft have a set of constraints which are, in many ways, considerably different from that of traditional aircraft and are often best addressed by a multidisciplinary approach.	Open access	1200 \$





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Journal of Engineering for Gas Turbines and Power	ASME	1.804	1.98	https:// asmedi gitalcoll ection.a sme.or g/gastu rbinesp ower/p ages/a bout	Aircraft Engines Coal, Biomass and Alternative Fuels Combustion, fuels and emissions Computational Fluid Dynamics (CFD) Analyses Controls, Diagnostics, Instrumentation and Measurement Techniques Cycle Innovations Heat Transfer and thermal Management Internal Combustion Engines New and Emerging Technologies Oil and Gas Applications Power Generation Plants Steam Turbines Structures and Dynamics Turbomachinery	The Journal of Engineering for Gas Turbines and Power publishes archival-quality papers in the broad technical areas of gas and steam turbines, internal combustion engines, and power generation. It covers the specific technical areas described in the SCOPE section below. Archival papers for this journal must not only be clearly written and demonstrated to be technically correct, but must also present new, previously unknown findings that are interesting, have lasting value for referencing and educating future generations, and have a relevant engineering application for the technical areas of the journal. "Application" means demonstrating that the innovations or ideas, the computational and/or experimental results, the modeling and analyses of systems, components or processes are useful to improve understanding and advance the state-of-the-art. Emphasis should be on demonstrated engineering relevance. This can take the form of new technologies, processes, concepts, theories, ideas, analyses and experiments that improve engineering designs, clarify understanding of technical issues facing the community, explain previously unexplained phenomena, and/or change the way we think. Interesting technology review papers and discussions of published papers are also welcome. The submission of papers that are only of mathematical interest with just a cursory relevance to engineering are discouraged.	Option to publish open access	\$3000





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Journal of Aerospace Engineering	ASCE	1.78 (2019- 2020)	1.75	https:// ascelibr ary.org/ journal/j aeeez	Topics of interest include aerodynamics, computational fluid dynamics, wind tunnel testing of buildings and structures, aerospace structures and materials, advanced composite materials, dynamics and control, real-time data acquisition, space engineering and construction, lunar base construction, field and remote sensing, and robotics.	The Journal of Aerospace Engineering promotes the implementation and development of space and aerospace technologies and their transfer to other civil engineering applications.	Option to publish open access	2000 \$
Journal of Aircraft	American Institute of Aeronautics and Astronautics	1.5 (2019- 2020)	1.74	https:// arc.aia a.org/ja /about	The Journal publishes qualified papers on aircraft systems, air transportation, air traffic management, and multidisciplinary design optimization of aircraft, flight mechanics, flight and ground testing, applied computational fluid dynamics, flight safety, weather and noise hazards, human factors, airport design, airline operations, application of computers to aircraft including artificial intelligence/expert systems, production methods, engineering economic analyses, affordability, reliability, maintainability, and logistics support, integration of propulsion and control systems into aircraft design and operations, aircraft aerodynamics (including unsteady aerodynamics), structural design/dynamics , aeroelasticity, and aeroacoustics. It publishes papers on general aviation, military and civilian aircraft, UAV, STOL and V/STOL, subsonic, supersonic, transonic, and hypersonic aircraft.	This Journal is devoted to the advancement of the applied science and technology of airborne flight through the dissemination of original archival papers describing significant advances in aircraft, the operation of aircraft, and applications of aircraft technology to other fields.	Subscripti on based Journal (Not OA)	Subscrip tion of member s: \$155 , non- member s: \$1410





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Control Theory and Technology	Springer Nature	NA	1.74	https:// www.sp ringer.c om/jour nal/117 68	Nonlinear systems and control Cyber-physical systems Identification and estimation Optimal control and optimization Robust and H-infinity control Adaptive and learning control Cooperative systems Stability and stabilization Distributed parameter systems Hybrid systems and DEDS Large scale systems etc.	The Control Theory and Technology publishes high-quality papers on original, theoretical and experimental research and development in the area of systems and control, including all aspects of control theory and its applications. Its function is to provide a forum for domestic, as well as international, scientists and engineers in this field to exchange their knowledge and experiences. Articles for submission may be survey papers, or reviews on well established or newly emerging research topics, techniques, etc.; or regular papers which describe new well developed theoretical results or applications; or brief papers which present new techniques, concepts, perspectives, etc.	Hybrid (Open Choice)	2170
Mechanics of Time- Dependent Materials	Springer Nature	1.461 (2019)	1.73	https:// www.sp ringer.c om/jour nal/110 43	The journal promotes the transfer of knowledge between various disciplines that deal with the properties of time-dependent solid materials but approach these from different angles. Among these disciplines are: Mechanical Engineering, Aerospace Engineering, Chemical Engineering, Rheology, Materials Science, Polymer Physics, Design, and others.	Mechanics of Time-Dependent Materials accepts contributions dealing with the time-dependent mechanical properties of solid polymers, metals, ceramics, concrete, wood, or their composites. It is recognized that certain materials can be in the melt state as function of temperature and/or pressure. Contributions concerned with fundamental issues relating to processing and melt-to-solid transition behaviour are welcome, as are contributions addressing time-dependent failure and fracture phenomena. Manuscripts addressing environmental issues will be considered if they relate to time-dependent mechanical properties.	Hybrid (Open Choice)	2570





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Computer Aided Geometric Design	Elsevier	1.230 (2019)	1.67	https:// www.sc iencedir ect.com /journal /compu ter- aided- geomet ric- design	This journal will report on new developments in CAGD and its applications, including but not restricted to the following: Mathematical and Geometric Foundations Curve, Surface, and Volume generation CAGD applications in Numerical Analysis, Computational Geometry, Computer Graphics, or Computer Vision Industrial, medical, and scientific applications	The journal Computer Aided Geometric Design is for researchers, scholars, and software developers dealing with mathematical and computational methods for the description of geometric objects as they arise in areas ranging from CAD/CAM to robotics and scientific visualization. The journal publishes original research papers, survey papers and with quick editorial decisions short communications of at most 3 pages. The primary objects of interest are curves, surfaces, and volumes such as splines (NURBS), meshes, subdivision surfaces as well as algorithms to generate, analyze, and manipulate them.	Option to publish open access	2550
International Review of Aerospace Engineering	Praise Worthy Prize		1.62	https:// www.pr aisewor thyprize .org/js m/index .php?jo urnal=ir ease&p age=ab out&op =editori alPolici es#focu sAndSc ope	Aerodynamics, fluid dynamics, flight mechanics, structural mechanics, energetics and propulsion, advanced materials, design and manufacture of aircraft, helicopters, missiles, launchers and satellites, rotorcraft/UAV/MAV, space vehicles and satellites engineering, systems and test procedures, robotics and intelligent systems, electrical machines, power electronics and electrical systems for aerospace applications, air transportation, navigation, guidance and control, avionics and systems, flight simulation, general aviation, human powered flight, light aviation, management studies, safety, air defence systems, aerospace communications, environmental issues in aerospace, teaching and continuous education, new and important applications and trends.	The International Review of Aerospace Engineering (IREASE) is a peer-reviewed journal that publishes original theoretical and applied papers on all aspects of aerospace research.	Option to publish open access	Basic 1000 euro





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Curved and Layered Structures	Walter de Gruyter		1.6	https:// www.d eqruyte r.com/vi ew/iour nals/cls /cls- overvie w.xml	The content of the journal is especially dedicated to scientists carrying out research and/or interested in structural mechanics, engineering structures, architectural design, wind engineering, aerospace engineering, naval engineering, structural stability, structural dynamics, structural stability/reliability, experimental modeling and smart structures.		Full open access	500
Journal of the American Helicopter Society	American Helicopter Society	1.43 (2019- 2020)	1.59	https://v tol.org/ publicat ions/jou mal-of- ahs	Papers presented at the VFS Annual Forum, VFS Technical Meetings, the European Rotorcraft Forum, and other technical conference	The Journal of the AHS is the world's only scientific journal dedicated to vertical flight technology. The Journal publishes original technical papers dealing with theory and practice of vertical flight. The Journal seeks to foster the exchange of significant new ideas and information about helicopters and V/STOL aircraft. The scope of the Journal covers the full range of research, analysis, design, manufacturing, test, operations, and support. A constantly growing list of specialty areas is included within that scope. These range from the classical specialties like aerodynamic, dynamics and structures to more recent priorities such as acoustics, materials and signature reduction and to operational issues such as design criteria, safety and reliability.	Associate d to Vertical Flight Society	Member ship





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering	SAGE		1.59	https://j ournals .sagep ub.com /home/ pig	The scope extends to Structural and mechanical design; Fluid dynamics and aerodynamics; Propulsion systems and fuels; Transmission and landing systems; Tribology, hydraulics and pneumatics; Testing and performance; Flight control systems and avionics; Manufacturing and quality assurance; Materials.	The Journal of Aerospace Engineering is a forum for the communication of ideas and methods presently in use at the forefront of technology in the field of aerospace engineering. It contains peer reviewed papers on both theoretical and practical aspects of all types of civil and military aircraft and spacecraft and their support systems. The scope is wide, covering research, design, development, production, operation, servicing and repair, components and auxiliary equipment, safety and reliability.	It offers optional open access publishing via the SAGE Choice programm e.	3,000 \$
Theoretical and Applied Mechanics Letters	Elsevier	NA	1.58	https:// www.sc iencedir ect.com /journal /theoret ical- and- applied = mecha nics- letters	Contributions include, but are not limited to, a variety of topics such as: • Aerospace and Aeronautical Engineering • Coastal and Ocean Engineering • Environment and Energy Engineering • Material and Structure Engineering • Biomedical Engineering • Mechanical and Transportation Engineering • Civil and Hydraulic Engineering	TAML aims at publishing novel, cutting edge researches in theoretical, computational, and experimental mechanics. The journal provides fast publication of letter-sized articles and invited reviews within 3 months. Emphasis is given to highlighting advances in science, engineering, and technology with originality and rapidity.	Open access	1000





Source title Publ	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
ary D		1.57	https:// www.m dpi.com /journal /aerosp ace	aerodynamics computational fluid dynamics fluid-structure interaction flight mechanics plasmas research instrumentation test facilities environment material science structural analysis thermophysics and heat transfer thermal-structure interaction aeroacoustics optics electromagnetism and radar propulsion etc.	Aerospace (ISSN 2226-4310) is an international, peer- reviewed, open access journal (free for readers) devoted to the publication of original papers, review articles, short notes and communications related to all fields of aerospace science, engineering and technology, disclosing theoretical, fundamental and applied results linked to potential applications that are related to research, design, manufacture, operations, control and maintenance of aircraft and spacecraft. Researchers are encouraged to publish the results of their recent theoretical and experimental developments with as much detail as possible. There is no restriction on the length of the papers.	open access	Basic 1000 CHF





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
CEAS Aeronautical Journal	Springer Nature	NA	1.56	https:// www.sp ringer.c om/jour nal/132 72	The Journal is devoted to publishing results and findings in all areas of aeronautics-related science and technology as well as reports on new developments in design and manufacturing of aircraft, rotorcraft, and unmanned aerial vehicles. Of interest are also (invited) in-depth reviews of the status of development in specific areas of relevance to aeronautics, and descriptions of the potential way forward. Typical disciplines of interest include flight physics and aerodynamics, aeroelasticity and structural mechanics, aeroacoustics, structures and materials, flight mechanics and flight control, systems, flight guidance, air traffic management, communication, navigation and surveillance, aircraft and aircraft design, rotorcraft and propulsion.	The CEAS Aeronautical Journal has been created under the umbrella of CEAS to provide an appropriate platform for excellent scientific publications submitted by scientists and engineers. The German Aerospace Center (DLR) and the European Space Agency (ESA) support the Journal.	Hybrid (Open Choice)	2170
Journal of Aerospace Information Systems	American Institute of Aeronautics and Astronautics	1.32 (2019- 2020)	1.51	https:// arc.aia a.org/ja is/about	Topics include aerospace systems and software engineering, verification and validation of embedded systems, uncertainty quantification, the field known as 'big data,' data analytics, machine learning, knowledge management for aerospace systems, human-automation interaction, and systems health management for aerospace systems. Applications of autonomous systems, systems engineering principles, and safety and mission assurance are of particular interest.	This Journal is devoted to the dissemination of original archival research papers describing new theoretical developments, novel applications, and case studies regarding advances in aerospace computing, information, and networks and communication systems that address aerospace-specific issues.	Subscripti on based Journal (Not OA)	Subscrip tion of member s: \$125 , non- member s: \$585





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
International Journal of Computational Fluid Dynamics	Taylor & Francis	1.071 (2019)	1.5	https:// www.ta ndfonlin e.com/t oc/gcfd 20/curr ent	Submitted papers should cover CFD algorithms, methods and applications relevant to current research and applied CFD challenges. Innovative multidisciplinary and multiphysics applications, High Performance Computing, from RANS levels to scale-resolving methodologies, are encouraged.	The International Journal of Computational Fluid Dynamics publishes innovative CFD research, both fundamental and applied, in a wide variety of fluids and physics fields. The Journal emphasizes accurate predictive tools for 3D flow analysis and design, and those promoting a deeper understanding of the physics of 3D fluid motion.	Authors can choose to publish gold open access in this journal.	€2495 (For full paper and most of the Europea n Countrie s)
International Journal of Intelligent Transportation Systems Research	Springer Nature	NA	1.4	https:// www.sp ringer.c om/jour nal/131 77	Sensor Technology Communication Technology and its Applications Vehicle Control and Automated Driving Safety Improvement and Human Interface Traffic Control Traffic Planning Urban Engineering Transportation Policy, Traffic Economy Traffic Psychology Other Applied Technologies	This journal is the only transportation journal to report on multi-disciplinary research efforts with the goal to discover solutions to difficult issues in the field. It provides a platform to bring together researchers and specialists in the fields of transportation, electrical, mechanical and traffic engineering, as well as those in the areas of policy planning, economics, and psychology, for wide-ranging discussion about future transportation systems. The journal is the global forum for transportation research.	Hybrid (Open Choice)	2170





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
International Journal of Industrial Organization	Elsevier	1.113 (2019)	1.36	https:// www.sc iencedir ect.com /journal /interna tional- journal- journal- of- industri al- organiz ation		The IJIO is an international venture that aims at full coverage of theoretical and empirical questions in industrial organization. This includes classic questions of strategic behavior and market structure. The journal also seeks to publish articles dealing with technological change, internal organization of firms, regulation, antitrust and productivity analysis. Submissions in theoretical work, empirical work, and case studies are encouraged.	Option to publish open access	2590
Journal of Thermophysic s and Heat Transfer	American Institute of Aeronautics and Astronautics	1.38 (2019- 2020)	1.28	https:// arc.aia a.org/jt ht/abou t	The Journal publishes qualified papers that deal with the properties and mechanisms involved in thermal energy transfer and storage in gases, liquids, and solids or combinations thereof. These studies include aerothermodynamics; conductive, convective, radiative, and multiphase modes of heat transfer; micro- and nano-scale heat transfer; nonintrusive diagnostics; numerical and experimental techniques; plasma excitation and flow interactions; thermal systems; and thermophysical properties.	This Journal is devoted to the advancement of the science and technology of thermophysics and heat transfer through the dissemination of original research papers disclosing new technical knowledge and exploratory developments and applications based on new knowledge.	Subscripti on based Journal (Not OA)	Subscrip tion of member s: \$140 , non- member s: \$1130





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
International Journal of Aerospace Engineering	Hindawi		1.26	https:// www.hi ndawi.c om/jour nals/ija e/about <u>/</u>	Mechanics of materials and structures Aerodynamics and fluid mechanics Dynamics and control Aeroacoustics Aeroelasticity Propulsion and combustion Avionics and systems Flight simulation and mechanics Unmanned air vehicles (UAVs).	International Journal of Aerospace Engineering aims to serve the international aerospace engineering community through dissemination of scientific knowledge on practical engineering and design methodologies pertaining to aircraft and space vehicles.	Open access	2050 \$
CEAS Space Journal	Springer Nature	NA	1.26	https:// www.sp ringer.c om/jour nal/125 67	The Journal is devoted to new developments and results in all areas of space-related science and technology, including important spin-off capabilities and applications as well as ground-based support systems and manufacturing advancements. Of interest are also (invited) in-depth reviews of the status of development in specific areas of relevance to space, and descriptions of the potential way forward. Typical disciplines of interest include mission design and space systems, satellite communications, aerothermodynamics (including physical fluid dynamics), environmental control and life support systems, materials, operations, space debris, optics, optoelectronics and photonics, guidance, navigation and control, mechanisms, propulsion, power, robotics, structures, testing and thermal issues and small satellites.	The CEAS Space Journal has been created by the CEAS Space Branch to provide an appropriate platform for the excellent scientific publications submitted by scientists and engineers. Under the umbrella of CEAS, the German Aerospace Center (DLR) and the European Space Agency (ESA) support the Journal.	Hybrid (Open Choice)	2170





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
International Journal of Aerospace Psychology	Taylor & Francis	1.111 (2019)	1.24	https:// www.ta ndfonlin e.com/t oc/hiap 21/curr ent	These fields include, to name a few, engineering and computer science, psychology, education, and physiology.	The primary goal of this journal is the publication of scholarly papers developed within this increasingly important field of study—the development and management of safe, effective aerospace systems from the standpoint of the human operators and occupants. Several divergent academic disciplines contribute heavily to its contents, making it truly interdisciplinary in nature and scope.		€2495 (For a paper and most of the Europea n Countrie s)





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
International Journal of Aeroacoustics	SAGE		1.16	https://j ournals .sagep ub.com /home/j ae	Subtopics include, among others, jet mixing noise; screech tones; broadband shock associated noise and methods for suppression; the near-ground acoustic environment of Short Take-Off and Vertical Landing (STOVL) aircraft; weapons bay aeroacoustics, cavity acoustics, closed-loop feedback control of aeroacoustic phenomena; computational aeroacoustics including high fidelity numerical simulations, and analytical acoustics.	International Journal of Aeroacoustics is a peer-reviewed journal publishing developments in all areas of fundamental and applied aeroacoustics. Fundamental topics include advances in understanding aeroacoustics phenomena; applied topics include all aspects of civil and military aircraft, automobile and high speed train aeroacoustics, and the impact of acoustics on structures.	offers optional open access publishing via the SAGE Choice programm e	3,000 \$
Aeronautical Journal	Cambridge University Press	0.663 (2019)	1.13	https:// www.ca mbridg e.org/c ore/jour nals/ae ronauti cal- journal	Research papers are solicited on all aspects of research, design and development, construction and operation of aircraft and space vehicles.	The Aeronautical Journal has, for over a century, been the UK's leading scientific and technical aeronautics Journal and is the world's oldest Aerospace Journal that remains in production. Published monthly, The Aeronautical Journal draws upon the expertise and resources of The Royal Aeronautical Society providing a world-wide forum for authors from the UK and overseas.	Hybrid (Open Choice)	1600£





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Aviation	Vilnius Gediminas Technical University	NA	1.13	https://j ournals .vgtu.lt/i ndex.p hp/Avia tion/ab out	It publishes papers in the following fields of research: Aerostructures Air Traffic Management Air Transport Technologies and Development Aircraft Avionics, Systems and Equipment Airports Flight Mechanics Flight Mechanics Flight Physics History of Aviation Human Factors Integrated Design and Validation (method and tools) Propulsion	The journal Aviation is aimed at all researchers looking for information about the aviation from history to technology.	Full open access	Free of charge (fees are covered by VGTU)
Aircraft Engineering and Aerospace Technology	Emerald		1.11	https:// www.e merald groupp ublishin g.com/j ournal/ aeat	 Civil and military aircraft Satellites and spacecraft Rotorcraft Flight systems Aerospace technologies Industry case studies 	Aircraft Engineering and Aerospace Technology provides a broad coverage of the materials and techniques employed in the aircraft and aerospace industry. Its international perspectives allow readers to keep up to date with current thinking and developments in critical areas such as coping with increasingly overcrowded airways, the development of new materials, recent breakthroughs in navigation technology, and more. The journal publishes a combination of technical papers focusing on specific topics, plus regular sections on contracts, the developments of new equipment and materials, safety issues, patents, standards, new books, news and people in the news make sure the journal offers lively, topical and genuinely international coverage happening in the field.	Option to publish open access	APC of £2,400/\$ 3,240/€2 ,880 for publishin g in a hybrid or fully open access journal





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Periodica Polytechnica Transportation Engineering	Budapesti Muszaki es Gazdasagtu domanyi Egyetem/Bu dapest University of Technology and Economics		1.08	https:// pp.bme .hu/tr/a bout		The main scope of the journal is to publish original research articles in the wide field of transportation, logistics and vehicle engineering, e.g. in the field of modeling and measuring complex systems, and also relating to environmental and urban problems just as much as the economic and social questions of transport (e.g.: travel or driver behavior). Handling and modeling of large networks, the analysis of vehicles and engines, and the related manufacture and repair processes are also considered. Special attention is paid to the future emerging technologies (autonomous driving and vehicles; electro mobility) within the transport sector, as well as intelligent transport systems and information and communication technologies.	This is a diamond open access journal: publishing and downloadi ng articles are both free of charge.	Free of charge





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Journal of Aerospace Technology and Management	Instituto de Aeronautica e Espaco- IAE		1.03	http://w ww.jat m.com. br/ojs/in dex.ph p/jatm/ about	To present scientific and technological research results related to the aerospace field, as well as promote an additional source of diffusion and interaction, providing public access to all of its contents, following the principle of making free access to research and generate a greater global exchange of knowledge.	The main objective of JATM is to show the scientific and technological research results, specially those relating to the aerospace field, as well as promote an additional source of diffusion and interaction with the scientific community. This journal provides public access to all of its contents, following the principle of making free access to research and generate a greater global exchange of knowledge.	Immediate open access to its content.	Free of charge





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Journal of International Trade and Economic Development	Taylor & Francis	1.073 (2019)	1	https:// www.ta ndfonlin e.com/t oc/rite2 0/curre nt	Publication of high quality articles covering; theoretical and applied issues in international and development economics; econometric applications of trade and/or development issues based on sound theoretical economic models or testing fundamental economic hypotheses; models of structural change; trade and development issues of economies in Eastern Europe, Asia and the Pacific area; papers on specific topics which are policy-relevant; review articles on important branches of the literature including controversial and innovative ideas are also welcome.	The Journal of International Trade and Economic Development (JITED) focuses on international economics, economic development, and the interface between trade and development. The links between trade and development economics are critical at a time when fluctuating commodity prices, ongoing production fragmentation, and trade liberalisation can radically affect the economies of advanced and developing countries. Our aim is to keep in touch with the latest developments in research as well as setting the agenda for future analysis.	Authors can choose to publish gold open access in this journal.	€2495 (For a paper and most of the Europea n Countrie s)
International Journal of Reliability, Quality and Safety Engineering	World Scientific	NA	0.98	https:// www.w orldscie ntific.co m/world scinet/ij rqse	Submission topics include but are not limited to the following: Reliability, quality assurance and engineering, software, algorithms, design and manufacturing, fuzzy logic, reliability growth and prediction, safety engineering, software testing and reliability, modeling and control issues, concurrent engineering, optimization of system reliability, performance analysis of systems, quality planning and measurements, risk assessment and analysis, fault-tolerant computing, and critical systems design.	IJRQSE is a refereed journal focusing on both the theoretical and practical aspects of reliability, quality, and safety in engineering. The journal is intended to cover a broad spectrum of issues in manufacturing, computing, software, aerospace, control, nuclear systems, power systems, communication systems, and electronics. Papers are sought in the theoretical domain as well as in such practical fields as industry and laboratory research. The journal is published six issues per year. It is intended to bridge the gap between the theoretical experts and practitioners in the academic, scientific, government, and business communities. Review articles and case studies are also welcome in addition to innovative works in all key areas of the journal.	open access option	NA





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Annals of Solid and Structural Mechanics	Springer Nature	NA	0.92	https:// www.sp ringer.c om/jour nal/123 56	The scope of the journal includes original papers dealing with mechanical, mathematical, numerical and experimental analysis of structures and structural materials, both taken in the broadest sense. Papers concerned with multi-scale, multi-field and multiple-media problems, including static and dynamic interaction, are welcome. Papers illustrating advanced and innovative applications to structural problems coming from any field of science and engineering, including aerospace, civil, materials, mechanical engineering and living materials and structures will be considered.	The international journal Annals of Solid and Structural Mechanics provides a forum to communicate recent and creative advances dealing with any aspect of mechanics of materials and structures. The journal aims to be a reference and a powerful tool to professionally actives in academic, industrial and governmental communities.	Hybrid (Open Choice)	2570
Scandinavian Economic History Review	Taylor & Francis	NA	0.84	https:// www.ta ndfonlin e.com/l oi/sehr 20	The journal also publishes contributions from closely related fields, such as demographic and labour history, as well as articles dealing with theoretical and methodological issues.	The Scandinavian Economic History Review has been published since 1953 by the Scandinavian Society for Economic and Social History. The journal publishes articles and reviews in the fields of economic, business and social history with a particular focus on the Nordic countries and the Baltic region.	Authors can choose to publish gold open access in this journal.	€2495 (For a paper and most of the Europea n Countrie s)





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Journal of The Institution of Engineers (India): Series C	Springer Nature	NA	0.76	https:// www.sp ringer.c om/jour nal/400 32	 Engineering Design including Vibration & Noise, Thermal Engineering, Cryogenics, Heat Transfer Non-conventional & Renewable Energy, Fluid Mechanics & Machinery Optimisation, Simulation & Modelling, Dynamic Systems, Measurement & Control Reliability, Availability & Maintainability, Tribology including Bearings Internet Aided Design, Soft Computing, Fuzzy Logic, Neural Network, Virtual Manufacturing Environments & Systems Avionics, Space Engineering, Aircraft Equipments, Aerodynamics, Propulsion etc. 	This series aims to cover the research findings and latest developments in the arena of mechanical sciences covering mechanical, production, aerospace and marine engineering. This includes high valued research investigation pertaining to theoretical and applied mechanics, solid mechanics, mechanics of materials, vibration and dynamics, machining and advance manufacturing processes, micro and nano systems, robotics, aircraft, space vehicles, marine power system, underwater acoustic engineering, etc. It is intended to provide the means of dissemination of knowledge through publication of papers.	Hybrid (Open Choice)	2170
Unmanned Systems	World Scientific	NA	0.72	https:// www.w orldscie ntific.co m/world scinet/u S	Unmanned Systems (US) aims to cover all subjects related to the development of automatic machine systems, which include advanced technologies in unmanned hardware platforms (aerial, ground, underwater and unconventional platforms), unmanned software systems, energy systems, modeling and control, communications systems, computer vision systems, sensing and information processing, navigation and path planning, computing, information fusion, multi-agent systems, mission management, machine intelligence, artificial intelligence, and innovative application case studies.	An unmanned system is a machine or device that is equipped with necessary data processing units, sensors, automatic control, and communications systems and is capable of performing missions autonomously without human intervention. Unmanned systems include unmanned aircraft, ground robots, underwater explorers, satellites, and other unconventional structures.	open access option	NA





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
SAE International Journal of Aerospace	SAE	NA	0.71	https:// www.sa e.org/p ublicati ons/coll ections/ content /e- journal- 01/	In addition to being identified as some of the best published technical articles on current technology, the Journal archives historic findings and illuminates the future of aerospace engineering and how we plan to get there. The Journal covers a range of subject areas, including propulsion, safety and reliability, software, systems, rotorcraft, maintenance, and general aviation.	The SAE International Journal of Aerospace is the preeminent source for peer-reviewed, cutting-edge engineering research within the aerospace industry. The Journal is an essential resource for anyone in academia, industry, or government seeking the latest studies and technology in aerospace engineering.	Option to authors to publish open access	750\$





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
International Journal of Turbo and Jet Engines	Walter de Gruyter	0.733 (2019)	0.66	https:// www.d egruyte r.com/vi ew/jour nals/tij/t ii: overvie w.xml	Turbo and jet engines Theory and design of propagation of (advanced) jet aircraft Thermodynamics Combustion Behavior of materials at High temperatures Turbine and engine design Thrust vectoring or Jet-Engine-Steering in effecting improved Flight control Energy and environmental issue Stealth in Integrated Systems Design, including jet-engine inlets and exhausts Vectoring and safety in air, sea and land jet systems	The Main aim and scope of this Journal is to help improve each separate components R&D and superimpose separated results to get integrated systems by striving to reach the overall advanced design and benefits by integrating: (a) Physics, Aero, and Stealth Thermodynamics in simulations by flying unmanned or manned prototypes supported by integrated Computer Simulations based on: (b) Component R&D of: (i) Turbo and Jet-Engines, (ii) Airframe, (iii) Helmet-Aiming-Systems and Ammunition based on: (c) Anticipated New Programs Missions based on (d) IMPROVED RELIABILITY, DURABILITY, ECONOMICS, TACTICS, STRATEGIES and EDUCATION in both the civil and military domains of Turbo and Jet Engines. The International Journal of Turbo & Jet Engines is devoted to cutting edge research in theory and design of propagation of jet aircraft. It serves as an international publication organ for new ideas, insights and results from industry and academic research on thermodynamics, combustion, behavior of related materials at high temperatures, turbine and engine design, thrust vectoring and flight control as well as energy and environmental issues.	Option to publish it open access	NA





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
International Journal of Vehicle Structures and Systems	MechAero Foundation for Technical Research & Education Excellence (MAFTREE)	0.38 (2019- 2020)	0.53	https:// maftree .org/eja /index.p hp/iivss /index	MAFTREE is engaged in promoting the advancement of technical research and education in the field of mechanical, aerospace, automotive and its related branches of engineering, science, and technology. IJVSS disseminates high quality original research and review papers, case studies, technical notes and book reviews.	The International Journal of Vehicle Structures and Systems (IJVSS) is a quarterly journal and is published by MechAero Foundation for Technical Research and Education Excellence (MAFTREE), based in Chennai, India.	The contents of this journal will be available in an open access format 24 month(s) after an issue is published.	Subscrip tion based journal
Economic Affairs	Wiley- Blackwell	NA	0.45	https:// onlineli brary.wi ley.com /journal /14680 270		The Institute of Economic Affairs is primarily an educational charity, working with students, academics, government bodies and key decision makers to highlight how markets can work to benefit society. Our academic journal Economic Affairs has been publishing stimulating original work and commentary since 1980, with an increasing international focus and readership. Through sharing ideas about worldwide markets and variations in government policy, Economic Affairs is distinct in its ability to communicate with a global audience.	Option to publish open access	2100





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
International Journal of Aviation, Aeronautics, and Aerospace	Embry- Riddle Aeronautical University		0.4	https://c ommon s.erau. edu/ijaa a/aimsa ndscop e.html	The International Journal of Aviation, Aeronautics, and Aerospace (IJAAA) is a peer-reviewed publication for scholars from a variety of backgrounds including educators, industry personnel, and government researchers.	Any topics related to aviation, aeronautics, and aerospace	Open access	Free of charge
Russian Aeronautics	Pleiades Publishing	0.29 (2019- 2020)	0.37	https:// www.sp ringer.c om/jour nal/119 77	Subjects covered in the journal are aircraft and rocket equipment design; aerodynamics, strength, dynamics, and control of flight vehicles; aircraft and rocket engine theory and design; technology, automation of aircraft/rocket equipment design and production; aircraft instruments and instrumentation computer complexes.	Russian Aeronautics is a journal that publishes articles on fundamental research, application, and developments in the field of aeronautical, space, rocket science and engineering that are carried out at institutes of higher education, research institutes, design bureaus, and branch enterprises.	NA	Subscrip tion based journal
INCAS Bulletin	INCAS - National Institute for Aerospace Research Elie Carafoli	0.14 (2019- 2020)	0.24	https:// bulletin. incas.ro /	It covers fluid mechanics, aerodynamics, flight theory, aeroelasticity, structures, applied control, mechatronics, experimental aerodynamics, computational methods.	INCAS BULLETIN is a scientific quartely journal published by INCAS – National Institute for Aerospace Research "Elie Carafoli" with focus in aeronautics.	Open access	Free of charge





Source title	Publisher	Impact Factor	Cite Score	Link	Papers selection ¹	Scope ²	Open access	Fee
Metal Powder Report	Elsevier	NA	0.1	https:// www.sc iencedir ect.com /journal /metal- powder -report	Papers from manufacturing, research and use of metal powders.	Metal Powder Report covers the powder metallurgy industry worldwide. Each issue carries news and features on technical trends in the manufacture, research and use of metal powders.	Supports open access	3000
Vertiflite	American Helicopter Society	NA	0.05	https://v tol.org/ vertiflite -online	NA	Vertiflite magazine is the official publication of the Vertical Flight Society, the professional organization working for the advancement of vertical flight technology and its useful application throughout the world. Vertiflite's editorial energies are devoted to informing our readers of the advances being made in the industry and encouraging increasingly broader use of vertical flight aircraft.	Associate d to Vertical Flight Society	Member ship
Air Force Magazine	Air Force Association	NA	0	https:// www.ai rforcem ag.com /about/	Air and Space operations, programs, technology, as well as its people and history are covered. Air Force Magazine is an authoritative source for insight and analysis about airpower, space power, and U.S. and allied defence strategy.	Air Force Magazine is the monthly journal of the Air Force Association and among the world's foremost publications on defense, aerospace, and airpower.	Subscripti on based Journal (Not OA)	Subscrip tion \$50/ann ualy