



Risks of Drone Use in Light of Literature Studies

Agnieszka A. Tubis ^{1,*} , Honorata Poturaj ¹ , Klaudia Dereń ² and Arkadiusz Żurek ²

¹ Department of Technical Systems Operation and Maintenance, Faculty of Mechanical Engineering, Wrocław University of Science and Technology, Wyspiańskiego Street 27, 50-370 Wrocław, Poland; honorata.poturaj@pwr.edu.pl

² Unmanned Aerial Vehicles (UAV) Section, Center for Advanced Systems Understanding Autonomous Systems Division, Helmholtz-Zentrum Dresden-Rossendorf e.V. (HZDR), Untermarkt 20, D-02826 Görlitz, Germany; k.deren@hzdr.de (K.D.); a.zurek@hzdr.de (A.Ż.)

* Correspondence: agnieszka.tubis@pwr.edu.pl

Abstract: This article aims to present the results of a bibliometric analysis of relevant literature and discuss the main research streams related to the topic of risks in drone applications. The methodology of the conducted research consisted of five procedural steps, including the planning of the research, conducting a systematic review of the literature, proposing a classification framework corresponding to contemporary research trends related to the risk of drone applications, and compiling the characteristics of the publications assigned to each of the highlighted thematic groups. This systematic literature review used the PRISMA method. A total of 257 documents comprising articles and conference proceedings were analysed. On this basis, eight thematic categories related to the use of drones and the risks associated with their operation were distinguished. Due to the high content within two of these categories, a further division into subcategories was proposed to illustrate the research topics better. The conducted investigation made it possible to identify the current research trends related to the risk of drone use and pointed out the existing research gaps, both in the area of risk assessment methodology and in its application areas. The results obtained from the analysis can provide interesting material for both industry and academia.

Keywords: literature review; PRISMA; UAV; unmanned aerial vehicles; risk assessment



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1. Introduction

Drones have been used for many years in various military missions [1]. However, advancing technological developments, including those associated with Industry 4.0, have led to the increased use of unmanned aerial vehicles (UAVs, also known as drones) in non-military areas. Among these areas, logistics, public safety, traffic surveillance, and monitoring are the most commonly cited [2]. As Yoo et al. note [3], the popularity of drone use in logistics areas has been mainly influenced by their use by large online retailers (Amazon, Google, DHL, Walmart) in the parcel delivery process. These researchers also note that drone delivery's main benefits are its speed, cost-effectiveness, and environmental friendliness [3].

The application area of drones is one of the criteria for their classification in literature reviews. An example of this approach is the classification presented by Singhal et al. [4]. The authors of this classification have defined three primary groups of drones, the membership of which being determined by the application area of the device. Thus, a distinction is made among the following [4]:

- **Civilian group**—refers to civilian applications of drones and includes drones used in such areas as photography, construction, mining, delivery, agriculture, logistics, disaster management, and surveillance.
- **Environment group**—concerned with the use of drones for ecosystem monitoring. This includes drones used primarily in the areas of soil monitoring, crop monitoring, water, underwater, mountain inspection, and air quality monitoring.

- Defence group—concerned with the use of UAVs in military applications. This includes drones used in the area of combat aircraft, spying, bomb dropping, missile launching, surveillance at the border, and warzone medical supplies.

The presented classification also shows the intensive development of drone use in non-military areas. Another widespread criterion for classifying drones is size [5].

Confirmation of the increasing importance of drone use in non-military areas is the growing number of publications on drone-related literature reviews. For this article, a search was conducted in the Web of Science database according to the following query:

TITLE_ABS_KEY (drone) AND (review).

This proceeding identified as many as 588 papers meeting the accepted search criterion. As shown in Figure 1, an increase in the number of such literature reviews has already been recorded since 2016, and as of 2021, the number of published review articles is more than 100 documents per year. This confirms the growing importance of such reviews in literature studies on using drones in various systems.

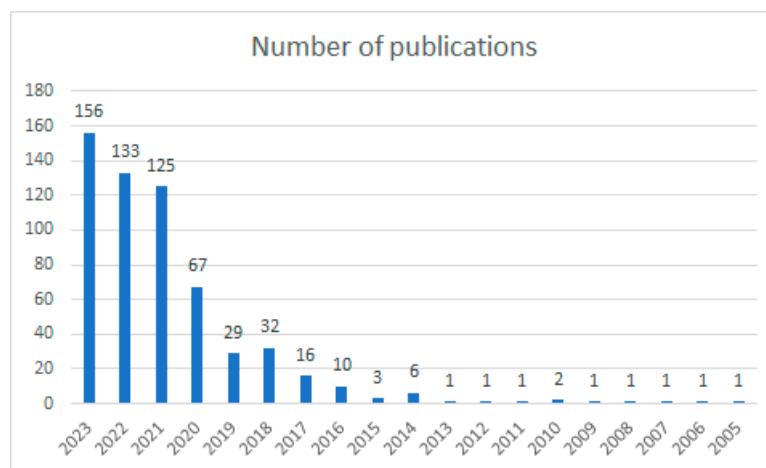


Figure 1. Number of publications of review articles on the use of drones according to Web of Science.

Published literature reviews cover various issues related to using and applying UAV systems. However, there are two leading research trends regarding literature studies. Both of these trends are presented in Table 1, along with examples illustrating the scope of the literature reviews performed.

Table 1. Two main research streams for drone literature studies.

Research Trend	Scope of the Analysed Literature	Publications
Drone application in the selected area	Mining industry	[6]
	Logistics	[7]
	Last-mile delivery	[8,9]
	Smart city	[10]
	Road traffic monitoring system	[11,12]
	Marine animal research	[13]
	Shark science	[14]
	Clinical microbiology and infectious diseases	[15]
	Healthcare	[16–18]
	Agriculture	[19]
	Medical products and transportation	[20]
	Architecture, engineering, and construction industry	[21,22]
	Animal behaviour research	[23]
	Disaster management	[24]
Drone operation	Detection	[25–27]
	Social acceptance	[28,29]
	Routing and scheduling problem	[30–34]

The authors' analysis of review articles shows that, in the last five years, literature studies on the risks of drone use have been published only regarding their application in a specific area, e.g., [23,35]. However, the purpose of these publications was not to cover topics related to methods and techniques for assessing the risks of drone use, but only to analyse the opportunities and risks of drone application in the selected area. In contrast, the purpose of our research is to develop a framework for a method of assessing and managing the risks associated with drone operations. Therefore, we analysed 256 documents we obtained while searching the Web of Science database for publications related to the keywords "drone" + "risk". This article aims to present the results of the bibliometric analysis of these documents and discuss the main research streams related to the topic of risk in drone applications. The main contributions of this article include the following:

- The results of the bibliometric analysis show contemporary publication trends related to the topic of risk in the application of drones.
- The proposed thematic classification for research areas related to drone application risk.
- Arrangement of publications related to drone application risks according to the proposed research classification.
- Identification of current research gaps in publications related to drone application risks.

The structure of this article is shown graphically in Figure 2.

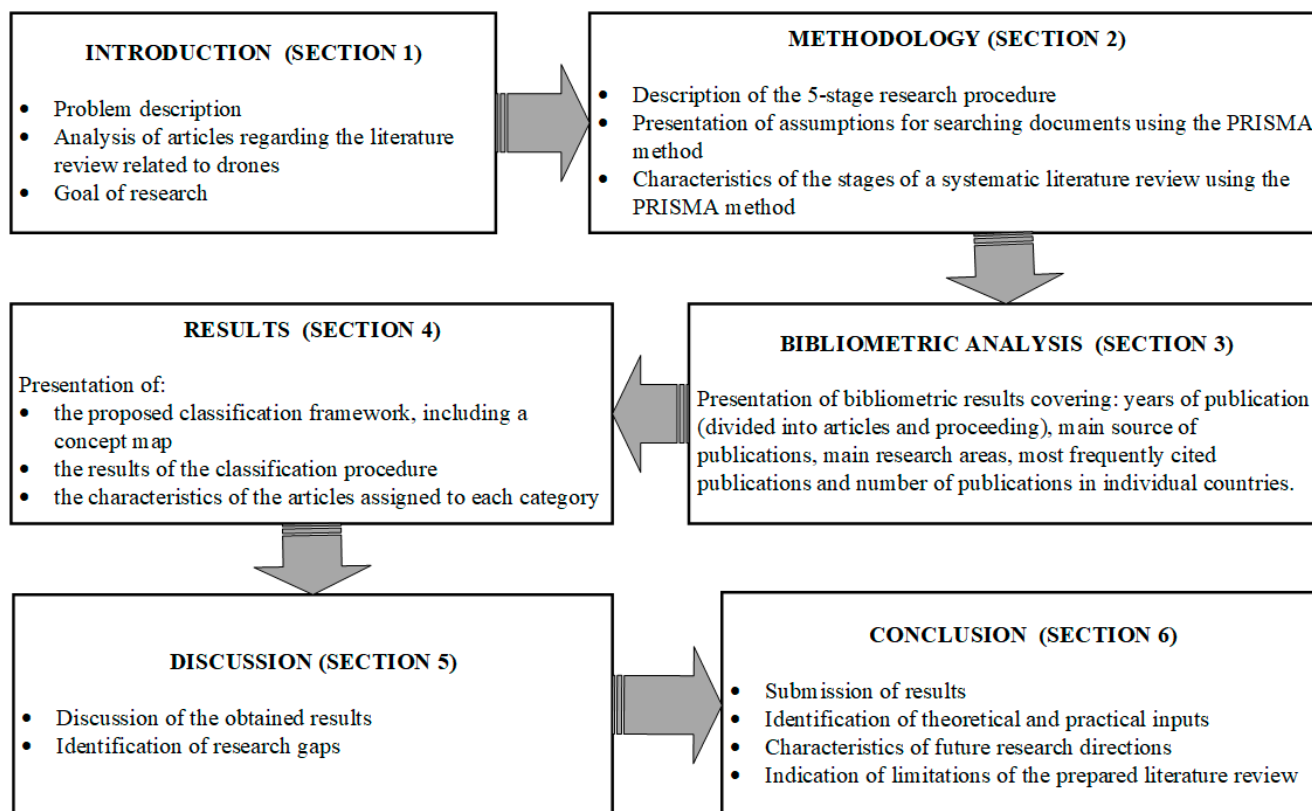


Figure 2. Article structure.

2. Methodology

2.1. Stages of the Research Procedure

Preparing a reliable literature review requires appropriate substantive preparation and adapting appropriate research methods to the planned work. This study was divided into five stages, according to the graphics shown in Figure 3.

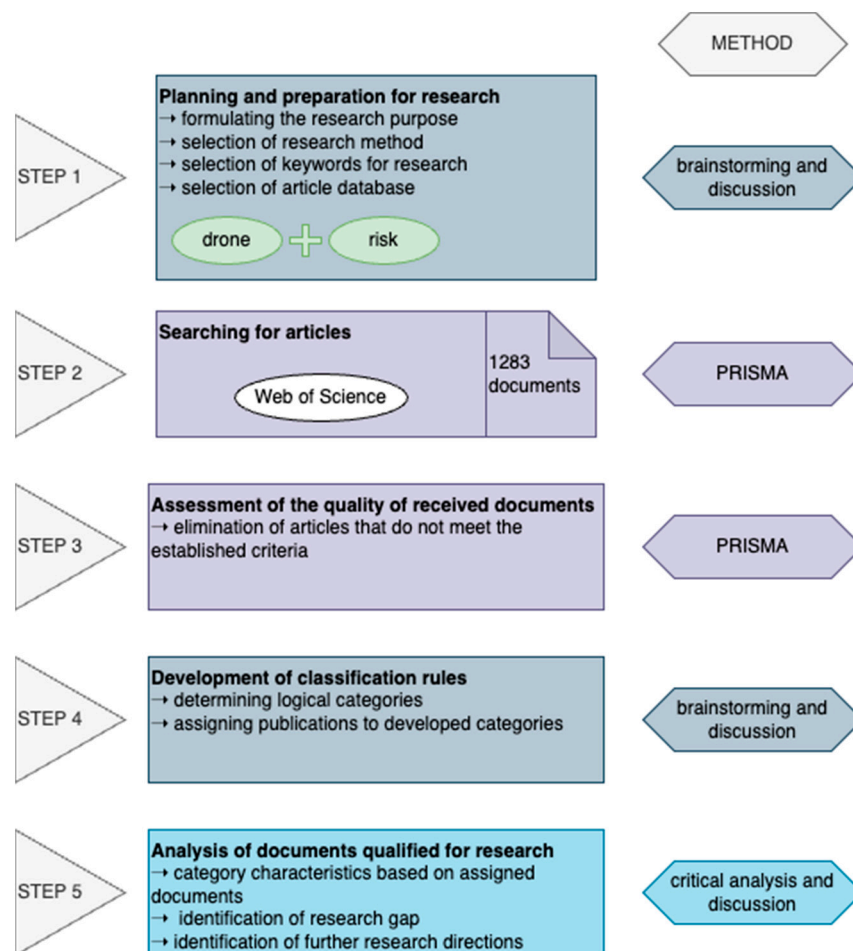


Figure 3. Methodology of research.

In the first stage, a discussion was held, which was preceded by a brainstorming session, allowing us to formulate the purpose of this study. Then, the method necessary to search and catalogue the documents was selected. The most extended discussion concerned the selection of keywords. The word “risk” was beyond doubt. However, the selection of the appropriate word to describe flying vehicles required a trial search of the database. A search using the abbreviation “UAV” returned fewer than 130 documents. The search using the keyword “drone” yielded over 1000 records, including all the documents from the first search. The database to be searched was the Web of Science Core Collection (WoS), which received a larger number of articles than the Scopus database.

In the second and third stages, the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) method was used to conduct a systematic review in accordance with the guidelines described by Moher et al. [36]. A detailed description of the procedure can be found in Section 2.2.

After selecting the documents, a brainstorming session was organised to determine logical categories. The following discussion allowed for the selection of seven categories: cybersecurity, drones as a source of risk, technology development related to the operation of drones, preventive activities against the risks associated with drones, monitoring, other applications of drones, and opinion surveys. Articles that did not fit into any of these main categories and were unique in their research area were assigned to the other category.

The documents qualified for review in stage three and assigned to categories were analysed in detail. This made it possible to confirm the articles belonging to categories and create descriptions based on them. In addition, a research gap was identified, determining future research directions on UAV topics.

2.2. PRISMA

The use of the PRISMA methodology requires the search to be carried out following the authors' recommendations. The search involves a four-phase flow (identification, screening, eligibility, and inclusion), and its results are schematically illustrated in Figure 4.

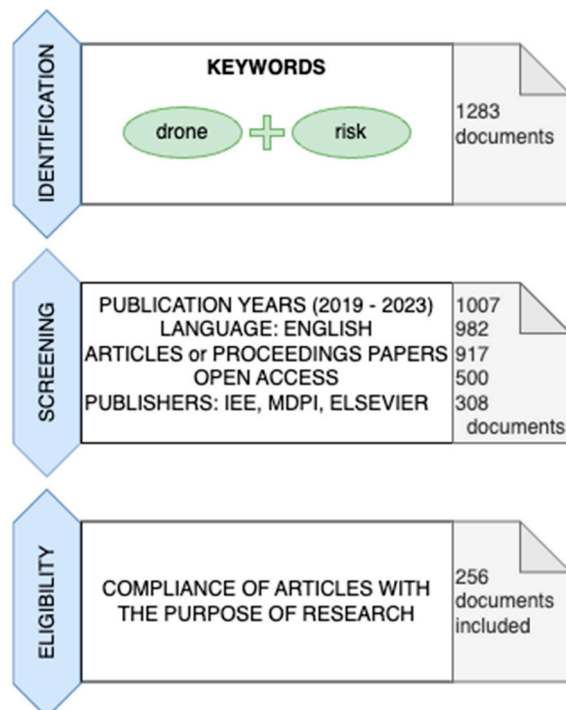


Figure 4. PRISMA—diagram of the systematic selection of literature.

As part of the identification, 1283 records were received from the WoS database. There were no duplicates in the search. All records were screened. The first limitation was the year of publication; documents published from 2019 to 23 November 2023 (the search date) were selected. Only documents published in English were selected. It is a language used by scientists worldwide, allowing them to share knowledge and discoveries. This study focuses on articles and proceedings papers available under open access. Both the choice of language and open access increase the availability of the results and enable people interested in the topic to access the source materials. At the very end of the screening process, articles published by three leading publishers in this area were selected: IEEE (Institute of Electrical and Electronics Engineers), MDPI, and Elsevier. The selection of the publishers mentioned above also guarantees the publications' high quality and relevance. Ultimately, 308 articles advanced to the next PRISMA stage.

Subsequently, it was checked whether the selected publications were compatible with the purpose of this study, specified at the beginning. In some articles, the drone appeared as an example of innovative technology that could be used in the described study, but no further description of this application was provided. UAVs often appeared as one of the tools used in Industry 4.0, most often in the abstract and in the introduction to an article whose main content was about topics unrelated to drones. A total of 256 documents were qualified for this study.

3. Bibliometric Analysis

Scientists from research centres around the world publish papers discussing the design and use of drones. However, there are leading countries in this field, such as the United States, China, and Great Britain. The map in Figure 5 shows the countries where the most publications on the researched topic occurred.

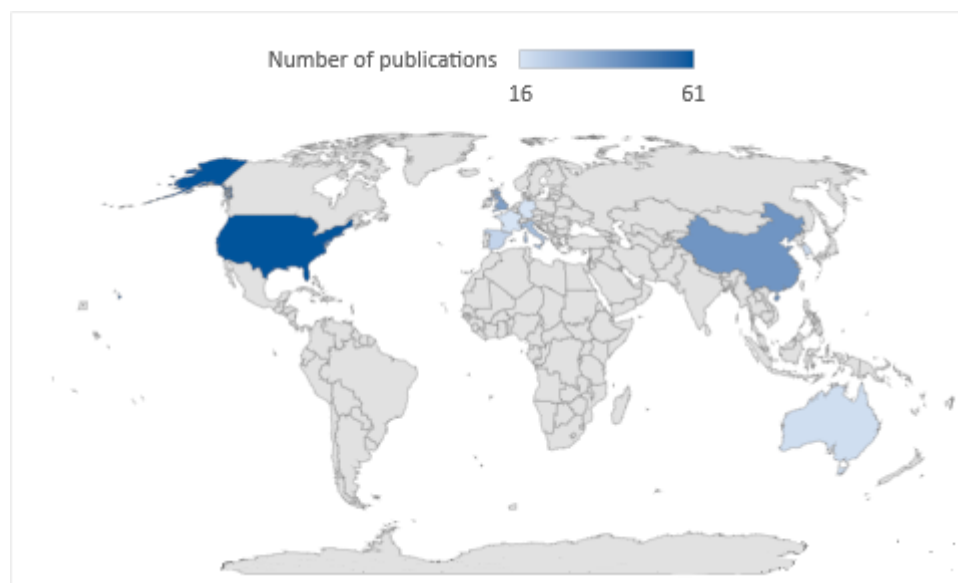


Figure 5. Countries leading in drone publishing.

The bibliometric analysis concerns 256 articles selected for this study. This allows the presentation of selected documents in a quantitative manner. Following the limitation that specifies the year of publication for the article, the number of published articles and conference materials distributed over the selected years was checked. The graph in Figure 6 shows that after 2020, there was a significant increase in publications regarding drones. This increase is due to the development of technology; the search was performed on 23 November 2023, so 2023 should culminate with several publications similar to those in 2022. Interestingly, during the COVID-19 crisis, drone potential was further harnessed, using the people-free nature of the technology to modify current service delivery to improve safety and capacity levels. This included the delivery of face masks to remote islands in Korea and prescription medicines from pharmacies to retirement villages in Florida. It could be argued that COVID-19 has increased technological advancement in many areas, and that perhaps drones represent a revolution in how we transport goods and potentially even ourselves (however, such an analysis is reserved for a future paper) [37]. Most of the documents on the analysed subject were published in the form of articles; proceedings papers constitute only 10%. This shows that drones are a widely researched topic but are not presented at conferences; it is possible that there are no conferences where drones are included as part of the subject.

The leading magazine publishing on drones was “Drones” by MDPI publishing house: 20% of publications. It is an international magazine focusing on the design and application of UAVs and the construction of their systems. The next five leading magazines on this topic are presented in Table 2. Unsurprisingly, these magazines focus on modern technologies and their application in a sustainable environment.

As part of the bibliographic analysis, the research areas to which publications about drones were assigned were checked. Table 3 shows a summary of this analysis. Some publications were assigned to two or more areas, so it is impossible to provide the percentage share of individual areas in the total number of documents analysed. Most publications are assigned to “engineering”, which is an obvious choice when analysing mechanical devices such as UAVs. The following areas concern research related to drone software, such as “remote sensing” and “computer science”. It is important that the most frequently selected areas include “Environmental Sciences & Ecology”. This shows how important it is to adapt drones to sustainable and ecological technology development principles.

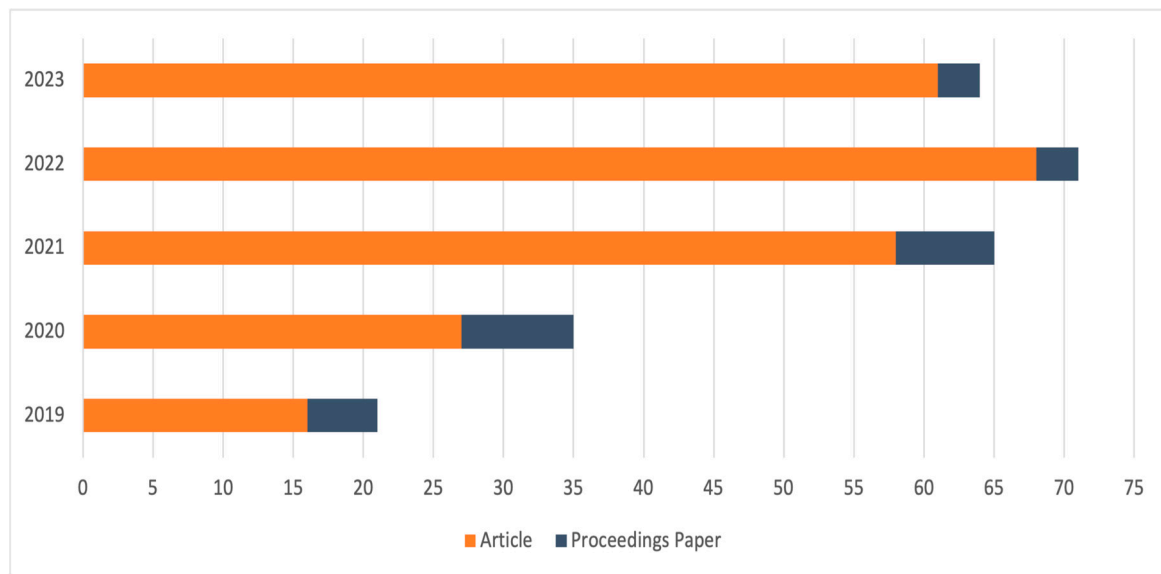


Figure 6. Years of publication and types of documents.

Table 2. Number of publications in primary sources.

Source Title	Number of Documents	%
Drones	52	20%
IEEE Access	20	8%
Sensors	19	7%
Applied Sciences-Basel	15	6%
Remote Sensing	14	5%
Sustainability	13	5%
Others	124	48%

Table 3. Number of publications in main research areas.

Research Area	Number of Documents
Engineering	107
Remote Sensing	69
Computer Science	47
Environmental Sciences and Ecology	44
Chemistry	35
Telecommunications	30
Instruments and Instrumentation	24
Physics	22
Science and Technology—Other Topics	22
Geology	17
Imaging Science and Photographic Technology	17
Materials Science	16
Robotics	10

UAVs are a current topic, which is confirmed by numerous citations of selected items. Table 4 shows the most frequently cited publications. The articles with the highest number

of citations were published in 2020 or 2021. The large number of citations accumulated over two or three years shows that these drone applications have numerous applications in both practice and research.

Table 4. The most frequently cited publications.

Authors, Document Title	Times Cited
Outay, F; Mengash, HA; Adnan, M Applications of unmanned aerial vehicle (UAV) in road safety, traffic, and highway infrastructure management: Recent advances and challenges [38]	116
Shen, Y; Guo, DJ; Long, F; Mateos, LA; Ding, HZ; Xiu, Z; Hellman, RB; King, A; Chen, SX; Zhang, CK; Tan, H Robots under COVID-19 pandemic: A comprehensive survey [39]	93
Shamsoshoara, A; Afghah, F; Razi, A; Zheng, L; Fulé, PZ; Blasch, E Aerial imagery pile burn detection using deep learning: The FLAME dataset [40]	71
Wang, J; Liu, YX; Song, HB Counter-unmanned aircraft system(s) (C-UAS): State-of-the-art, challenges, and future trends [41]	71
Shayea, I; Ergen, M; Azmi, MH; Çolak, SA; Nordin, R; Daradkeh, YI Key challenges, drivers and solutions for mobility management in 5G networks: A survey [42]	70
Annis, A; Nardi, F; Petroselli, A; Apollonio, C; Arcangeletti, E; Tauro, F; Belli, C; Bianconi, R; Grimaldi, S UAV-DEMs for small-scale flood hazard mapping [43]	64
Tarolli, P; Straffelini, E Agriculture in hilly and mountainous landscapes: Threats, monitoring and sustainable management [44]	59

Publications about drones appear worldwide; their number and citations clearly show that this is a promising area of research.

4. Results

The preliminary analysis identified eight basic categories (with two categories also distinguished by subcategories) that illustrate current research trends on drone risks. The proposed thematic groups are shown in Figure 7, while Table 5 presents the results of the classification procedure carried out for the analysed set of documents.

Table 5. Results of the classification of documents according to the adopted thematic groups.

Basic Category	Subcategories	Eligible Publications
Monitoring	Agriculture	[45–51]
	Natural disasters	[40,43,52–59]
	Landscape	[44,60–70]
	People	[71,72]
	Animals and birds	[73–76]
	Plants	[77–82]
	Insects	[83–85]
	Vehicle traffic	[38,86–92]
	Water environment	[93–103]
	Infrastructure	[104–108]
	Emission of pollution	[109–116]
	Landslides	[117–125]
	Inspection	[38,126–136]
	Other	[137–142]
Other applications of drones	Rapid response operations	[39,113,143–164]
	Transport	[143–150,152,153,160,165–176]
	Other applications	[42,177–187]

Table 5. Cont.

Basic Category	Subcategories	Eligible Publications
Technology development related to the operation of drones		[67,94,143,152,154,156,162,163,188–222]
Drones as a source of risk		[223–238]
Cybersecurity		[239–250]
Preventive activities against the risks associated with drones		[41,251–281]
Opinion survey		[160,165,167,168,170,171,282–286]
Other		[287–293]

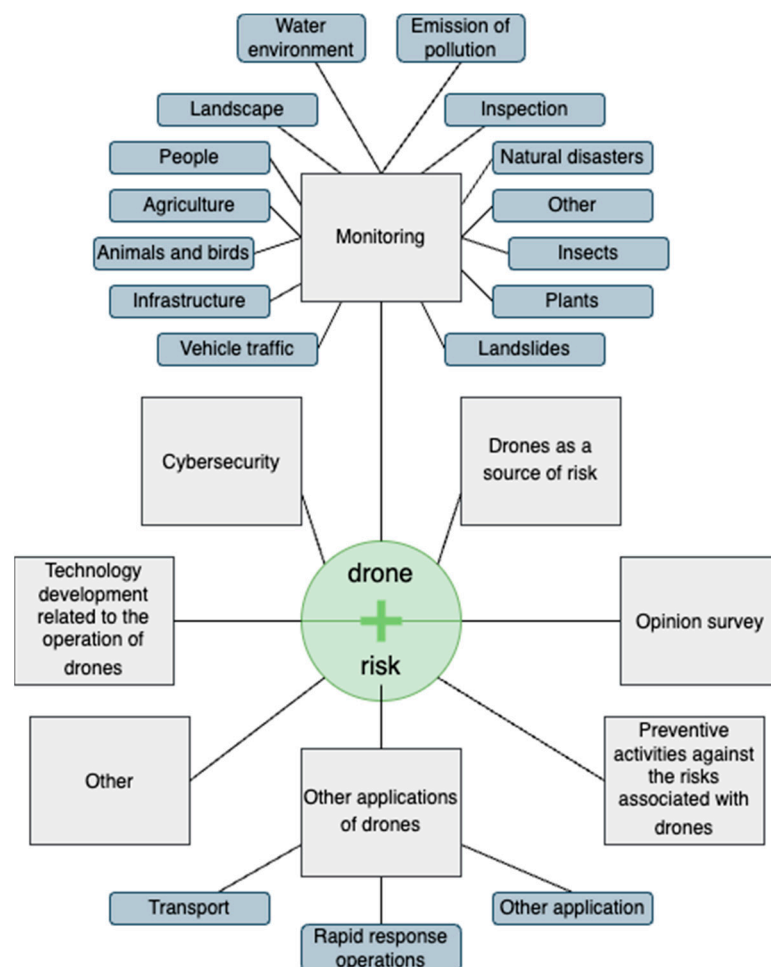


Figure 7. Map of the research categories.

Each research category is characterised below.

4.1. Monitoring—102 Documents

The most popular topic in the analysed set of publications is research on the use of drones in monitoring specific phenomena. As many as 102 documents were classified in this group. The research characteristics, as described in these publications, are presented in Table 6 due to the size of this group. It is also worth noting that a detailed analysis of publications in this area made it possible to distinguish research subcategories for this set.

Table 6. Characteristics of research areas in publications classified under the “Monitoring” group.

Research Subcategory	Research Area	Publications
Agriculture	Monitoring farmland for decision-making purposes	Cranberries [45] Grass seed [46] Wheat [47]
	Monitoring meteorological variables (temperature, humidity)	Identification of irrigation needs [48] Variables affecting the nutritional value of rice [49]
	Assessment of field damage caused by animals	[43]
	Increasing productivity and food safety	[51]
Natural disasters	Identifying areas at risk and monitoring the occurrence and spread of flood	[43,52–56]
	Identifying areas at risk and monitoring the occurrence and spread of fire	[51–53]
	Monitoring the generation of destructive primary lahars responsible for the volcanic eruption	[59]
Landscape	Monitoring the factors responsible for coastal changes	[62]
	Morphological and topographical changes in coastal areas	[60,61,70]
	Monitoring of permafrost	[63]
	Monitoring and 3D modelling of endangered areas	[64,65]
	Gathering spatial information about the landscape	[66]
	Distribution of magnetic minerals in the subsurface	[69]
	Decision support for ecosystem interventions	[44]
People	Detection of hazardous obstacles in unstructured terrain environments	[68]
	Monitoring of sports events	[71]
	Moving people exposed to radiation	[72]
Animals and birds	Detecting bird droppings	[73,74]
	Conducting a census of a selected animal or bird species	[75,76]
Plants	Surveying the vegetation of a selected area	[77–79]
	Assessing the state of vegetation destruction in a selected area	[80,81]
	Determination of understory composition	[82]
Insects	Monitoring of insects inhabiting wetlands	[85]
	Identification of breeding sites of virus-spreading insects	[83,84]
Vehicle traffic	Monitoring marine traffic of ships	[92]
	Measurement of speed and behaviour of car drivers, monitoring of traffic volume	[38,86–89,91]
	Monitoring the driving and dangerous behaviour of cyclists	[90]
Water environment	Sampling and testing of waters	[93–96]
	Studying the behaviour of sea creatures	[97]
	Ocean observation to model tropical cyclones	[98]
	Monitoring for shark warnings	[99]
	Mapping the distribution of vegetation that provides habitat for sea creatures	[100]
	Monitoring reefs and factors affecting seaweed growth	[101]
	Monitoring critical phenomena to support the management of aquaculture farms	[102]
Infrastructure	Spatial modelling of salt marshes	[103]
	Three-dimensional mapping of selected infrastructure facilities	[106]
	Condition monitoring of transmission networks	[104,105]
	Assessment of the thermal quality of buildings	[107]
	Identification of traces of historical objects	[108]

Table 6. Cont.

Research Subcategory	Research Area	Publications
Emission of pollution	Emission of selected chemical compounds during forest burning	[109]
	Monitoring of air pollution in a selected area	[115,116]
	Measurement of radiological contamination, monitoring of radiation distribution	[110,111]
	Identification of areas where diffuse pollution from agriculture occurs	[112]
	Dispersion of volatile chemicals	[113]
	Mapping of soil contamination	[114]
Landslides	Survey of open pit mine slopes	[122]
	Creating landslide maps for risk assessment	[117–121]
	Monitoring of landslides of rubble and rocks	[123,124]
	Detecting cracks in retaining walls	[125]
Inspection	Conducting inspections of unburied land pipelines	[127]
	Identifying corrosion in industrial structures such as telecommunications towers and wind farms	[129,130]
	Conducting inspections of safety-critical infrastructure	[131]
	Tracking construction progress	[132,133]
	Inspecting terrain for unexploded ordnance and landmines	[134,135]
	Inspecting bridge and road infrastructure	[38,136]
Other	Detection of asbestos roof slates	[137]
	Investigation of orphaned wells	[138]
	Snowpack depth, density, and stratigraphy study	[139]
	Land management	[140]
	Improvement of terrestrial wireless cellular networks	[141]
	Fracture distribution and orientation in outcrops	[142]

The analysis of the above publications made it possible to conclude that in the process of monitoring, the use of drones serves as a supplement to the measurement for the field surveys carried out (the field surveys are carried out first and then supplemented with data from the drone) or as a system reporting the need for additional research (identifying a specific phenomenon that requires additional research). The authors of the publication point out in their research the benefits of drone use, such as:

- The ability to conduct territorial surveys over a larger area in a shorter time.
- Lower costs of conducted surveys in the field.
- Increased safety of performed surveys in dangerous and difficult-to-access areas.
- The ability to obtain real-time images and immediately analyse them for decision-making.

It is also worth noting that drones are often used only as tools to take pictures/measurements. Then, the data they collect are analysed based on machine learning algorithms or artificial intelligence. Therefore, many publications in this group refer to combined autonomous data collection and analysis systems based on drones and AI. Of particular relevance is the use of such solutions for monitoring natural disasters in progress, such as fire [51–53] and flooding [43,52–56], in which the decisions made can save lives. The second combination often found in publications about drones used for monitoring is the combination of drones with laser scanner technology (LiDAR) for surveying. An analysis of the publications shows that maps created from data collected by drones are based either on images taken with cameras of various types or on scans derived from LiDAR.

Drone monitoring is also used very often to conduct inspections. Due to the efficiency of performing tasks with reduced turnaround time, the ability to add to places that are difficult for humans to access, and the lack of contraindications to work in harsh conditions, drones are increasingly being used as a tool for performing various types of

inspections [126]. Examples of such publications relating directly to inspection processes based on drone-based monitoring are as follows:

- Conducting inspections of unburied land pipelines [127];
- Identifying corrosion in industrial structures such as telecommunications towers [128] and wind farms [129,130];
- Conducting inspections of safety-critical infrastructure [131];
- Tracking construction progress [132,133];
- Inspecting terrain for unexploded ordnance [134] and landmines [135];
- Inspecting bridge and road infrastructure [38,136].

4.2. Other Applications of Drones—48 Documents

Monitoring is the main area of non-military application of drones. However, researchers and industry are constantly looking for new areas where the potential of autonomous aerial systems can be exploited. Drones are increasingly used in rapid response operations, where response time is critical to determining success. As indicated in the introduction, more and more logistics operators and online retailers are interested in using drones to deliver business and individual shipments to consumers [3].

4.2.1. Rapid Response Operations

Construction, ease of implementation, efficiency, safety, effectiveness, and the ability to transport items or collect data cause drones to be considered a promising technology for search and rescue missions [143–150], support for ground transport in dire situations [151–153], or disaster respond and recovery [143,144,146,154–156]. Drones can be used for the following purposes:

- Detection of chemical substances [155];
- Disaster victim identification [150];
- Firefighting operations [157,158];
- Transport of medical products [151,159,160];
- Restoring radio communication [149];
- Support for police patrols [161];
- Responding to the gestures of a person participating in a response mission [162];
- Surveillance in areas with diverse radiation levels [163];
- Detecting anomalies in pollution [113].

Drones have been adapted to the needs created by the COVID-19 pandemic [39], which shows the multitude of possible applications and the flexibility in adapting drones to the emerging or changing needs of the user. During COVID-19, drones were used, among others, for transporting medical supplies, facilitating contactless deliveries, or disinfecting large surfaces [164]. Another example is the system described in [151], which could be refined and used for monitoring elderly patients and delivering medical supplies to them as soon as possible.

4.2.2. Transport

The use of UAVs to transport materials is marked by advantages such as reduced costs, increased safety, and increased efficiency [166,174,176]; however, not everything can be transported this way. Researchers are exploring the possibilities of using UAVs for transportation while noting their limitations. Drones make it possible to transport goods from point A to point B in a delivery service [165–168]. It is also possible to transport medical goods or blood, in compliance with existing regulations [152,153,160,169–172]. There are many opportunities for commercial use of drones; an overview using Australia as an example can be found in [173]. Using drones to transport and spread materials is also possible in other fields, such as in agriculture [174] or construction [175].

4.2.3. Other Applications

As noted in the introduction, drones are currently used for military [177,178] and non-military missions. The scope of their use is increasing every year, so there are publications in the literature on newer and newer drone applications in areas such as:

- Warehouse operations support [179,180];
- Education [181];
- Mobile communications [42,182].

Some studies on the use of drones describe very interesting, although infrequent, situations such as:

- Fighting mosquitoes [183] or desert locusts [184];
- Exploration of other planets, such as Mars [185];
- Rehabilitation of birds of prey [186];
- Herding wild horses into pens [187].

4.3. Technology Development Related to the Operation of Drones—43 Documents

Research on UAVs concerns possible applications and the technology necessary for their proper functioning. An overview of key technologies enabling the development of systems using drones is described in [203]. While [152] describes the technological or regulatory challenges for UAVs, in [204,222], attention is drawn to the legal-political, socio-legal approach and the implementation of regulations, highlighting the measures that should be taken before making a given technology available to the public. Some of the important areas are planning paths, avoiding obstacles, and navigation [143,154,156,188–202]. The aspects mentioned above have a significant impact on the operational safety of the drone. The increase in safety may also result from changes in the design [205,206], appropriate risk analysis tailored to the purpose of the drone [163,188,189,202,207,208], and the detection of unexpected behaviours and abnormal situations during the operation of the drone [209–213]. Just as important as the drone's flight is its landing. Researchers pay attention to automatic landing [67,214,215] on horizontal surfaces, with the possibility of climbing [216]. Researchers also share developed solutions in the design, construction, and testing of a drone in the form of open source [94], describe the process of designing a drone [217], or develop a drone network [218,219]. In articles, there are also proposals for human–drone interaction using gestures [162], drone communication systems [220], or MNIST character recognition and visual odometry [221].

The use of the mentioned technologies in drones is possible thanks to the use of the following:

- Deep learning [214];
- Decentralised learning [220];
- Reinforcement learning [202];
- Imitation learning [197];
- Simulation [188,189].

4.4. Drones as a Source of Risk—16 Documents

Most publications describing non-military drone applications focus their attention primarily on the benefits of introducing drones into ongoing operations. However, many researchers emphasise that drones, while bringing numerous benefits and new opportunities in many fields, can also pose various risks [223]. One of the most common risks is the risk of drone–human collisions [224] or drone–other-machine collisions [225]. In particular, moving amateur drones can lead to serious safety hazards, risks to human life or health, and damage to infrastructure [226].

Publications on potential collisions are characterised in Table 7

Table 7. Publications regarding collisions of drones with other objects.

Source of Risk	Characteristics	Publication
Damage to the drone	Engine damage affects flight safety, the surroundings, and the drone's functionality. There is a possibility of an unplanned impact on the ground.	[227]
Performing missions in a space shared with people and other objects	The possibility of collisions due to changes in the drone's flight path is caused by difficult weather conditions, in a construction environment where people and machines work among many permanent and temporary structures. Urban areas where the terrain is diverse and there is a high population density.	[228] [229,230]
Performing missions near the airport	Risk of collision with other flying objects.	[225,231,232]

Because drones are used to monitor animals and birds, much research has been done on how these creatures react to drones and how these devices may affect certain animal species. Thus, the papers analysed identify publications in which drones are a source of risk to the animals and birds under study:

- The study of how seagulls react to drones [233];
- The study of how 16 bird species react to drone interference in their environment [234];
- The study of the behavioural responses to drones of bison and horses [235];
- The impact of drones on birds [236].

Drones can be a source of noise and visual pollution and are also the subject of ongoing research [237]. In addition, their high vulnerability to weather conditions is also a subject of assessed risk. An example is the research of [29], which analyses the effect of the type of nozzle used (nozzles) on the wind drift rate of a drone when spraying fields.

4.5. Cybersecurity—12 Documents

Drones can pose a threat if they are used in an inappropriate or undesirable manner, such as for terrorist attacks. Because they are autonomous devices, the issue of cyber security, therefore, becomes a critical research aspect. Cyberattacks threaten both small, commercial drones used for daily activities [242,243] and drone networks [239–241]. Indeed, vulnerabilities in security systems can be exploited by third parties to launch an attack [244]. Cyberattacks can also include GPS forgery, which can be prevented by blockchain technology [245].

Because of the issue's importance, many researchers are working on systems to protect drones from cyberattacks and data leakage. Such solutions include:

- The privacy-protecting scheme [246];
- The intrusion detection system that monitors network traffic and detects any suspicious or malicious activity [247,248];
- The Internet of Drones identity authentication protocol that provides forward and backward security and resists impersonation attacks [249].

Jahan et al. also proposed an interesting scheme for modelling attacks on autonomous systems. It can be used to analyse the strategy used in drone attacks, which will help better protect drones from potential cyberattacks [250].

4.6. Preventive Activities against the Risks Associated with Drones—32 Documents

Because drones are increasingly likely to be a source of occurring risks, a group of publications has also been identified on implementing solutions to mitigate various risks associated with UAV systems. An important aspect of risk mitigation is the early detection of a drone. Detecting drones is becoming increasingly important in the context of public safety, especially concerning the potential risks associated with their illegal use. Detecting drones in surveillance footage is challenging due to their small size, low contrast, and bird similarity. To solve this problem, researchers propose using the following drone detection techniques:

- Deep machine learning [251,252];
- Deep convolutional neural network (DC-CNN) (DC-CNN) [253];
- Spatiotemporal information and optical flow [254];
- Radio frequency (RF) [255–257];
- Sensors that measure the sound emitted by the UAV [258];
- The transformer network [259];
- The “fisheye” camera system [260].

Due to the potential collisions in shared airspace, there is a lot of research on increasing air traffic control and managing this traffic in terms of integrating UAVs into urban airspace [261–263].

To minimise risks, many researchers are working not only on drone detection systems but also on other types of countermeasures, solutions, and systems to increase the safety of their operations [41,264,265]. These include, for example:

- Solutions to detect the harmful status of a drone [266];
- Risk analysis models [267];
- Systems for collision avoidance [268–274];
- Systems to prevent UAVs from entering controlled airspace, such as power plants, airports, and military facilities [275].

The European framework defines a set of services and procedures developed as a management system that will enable the organisation of UAS operations and provide users with safe and efficient access to airspace [281].

Procedures for analysing the causes of accidents are also of particular importance. For this reason, Silalahi et al. [276] proposed using log message data to discover and extract some incident-related information using a deep learning-based NLP technique to analyse drone incidents.

The skills of drone controllers are also becoming a critical issue. An essential aspect in this case is the provision of appropriate training equipment that prepares users for the rational and safe use of unmanned aircraft. Examples of such equipment include a device that allows drone control in a virtual environment [277] and a system for inspecting and evaluating drone pilot trainees [278].

Because the source of risk may be not only the drone itself but also its operator, some researchers are conducting studies aimed at investigating who commercial drone users are and what their characteristics entail [279]. Also noteworthy is research into the behaviour of drone users and the methods and techniques they use to reduce the risks involved in drone use, as well as their compliance with airspace requirements and their ability to read visual navigation charts (VNCs) and use AirShare (a local tool that shows airspace requirements) [280].

4.7. Opinion Survey—11 Documents

Equipping UAVs with the latest and greatest technology will prove to be a fruitless exercise if potential drone users do not decide to use them. There are doubts in society about the use of drones, so it is important to follow ethical principles when designing drones [284]. User preferences regarding the design and possibilities of using drones were

surveyed, and people indicated that drone technology could be used in many outdoor, military, or special missions [285].

It was also checked how people view the following:

- The use of drones as a delivery service [165,167,168,282,283] in medicine [171];
- The use of drones to conduct rescue operations on the beach [286];
- Possible changes in the formation of behavioural intentions of potential users [282];
- Factors that influence a change in the perception of drones [167,168].

Drone users are not only people who choose this parcel delivery method, but also health care workers, and their doubts and opinions must be considered when designing a UAV system for medical use [160,170].

4.8. Other—7 Documents

The analyses made it impossible to classify the six documents into any highlighted thematic groups. For this reason, they have been collected in an additional category under the heading “Other”. This includes publications on the following issues:

- Adapting drones for unrestricted and safe indoor use [287];
- The safety of racing drones [288];
- The use of ultrasonic sensors in autonomous devices [289];
- The dangers associated with filming VLOS flights, which arise from the need for the pilot to manage variable supervision at two levels, i.e., filming and flying [290];
- Legal and organisational norms and regulations for the operation and use of drones in various areas [291,293];
- Aspects related to the operation and use of drones [292].

5. Discussion

The development of Industry 4.0 and the progressive development of technological UAV systems make it possible to observe a significant increase in the scope of drone applications in non-military areas. This is confirmed both by the growing number of publications on the operation of UAV systems and by the growing number of literature studies related to this research. The results presented in this article represent only a fragment of this research area, which has been consciously limited to issues related to the risks of drone use.

5.1. Analysis of the Obtained Results

The analysis of 257 publications enabled the identification and characterisation of eight basic research trends concerning contemporary research in drone application risks. The results of the literature studies indicate that the largest group comprises publications on the application of drones in monitoring certain phenomena or objects, as well as in the processes of transport service and rapid response organisations. This is also confirmed by the data presented in Table 1, according to which the largest group of published literature reviews focuses precisely on the application of drone use in various areas. What should be noted is that none of the drone application publications analysed featured studies on the risks of drone use in military areas. This is, in all likelihood, because most of the results of such studies are confidential due to their critical importance to the military. Therefore, the applied nature of drone risk research focuses primarily on non-military solutions.

The research areas highlighted are not equally numerous. Due to the predominant publications on drone application in this area, two research trends are distinguished:

1. Monitoring (Section 4.1) is the main area of research related to the risks of using UAV systems. Due to the size of this group, we divided it, according to the most popular areas of drone application, into 14 subcategories.
2. Other applications (Section 4.2), where two leading trends can already be distinguished, regarding using drones in transportation and as support in rapid response

organisations. This group has the potential for further development as the functionality offered by modern UAV systems expands.

The remaining research categories are far less numerous. Nonetheless, the risk of digital attacks (Section 4.5) was separated from the other risk analyses, in which drones are a source of potential adverse events (Section 4.4). This action was deliberate, as the concept concerning cyber security is now an important research trend, which has its own already defined characteristics and is the subject of separate analyses. In the case of UAV systems, research in this area is particularly important due to the often-autonomous nature of the missions carried out by drones and the high risk of their acquisition by third parties. Therefore, the research described in Section 4.6, which aims to develop solutions and methods to improve the safety of drone use, not only by professionals but also by amateurs, becomes critical. Notably, the latter group of users is a potential source of risk associated with improper drone use, which can cause the occurrence of adverse events. Finally, it is also worth noting that the intensive development of technology related to UAV systems raises more and more societal emotions, including negative emotions such as fear, resistance to deployment, and a sense of discomfort. For this reason, when researching the risks of drone use, one cannot ignore the aspects of public opinion polls on issues related to the sharing of public space or drone use itself. Therefore, the last of the research trends highlighted is the group on public opinion polling (Section 4.7).

Referring to the biometric analysis presented is also necessary when discussing the results obtained. First, the intensive increase in papers published after 2020 is noteworthy. This shows the growing importance of this topic in the last three years, which will continue to develop due to, among other things, observed technological progress and the increasing use of drones in non-military areas of human activity (both industrial and research). The second important point is the strong dominance of publications by researchers from the United States. In second place is China, indicating that significant powers are also investing more and more in non-military use of UAV systems. The low share of publications coming from individual European countries may be worrying. However, when the total number of publications from all countries belonging to the European Union is added up, the result improves significantly. The citation rates of the analysed papers are also evidence of the growing importance of drone research topics. The highlighted publications in the citation analysis have achieved high recognition (number of citations above 50) in the last 2–3 years. This indicates not only the high quality of the results presented but also the popularity of the subject matter covered in them.

5.2. Identification of the Research Gap

Although the keywords “drone” and “risk” were used to search for publications for the area under study, it should be noted that risk as an object of study appeared in only a handful of documents. In addition, risks appearing in the text of publications did not refer to a drone performing a mission but to issues related to the phenomenon under study. For this reason, all publications were reanalysed to determine the role played by the drone in the research described. In this way, the authors wanted to confirm the initially identified research gap. The results made it possible to conclude that in only 19 publications out of the 257 documents analysed, the UAV system was the subject of ongoing research. In all of the remaining 238 publications, the drone was merely a tool for conducting research. These highlighted 19 papers were primarily concerned with research in the “Cyber Security” and “Drones as a source of risk” groups. These results indicate that there is currently a lack of research focusing on aspects of risk directly related to drone operations.

In addition, in the highlighted group of 19 publications relating to the risks of drone use, only two articles dealt with the risk assessment method itself. The drone risk assessment process, which includes identifying adverse events and analysing the risk of their occurrence, should consider the specific conditions of drone operation, including the environment in which they operate, the scope of the tasks performed, and the functionality set. Research on this topic could not be identified among the documents analysed. Thus,

this area represents a significant research gap that needs to be filled due to the critical nature of this issue from the point of view of further technological development and the scope of drone applications.

The research gaps regarding the risks associated with the areas where drones are used are also worth noting. From the documents analysed, few publications have addressed the risks of drone use in internal logistics operations. Meanwhile, published literature reviews (e.g., [7,179]) indicate that this topic is the subject of numerous studies conducted in this area. Risk assessment models for the use of drones in confined spaces, as well as for internal deliveries feeding production lines and beyond, will become increasingly important with, among other things, the observed steady development of the Logistics 4.0 concept, within which drones are one of the critical cyber-physical systems supporting material flows in the supply chain.

6. Conclusions

The increasing scope of use and types of equipment of modern drones make the topics related to the risks of their operation significant from the point of view of safety and the potential and quality of research they can facilitate. Therefore, the research topics addressed in this article are critical from the point of view of further development of this technology and its application in military and non-military conditions. The results presented in this article provide interesting research material for both the industry and academia. Industry representatives can learn about the broad possibilities of drone application in monitoring processes, the technological changes taking place in this area, as well as the risks associated with the operation of the UAV system. The solutions described in Section 4.6 will recognise the latest developments in methods, techniques, and tools to mitigate these risks. On the other hand, representatives of the scientific community can get acquainted with current research trends related to the risks of drone use in industry and also in scientific research. The described research results of the last five years, especially the identified research gaps, can inspire them to develop their research areas and explore applied methods and tools.

The identified research gap in Section 5.2 also provides a starting point for further research for the authors. Therefore, further research directions will focus on developing risk assessment methods that will consider the specific conditions of drone operation and the purpose of the mission. The second important direction of our further research will be analysing the risks associated with using drones in internal logistics, particularly concerning anthropotechnical systems.

The research conducted is comprehensive in nature. A prestigious journal database—Web of Science—which publishes documents that meet the requirements of the JCR list, was used to search for documents. This ensured the high quality of publications accepted for analysis. Of course, the use of only one journal database and the restriction of documents to publications from only three leading publishers can be considered a limitation of the conducted research. However, such measures were taken consciously, and the results obtained were subject to additional verification. First, an additional search was conducted in the Scopus database per the adopted search model. In most cases, the results overlapped with those obtained from the Web of Science database. Additional publications not included in the database were mostly conference proceedings, which are published in publications that do not have IF points. Thus, they do not have the required scientific impact, the inclusion of which is critical to the formulated conclusions of this research. The second restriction of including publications from the three leading publishing houses was also further verified. After the analysis of the articles selected for this study was completed, publications from two more publishers, Springer Nature and Wiley, were also verified. Both publishing houses published about 30 papers related to the subject matter under study during the analysed period and ranked fourth and fifth on the list of publishing houses publishing this subject matter. The subject matter of the publications from these publishing houses was compared with the proposed classification, and it was found that the subject matter covered was in complete agreement. This means that including these publications in this

article would not have had a substantive impact on the identified research trends in the proposed classification framework, but it would have only increased the cited article base. None of these papers included publications that addressed the identified research gap satisfactorily. Therefore, the restrictions introduced can be considered reasonable.

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References

- Hodgkinson, D.; Johnston, R. *Aviation Law and Drones: Unmanned Aircraft and the Future of Aviation*; Routledge: Oxfordshire, UK; New York, NY, USA, 2018.
- Macrina, G.; Di Puglia Pugliese, L.; Guerriero, F.; Laporte, G. Drone-Aided Routing: A Literature Review. *Transp. Res. Part C Emerg. Technol.* **2020**, *120*, 102762. [\[CrossRef\]](#)
- Yoo, W.; Yu, E.; Jung, J. Drone Delivery: Factors Affecting the Public's Attitude and Intention to Adopt. *Telemat. Inform.* **2018**, *35*, 1687–1700. [\[CrossRef\]](#)
- Singhal, G.; Bansod, B.; Mathew, L. Unmanned Aerial Vehicle Classification, Applications and Challenges: A Review. *Preprints* **2018**, 2018110601. [\[CrossRef\]](#)
- Hassanalian, M.; Abdelkefi, A. Classifications, Applications, and Design Challenges of Drones: A Review. *Prog. Aerosp. Sci.* **2017**, *91*, 99–131. [\[CrossRef\]](#)
- Shahmoradi, J.; Talebi, E.; Roghanchi, P.; Hassanalian, M. A Comprehensive Review of Applications of Drone Technology in the Mining Industry. *Drones* **2020**, *4*, 34. [\[CrossRef\]](#)
- Moshref-Javadi, M.; Winkenbach, M. Applications and Research Avenues for Drone-Based Models in Logistics: A Classification and Review. *Expert. Syst. Appl.* **2021**, *177*, 114854. [\[CrossRef\]](#)
- Garg, V.; Niranjana, S.; Prybutok, V.; Pohlen, T.; Gligor, D. Drones in Last-Mile Delivery: A Systematic Review on Efficiency, Accessibility, and Sustainability. *Transp. Res. D Transp. Environ.* **2023**, *123*, 103831. [\[CrossRef\]](#)
- Eskandaripour, H.; Boldsai Khan, E. Last-Mile Drone Delivery: Past, Present, and Future. *Drones* **2023**, *7*, 77. [\[CrossRef\]](#)
- Gohari, A.; Ahmad, A.B.; Rahim, R.B.A.; Supa'at, A.S.M.; Abd Razak, S.; Gismalla, M.S.M. Involvement of Surveillance Drones in Smart Cities: A Systematic Review. *IEEE Access* **2022**, *10*, 56611–56628. [\[CrossRef\]](#)
- Bisio, I.; Garibotto, C.; Haleem, H.; Lavagetto, F.; Sciarrone, A. A Systematic Review of Drone Based Road Traffic Monitoring System. *IEEE Access* **2022**, *10*, 101537–101555. [\[CrossRef\]](#)
- Gohari, A.; Ahmad, A.B.; Rahim, R.B.A.; Elamin, N.I.M.; Gismalla, M.S.M.; Oluwatosin, O.O.; Hasan, R.; Latip, A.S.A.; Lawal, A. Drones for Road Accident Management: A Systematic Review. *IEEE Access* **2023**, *11*, 109247–109256. [\[CrossRef\]](#)
- Raoult, V.; Colefax, A.P.; Allan, B.M.; Cagnazzi, D.; Castelblanco-Martínez, N.; Ierodiaconou, D.; Johnston, D.W.; Landeo-Yauri, S.; Lyons, M.; Pirotta, V.; et al. Operational Protocols for the Use of Drones in Marine Animal Research. *Drones* **2020**, *4*, 64. [\[CrossRef\]](#)
- Butcher, P.; Colefax, A.; Gorkin, R.; Kajiura, S.; López, N.; Mourier, J.; Purcell, C.; Skomal, G.; Tucker, J.; Walsh, A.; et al. The Drone Revolution of Shark Science: A Review. *Drones* **2021**, *5*, 8. [\[CrossRef\]](#)
- Poljak, M.; Šterbenc, A. Use of Drones in Clinical Microbiology and Infectious Diseases: Current Status, Challenges and Barriers. *Clin. Microbiol. Infect.* **2020**, *26*, 425–430. [\[CrossRef\]](#) [\[PubMed\]](#)
- Hiebert, B.; Nouvet, E.; Jeyabalan, V.; Donelle, L. The Application of Drones in Healthcare and Health-Related Services in North America: A Scoping Review. *Drones* **2020**, *4*, 30. [\[CrossRef\]](#)
- Rosser, J.C.; Vignesh, V.; Terwilliger, B.A.; Parker, B.C. Surgical and Medical Applications of Drones: A Comprehensive Review. *J. Soc. Laparoendosc. Surg.* **2018**, *22*, e2018.00018. [\[CrossRef\]](#) [\[PubMed\]](#)
- Sevilla-Sevilla, C.; Mendieta-Aragón, A.; Ruiz-Gómez, L.M. Drones in Hospitality and Tourism: A Literature Review and Research Agenda. *Tour. Rev.* **2023**, *79*, 378–391. [\[CrossRef\]](#)
- Rejeb, A.; Abdollahi, A.; Rejeb, K.; Treiblmaier, H. Drones in Agriculture: A Review and Bibliometric Analysis. *Comput. Electron. Agric.* **2022**, *198*, 107017. [\[CrossRef\]](#)
- Zailani, M.A.H.; Sabudin, R.Z.A.R.; Rahman, R.A.; Saiboon, I.M.; Ismail, A.; Mahdy, Z.A. Drone for Medical Products Transportation in Maternal Healthcare. *Medicine* **2020**, *99*, e21967. [\[CrossRef\]](#)

21. Agapiou, A. Drones in Construction: An International Review of the Legal and Regulatory Landscape. *Proc. Inst. Civ. Eng.-Manag. Procure. Law* **2021**, *174*, 118–125. [\[CrossRef\]](#)
22. Nwaogu, J.M.; Yang, Y.; Chan, A.P.C.; Chi, H. Application of Drones in the Architecture, Engineering, and Construction (AEC) Industry. *Autom. Constr.* **2023**, *150*, 104827. [\[CrossRef\]](#)
23. Schad, L.; Fischer, J. Opportunities and Risks in the Use of Drones for Studying Animal Behaviour. *Methods Ecol. Evol.* **2023**, *14*, 1864–1872. [\[CrossRef\]](#)
24. Mohd Daud, S.M.S.; Mohd Yusof, M.Y.P.; Heo, C.C.; Khoo, L.S.; Chainchel Singh, M.K.; Mahmood, M.S.; Nawawi, H. Applications of Drone in Disaster Management: A Scoping Review. *Sci. Justice* **2022**, *62*, 30–42. [\[CrossRef\]](#) [\[PubMed\]](#)
25. Coluccia, A.; Parisi, G.; Fascista, A. Detection and Classification of Multirotor Drones in Radar Sensor Networks: A Review. *Sensors* **2020**, *20*, 4172. [\[CrossRef\]](#) [\[PubMed\]](#)
26. Zitar, R.A.; Mohsen, A.; Seghrouchni, A.E.; Barbaresco, F.; Al-Dmour, N.A. Intensive Review of Drones Detection and Tracking: Linear Kalman Filter versus Nonlinear Regression, an Analysis Case. *Arch. Comput. Methods Eng.* **2023**, *30*, 2811–2830. [\[CrossRef\]](#)
27. Khan, M.A.; Menouar, H.; Eldeeb, A.; Abu-Dayya, A.; Salim, F.D. On the Detection of Unauthorized Drones—Techniques and Future Perspectives: A Review. *IEEE Sens. J.* **2022**, *22*, 11439–11455. [\[CrossRef\]](#)
28. Sabino, H.; Almeida, R.V.S.; de Moraes, L.B.; da Silva, W.P.; Guerra, R.; Malcher, C.; Passos, D.; Passos, F.G.O. A Systematic Literature Review on the Main Factors for Public Acceptance of Drones. *Technol. Soc.* **2022**, *71*, 102097. [\[CrossRef\]](#)
29. Wang, N.; Mutzner, N.; Blanchet, K. Societal Acceptance of Urban Drones: A Scoping Literature Review. *Technol. Soc.* **2023**, *75*, 102377. [\[CrossRef\]](#)
30. Liang, Y.-J.; Luo, Z.-X. A Survey of Truck–Drone Routing Problem: Literature Review and Research Prospects. *J. Oper. Res. Soc. China* **2022**, *10*, 343–377. [\[CrossRef\]](#)
31. Pasha, J.; Elmi, Z.; Purkayastha, S.; Fathollahi-Fard, A.M.; Ge, Y.-E.; Lau, Y.-Y.; Dulebenets, M.A. The Drone Scheduling Problem: A Systematic State-of-the-Art Review. *IEEE Trans. Intell. Transp. Syst.* **2022**, *23*, 14224–14247. [\[CrossRef\]](#)
32. Raivi, A.M.; Huda, S.M.A.; Alam, M.M.; Moh, S. Drone Routing for Drone-Based Delivery Systems: A Review of Trajectory Planning, Charging, and Security. *Sensors* **2023**, *23*, 1463. [\[CrossRef\]](#)
33. Guban, G.; Haque, A. Path Planning for Autonomous Drones: Challenges and Future Directions. *Drones* **2023**, *7*, 169. [\[CrossRef\]](#)
34. Rojas Viloria, D.; Solano-Charris, E.L.; Muñoz-Villamizar, A.; Montoya-Torres, J.R. Unmanned Aerial Vehicles/Drones in Vehicle Routing Problems: A Literature Review. *Int. Trans. Oper. Res.* **2021**, *28*, 1626–1657. [\[CrossRef\]](#)
35. Kucharczyk, M.; Hugenholtz, C.H. Remote Sensing of Natural Hazard-Related Disasters with Small Drones: Global Trends, Biases, and Research Opportunities. *Remote Sens. Environ.* **2021**, *264*, 112577. [\[CrossRef\]](#)
36. Moher, D.; Liberati, A.; Tetzlaff, J.; Altman, D.G. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *Int. J. Surg.* **2010**, *8*, 336–341. [\[CrossRef\]](#)
37. Merkert, R.; Bushell, J. Managing the Drone Revolution: A Systematic Literature Review into the Current Use of Airborne Drones and Future Strategic Directions for Their Effective Control. *J. Air Transp. Manag.* **2020**, *89*, 101929. [\[CrossRef\]](#) [\[PubMed\]](#)
38. Outay, F.; Mengash, H.A.; Adnan, M. Applications of Unmanned Aerial Vehicle (UAV) in Road Safety, Traffic and Highway Infrastructure Management: Recent Advances and Challenges. *Transp. Res. Part A Policy Pract.* **2020**, *141*, 116–129. [\[CrossRef\]](#) [\[PubMed\]](#)
39. Shen, Y.; Guo, D.; Long, F.; Mateos, L.A.; Ding, H.; Xiu, Z.; Hellman, R.B.; King, A.; Chen, S.; Zhang, C.; et al. Robots under COVID-19 Pandemic: A Comprehensive Survey. *IEEE Access* **2021**, *9*, 1590–1615. [\[CrossRef\]](#)
40. Shamsoshoara, A.; Afghah, F.; Razi, A.; Zheng, L.; Fulé, P.Z.; Blasch, E. Aerial Imagery Pile Burn Detection Using Deep Learning: The FLAME Dataset. *Comput. Netw.* **2021**, *193*, 108001. [\[CrossRef\]](#)
41. Wang, J.; Liu, Y.; Song, H. Counter-Unmanned Aircraft System(s) (C-UAS): State of the Art, Challenges, and Future Trends. *IEEE Aerosp. Electron. Syst. Mag.* **2021**, *36*, 4–29. [\[CrossRef\]](#)
42. Shayea, I.; Ergen, M.; Hadri Azmi, M.; Aldirmaz Colak, S.; Nordin, R.; Daradkeh, Y.I. Key Challenges, Drivers and Solutions for Mobility Management in 5G Networks: A Survey. *IEEE Access* **2020**, *8*, 172534–172552. [\[CrossRef\]](#)
43. Annis, A.; Nardi, F.; Petroselli, A.; Apollonio, C.; Arcangeletti, E.; Tauro, F.; Belli, C.; Bianconi, R.; Grimaldi, S. UAV-DEMs for Small-Scale Flood Hazard Mapping. *Water* **2020**, *12*, 1717. [\[CrossRef\]](#)
44. Tarolli, P.; Straffellini, E. Agriculture in Hilly and Mountainous Landscapes: Threats, Monitoring and Sustainable Management. *Geogr. Sustain.* **2020**, *1*, 70–76. [\[CrossRef\]](#)
45. Akiva, P.; Planche, B.; Roy, A.; Dana, K.; Oudemans, P.; Mars, M. AI on the Bog: Monitoring and Evaluating Cranberry Crop Risk. In Proceedings of the 2021 IEEE Winter Conference on Applications of Computer Vision (WACV), Waikoloa, HI, USA, 3–8 January 2021; pp. 2492–2501.
46. Andreasen, C.; Rasmussen, J.; Bitarafan, Z. Site-Specific Seed Yield Prediction of Red Fescue (*Festuca rubra* L.) Based on Drone Imaging and Local Regression Models. *Agronomy* **2023**, *13*, 316. [\[CrossRef\]](#)
47. Shafi, U.; Mumtaz, R.; Anwar, Z.; Ajmal, M.M.; Khan, M.A.; Mahmood, Z.; Qamar, M.; Jhanzab, H.M. Tackling Food Insecurity Using Remote Sensing and Machine Learning-Based Crop Yield Prediction. *IEEE Access* **2023**, *11*, 108640–108657. [\[CrossRef\]](#)
48. Alexandris, S.; Psomiadis, E.; Proutsos, N.; Philippopoulos, P.; Charalampopoulos, I.; Kakaletis, G.; Papoutsis, E.-M.; Vassilakis, S.; Paraskevopoulos, A. Integrating Drone Technology into an Innovative Agrometeorological Methodology for the Precise and Real-Time Estimation of Crop Water Requirements. *Hydrology* **2021**, *8*, 131. [\[CrossRef\]](#)

49. Hama, A.; Tanaka, K.; Mochizuki, A.; Tsuruoka, Y.; Kondoh, A. Estimating the Protein Concentration in Rice Grain Using UAV Imagery Together with Agroclimatic Data. *Agronomy* **2020**, *10*, 431. [\[CrossRef\]](#)
50. Drimaj, J.; Skoták, V.; Kamler, J.; Plhal, R.; Adamec, Z.; Mikulka, O.; Janata, P. Comparison of Methods for Estimating Damage by Wild Ungulates on Field Crops. *Agriculture* **2023**, *13*, 1184. [\[CrossRef\]](#)
51. McCarthy, C.; Nyoni, Y.; Kachamba, D.J.; Banda, L.B.; Moyo, B.; Chisambi, C.; Banfill, J.; Hoshino, B. Can Drones Help Smallholder Farmers Improve Agriculture Efficiencies and Reduce Food Insecurity in Sub-Saharan Africa? Local Perceptions from Malawi. *Agriculture* **2023**, *13*, 1075. [\[CrossRef\]](#)
52. Alsumayt, A.; El-Haggar, N.; Amouri, L.; Alfawaer, Z.M.; Aljameel, S.S. Smart Flood Detection with AI and Blockchain Integration in Saudi Arabia Using Drones. *Sensors* **2023**, *23*, 5148. [\[CrossRef\]](#)
53. Belcore, E.; Piras, M.; Pezzoli, A. Land Cover Classification from Very High-Resolution UAS Data for Flood Risk Mapping. *Sensors* **2022**, *22*, 5622. [\[CrossRef\]](#)
54. Sodnik, J.; Mikoš, M.; Bezak, N. Torrential Hazards' Mitigation Measures in a Typical Alpine Catchment in Slovenia. *Appl. Sci.* **2023**, *13*, 11136. [\[CrossRef\]](#)
55. Tiepolo, M.; Belcore, E.; Braccio, S.; Issa, S.; Massazza, G.; Rosso, M.; Tarchiani, V. Method for Fluvial and Pluvial Flood Risk Assessment in Rural Settlements. *MethodsX* **2021**, *8*, 101463. [\[CrossRef\]](#) [\[PubMed\]](#)
56. Whitehurst, D.; Friedman, B.; Kochersberger, K.; Sridhar, V.; Weeks, J. Drone-Based Community Assessment, Planning, and Disaster Risk Management for Sustainable Development. *Remote Sens.* **2021**, *13*, 1739. [\[CrossRef\]](#)
57. Hernández-López, D.; López-Rebollo, J.; Moreno, M.A.; Gonzalez-Aguilera, D. Automatic Processing for Identification of Forest Fire Risk Areas along High-Voltage Power Lines Using Coarse-to-Fine LiDAR Data. *Forests* **2023**, *14*, 662. [\[CrossRef\]](#)
58. Munawar, H.S.; Gharineiat, Z.; Akram, J.; Imran Khan, S. A Framework for Burnt Area Mapping and Evacuation Problem Using Aerial Imagery Analysis. *Fire* **2022**, *5*, 122. [\[CrossRef\]](#)
59. Andrade, S.D.; Saltos, E.; Nogales, V.; Cruz, S.; Lee, G.; Barclay, J. Detailed Cartography of Cotopaxi's 1877 Primary Lahar Deposits Obtained by Drone-Imagery and Field Surveys in the Proximal Northern Drainage. *Remote Sens.* **2022**, *14*, 631. [\[CrossRef\]](#)
60. Minervino Amodio, A.; Di Paola, G.; Roskopf, C.M. Monitoring Coastal Vulnerability by Using DEMs Based on UAV Spatial Data. *ISPRS Int. J. Geoinf.* **2022**, *11*, 155. [\[CrossRef\]](#)
61. Casagrande, G.; Bezzi, A.; Fracaros, S.; Martinucci, D.; Pillon, S.; Salvador, P.; Sponza, S.; Fontolan, G. Quantifying Transgressive Coastal Changes Using UAVs: Dune Migration, Overwash Recovery, and Barrier Flooding Assessment and Interferences with Human and Natural Assets. *J. Mar. Sci. Eng.* **2023**, *11*, 1044. [\[CrossRef\]](#)
62. Alberico, I.; Casalbore, D.; Pelosi, N.; Tonielli, R.; Calidonna, C.; Dominici, R.; De Rosa, R. Remote Sensing and Field Survey Data Integration to Investigate on the Evolution of the Coastal Area: The Case Study of Bagnara Calabria (Southern Italy). *Remote Sens.* **2022**, *14*, 2459. [\[CrossRef\]](#)
63. Kaiser, S.; Boike, J.; Grosse, G.; Langer, M. The Potential of UAV Imagery for the Detection of Rapid Permafrost Degradation: Assessing the Impacts on Critical Arctic Infrastructure. *Remote Sens.* **2022**, *14*, 6107. [\[CrossRef\]](#)
64. Mackinnon, S. The Ontological Multiplicity of Digital Heritage Objects: 3D Modelling in the Cherish Project. *Heritage* **2023**, *6*, 1397–1410. [\[CrossRef\]](#)
65. Nicu, I.C.; Rubensdotter, L.; Stalsberg, K.; Nau, E. Coastal Erosion of Arctic Cultural Heritage in Danger: A Case Study from Svalbard, Norway. *Water* **2021**, *13*, 784. [\[CrossRef\]](#)
66. Muñoz-Sánchez, V.; Valdez-Delgado, K.M.; Hernandez-Lopez, F.J.; Moo-Llanes, D.A.; González-Farías, G.; Danis-Lozano, R. Use of Unmanned Aerial Vehicles for Building a House Risk Index of Mosquito-Borne Viral Diseases. *Machines* **2022**, *10*, 1161. [\[CrossRef\]](#)
67. Saavedra-Ruiz, M.; Pinto-Vargas, A.M.; Romero-Cano, V. Monocular Visual Autonomous Landing System for Quadcopter Drones Using Software in the Loop. *IEEE Aerosp. Electron. Syst. Mag.* **2022**, *37*, 2–16. [\[CrossRef\]](#)
68. Song, S.; Huang, T.; Li, C.; Shao, G.; Gao, Y.; Zhu, Q. A Safety-Assured Semantic Map for an Unstructured Terrain Environment towards Autonomous Engineering Vehicles. *Drones* **2023**, *7*, 550. [\[CrossRef\]](#)
69. Fernandez Romero, S.; Morata Barrado, P.; Rivero Rodriguez, M.A.; Vazquez Yañez, G.A.; De Diego Custodio, E.; Michelena, M.D. Vector Magnetometry Using Remotely Piloted Aircraft Systems: An Example of Application for Planetary Exploration. *Remote Sens.* **2021**, *13*, 390. [\[CrossRef\]](#)
70. Carvalho, R.C.; Woodroffe, C.D. Morphological Exposure of Rocky Platforms: Filling the Hazard Gap Using UAVs. *Drones* **2019**, *3*, 42. [\[CrossRef\]](#)
71. Al-Dosari, K.; Hunaiti, Z.; Balachandran, W. Mega Sporting Event Scenario Analysis and Drone Camera Surveillance Impacts on Command-and-Control Centre Situational Awareness for Dynamic Decision-Making. *Safety* **2023**, *9*, 54. [\[CrossRef\]](#)
72. Alrammah, I.A.; AlShareef, M.R. A Digitalized Framework for Responding to Radiological Accidents in a Public Major Event. *J. Radiat. Res. Appl. Sci.* **2023**, *16*, 100536. [\[CrossRef\]](#)
73. Castenschiold, J.H.F.; Gehrlein, J.B.; Bech-Hansen, M.; Kallehauge, R.M.; Pertoldi, C.; Bruhn, D. Monitoring Dropping Densities with Unmanned Aerial Vehicles (UAV): An Effective Tool to Assess Distribution Patterns in Field Utilization by Foraging Geese. *Symmetry* **2022**, *14*, 2175. [\[CrossRef\]](#)
74. Lefcourt, A.; Siemens, M.; Rivadeneira, P. Optical Parameters for Using Visible-Wavelength Reflectance or Fluorescence Imaging to Detect Bird Excrements in Produce Fields. *Appl. Sci.* **2019**, *9*, 715. [\[CrossRef\]](#)

75. Fudala, K.; Bialik, R.J. The Use of Drone-Based Aerial Photogrammetry in Population Monitoring of Southern Giant Petrels in ASMA 1, King George Island, Maritime Antarctica. *Glob. Ecol. Conserv.* **2022**, *33*, e01990. [\[CrossRef\]](#)
76. Michez, A.; Broset, S.; Lejeune, P. Ears in the Sky: Potential of Drones for the Bioacoustic Monitoring of Birds and Bats. *Drones* **2021**, *5*, 9. [\[CrossRef\]](#)
77. Bollard, B.; Doshi, A.; Gilbert, N.; Poirot, C.; Gillman, L. Drone Technology for Monitoring Protected Areas in Remote and Fragile Environments. *Drones* **2022**, *6*, 42. [\[CrossRef\]](#)
78. Detka, J.; Coyle, H.; Gomez, M.; Gilbert, G.S. A Drone-Powered Deep Learning Methodology for High Precision Remote Sensing in California's Coastal Shrubs. *Drones* **2023**, *7*, 421. [\[CrossRef\]](#)
79. Han, S.M.; Lee, J.R.; Nam, K.-H. Drone-Based Monitoring and Mapping for LMO Confined Field Management under the Ministry of Environment. *Appl. Sci.* **2023**, *13*, 10627. [\[CrossRef\]](#)
80. Del Curto, D.; Garzulino, A.; Menini, G.; Schiesaro, C. Sustainable Conservation and Management of a 20th-Century Landscape in the Alps: The Former Sanatorium Village of Sondalo. *Sustainability* **2022**, *14*, 7424. [\[CrossRef\]](#)
81. Takeshige, R.; Onishi, M.; Aoyagi, R.; Sawada, Y.; Imai, N.; Ong, R.; Kitayama, K. Mapping the Spatial Distribution of Fern Thickets and Vine-Laden Forests in the Landscape of Bornean Logged-Over Tropical Secondary Rainforests. *Remote Sens.* **2022**, *14*, 3354. [\[CrossRef\]](#)
82. Penglase, K.; Lewis, T.; Srivastava, S.K. A New Approach to Estimate Fuel Budget and Wildfire Hazard Assessment in Commercial Plantations Using Drone-Based Photogrammetry and Image Analysis. *Remote Sens.* **2023**, *15*, 2621. [\[CrossRef\]](#)
83. Valdez-Delgado, K.M.; Garcia-Salazar, O.; Moo-Llanes, D.A.; Izcapa-Treviño, C.; Cruz-Pliego, M.A.; Domínguez-Posadas, G.Y.; Armendáriz-Valdez, M.O.; Correa-Morales, F.; Cisneros-Vázquez, L.A.; Ordóñez-González, J.G.; et al. Mapping the Urban Environments of Aedes Aegypti Using Drone Technology. *Drones* **2023**, *7*, 581. [\[CrossRef\]](#)
84. Trujillano, F.; Jimenez Garay, G.; Alatrística-Salas, H.; Byrne, I.; Nunez-del-Prado, M.; Chan, K.; Manrique, E.; Johnson, E.; Apollinaire, N.; Kouame Kouakou, P.; et al. Mapping Malaria Vector Habitats in West Africa: Drone Imagery and Deep Learning Analysis for Targeted Vector Surveillance. *Remote Sens.* **2023**, *15*, 2775. [\[CrossRef\]](#)
85. Niwa, H.; Hirata, T. A New Method for Surveying the World's Smallest Class of Dragonfly in Wetlands Using Unoccupied Aerial Vehicles. *Drones* **2022**, *6*, 427. [\[CrossRef\]](#)
86. Lee, K.H. Improvement in Target Range Estimation and the Range Resolution Using Drone. *Electronics* **2020**, *9*, 1136. [\[CrossRef\]](#)
87. Lee, K.-H. A Study on Distance Measurement Module for Driving Vehicle Velocity Estimation in Multi-Lanes Using Drones. *Appl. Sci.* **2021**, *11*, 3884. [\[CrossRef\]](#)
88. Mahajan, V.; Barmounakis, E.; Alam, M.R.; Geroliminis, N.; Antoniou, C. Treating Noise and Anomalies in Vehicle Trajectories from an Experiment with a Swarm of Drones. *IEEE Trans. Intell. Transp. Syst.* **2023**, *24*, 9055–9067. [\[CrossRef\]](#)
89. Jiang, B.; Givigi, S.N.; Delamer, J.-A. A MARL Approach for Optimizing Positions of VANET Aerial Base-Stations on a Sparse Highway. *IEEE Access* **2021**, *9*, 133989–134004. [\[CrossRef\]](#)
90. Wang, C.; Wei, L.; Wang, K.; Tang, H.; Yang, B.; Li, M. Investigating the Factors Affecting Rider's Decision on Overtaking Behavior: A Naturalistic Riding Research in China. *Sustainability* **2022**, *14*, 11495. [\[CrossRef\]](#)
91. Wang, K.; Lu, J.J. A Two-Layer Risky Driver Recognition Model with Context Awareness. *IEEE Access* **2021**, *9*, 138483–138495. [\[CrossRef\]](#)
92. Carić, H.; Cukrov, N.; Omanović, D. Nautical Tourism in Marine Protected Areas (MPAs): Evaluating an Impact of Copper Emission from Antifouling Coating. *Sustainability* **2021**, *13*, 11897. [\[CrossRef\]](#)
93. Bandini, F.; Kooij, L.; Mortensen, B.K.; Caspersen, M.B.; Thomsen, L.G.; Olesen, D.; Bauer-Gottwein, P. Mapping Inland Water Bathymetry with Ground Penetrating Radar (GPR) on Board Unmanned Aerial Systems (UASs). *J. Hydrol.* **2023**, *616*, 128789. [\[CrossRef\]](#)
94. Carlson, D.F.; Akbulut, S.; Rasmussen, J.F.; Hestbech, C.S.; Andersen, M.H.; Melvad, C. Compact and Modular Autonomous Surface Vehicle for Water Research: The Naval Operating Research Drone Assessing Climate Change (NORDACC). *HardwareX* **2023**, *15*, e00453. [\[CrossRef\]](#)
95. Graham, C.T.; O'Connor, I.; Broderick, L.; Broderick, M.; Jensen, O.; Lally, H.T. Drones Can Reliably, Accurately and with High Levels of Precision, Collect Large Volume Water Samples and Physio-Chemical Data from Lakes. *Sci. Total Environ.* **2022**, *824*, 153875. [\[CrossRef\]](#)
96. Douglas Greene, S.B.; LeFevre, G.H.; Markfort, C.D. Improving the Spatial and Temporal Monitoring of Cyanotoxins in Iowa Lakes Using a Multiscale and Multi-Modal Monitoring Approach. *Sci. Total Environ.* **2021**, *760*, 143327. [\[CrossRef\]](#)
97. Bourke, E.; Raoult, V.; Williamson, J.E.; Gaston, T.F. Estuary Stingray (*Dasyatis fluviorum*) Behaviour Does Not Change in Response to Drone Altitude. *Drones* **2023**, *7*, 164. [\[CrossRef\]](#)
98. Bousquet, O.; Barruol, G.; Cordier, E.; Barthe, C.; Bielli, S.; Calmer, R.; Rindraharisaona, E.; Roberts, G.; Tulet, P.; Amelie, V.; et al. Impact of Tropical Cyclones on Inhabited Areas of the SWIO Basin at Present and Future Horizons. Part 1: Overview and Observing Component of the Research Project RENOVRIK-CYCLONE. *Atmosphere* **2021**, *12*, 544. [\[CrossRef\]](#)
99. Gorkin, R.; Adams, K.; Berryman, M.J.; Aubin, S.; Li, W.; Davis, A.R.; Barthelmy, J. Sharkeye: Real-Time Autonomous Personal Shark Alerting via Aerial Surveillance. *Drones* **2020**, *4*, 18. [\[CrossRef\]](#)
100. Liu, Z.Y.-C.; Chamberlin, A.J.; Tallam, K.; Jones, I.J.; Lamore, L.L.; Bauer, J.; Bresciani, M.; Wolfe, C.M.; Casagrandi, R.; Mari, L.; et al. Deep Learning Segmentation of Satellite Imagery Identifies Aquatic Vegetation Associated with Snail Intermediate Hosts of Schistosomiasis in Senegal, Africa. *Remote Sens.* **2022**, *14*, 1345. [\[CrossRef\]](#)

101. Tait, L.W.; Orchard, S.; Schiel, D.R. Missing the Forest and the Trees: Utility, Limits and Caveats for Drone Imaging of Coastal Marine Ecosystems. *Remote Sens.* **2021**, *13*, 3136. [\[CrossRef\]](#)
102. Ubina, N.A.; Cheng, S.-C. A Review of Unmanned System Technologies with Its Application to Aquaculture Farm Monitoring and Management. *Drones* **2022**, *6*, 12. [\[CrossRef\]](#)
103. Mury, A.; Collin, A.; Houet, T.; Alvarez-Vanhard, E.; James, D. Using Multispectral Drone Imagery for Spatially Explicit Modeling of Wave Attenuation through a Salt Marsh Meadow. *Drones* **2020**, *4*, 25. [\[CrossRef\]](#)
104. Yan, S.; Li, J.; Wang, J.; Liu, G.; Ai, A.; Liu, R. A Novel Strategy for Extracting Richer Semantic Information Based on Fault Detection in Power Transmission Lines. *Entropy* **2023**, *25*, 1333. [\[CrossRef\]](#)
105. Jalil, B.; Leone, G.R.; Martinelli, M.; Moroni, D.; Pascali, M.A.; Berton, A. Fault Detection in Power Equipment via an Unmanned Aerial System Using Multi Modal Data. *Sensors* **2019**, *19*, 3014. [\[CrossRef\]](#)
106. Filatov, A.; Zaslavskiy, M.; Krinkin, K. Multi-Drone 3D Building Reconstruction Method. *Mathematics* **2021**, *9*, 3033. [\[CrossRef\]](#)
107. Mayer, Z.; Heuer, J.; Volk, R.; Schultmann, F. Aerial Thermographic Image-Based Assessment of Thermal Bridges Using Representative Classifications and Calculations. *Energies* **2021**, *14*, 7360. [\[CrossRef\]](#)
108. Storch, M.; Jarmer, T.; Adam, M.; de Lange, N. Systematic Approach for Remote Sensing of Historical Conflict Landscapes with UAV-Based Laserscanning. *Sensors* **2021**, *22*, 217. [\[CrossRef\]](#)
109. Aurell, J.; Gullett, B.; Holder, A.; Kiros, F.; Mitchell, W.; Watts, A.; Ottmar, R. Wildland Fire Emission Sampling at Fishlake National Forest, Utah Using an Unmanned Aircraft System. *Atmos. Environ.* **2021**, *247*, 118193. [\[CrossRef\]](#)
110. Molnár, A. Gamma Radiation Dose Measurement Using an Energy-Selective Method with the Help of a Drone. *Sensors* **2022**, *22*, 9062. [\[CrossRef\]](#)
111. García-Cobos, F.J.; Paniagua-Sánchez, J.M.; Gordillo-Guerrero, A.; Marabel-Calderón, C.; Rufo-Pérez, M.; Jiménez-Barco, A. Personal Exposimeter Coupled to a Drone as a System for Measuring Environmental Electromagnetic Fields. *Environ. Res.* **2023**, *216*, 114483. [\[CrossRef\]](#)
112. Reaney, S.M.; Mackay, E.B.; Haygarth, P.M.; Fisher, M.; Molineux, A.; Potts, M.; Benskin, C. McW.H. Identifying Critical Source Areas Using Multiple Methods for Effective Diffuse Pollution Mitigation. *J. Environ. Manag.* **2019**, *250*, 109366. [\[CrossRef\]](#)
113. Fumian, F.; Di Giovanni, D.; Martellucci, L.; Rossi, R.; Gaudio, P. Application of Miniaturized Sensors to Unmanned Aerial Systems, A New Pathway for the Survey of Polluted Areas: Preliminary Results. *Atmosphere* **2020**, *11*, 471. [\[CrossRef\]](#)
114. Jia, X.; Cao, Y.; O'Connor, D.; Zhu, J.; Tsang, D.C.W.; Zou, B.; Hou, D. Mapping Soil Pollution by Using Drone Image Recognition and Machine Learning at an Arsenic-Contaminated Agricultural Field. *Environ. Pollut.* **2021**, *270*, 116281. [\[CrossRef\]](#) [\[PubMed\]](#)
115. Duangsuwan, S.; Prapruetdee, P.; Subongkod, M.; Klubsuwan, K. 3D AQI Mapping Data Assessment of Low-Altitude Drone Real-Time Air Pollution Monitoring. *Drones* **2022**, *6*, 191. [\[CrossRef\]](#)
116. Mokhtari, I.; Bechkit, W.; Rivano, H. A Generic Framework for Monitoring Pollution Plumes in Emergencies Using UAVs. In Proceedings of the 2021 International Joint Conference on Neural Networks (IJCNN), Shenzhen, China, 18–22 July 2021; pp. 1–9.
117. Chen, T.-H.K.; Prishchepov, A.V.; Fensholt, R.; Sabel, C.E. Detecting and Monitoring Long-Term Landslides in Urbanized Areas with Nighttime Light Data and Multi-Seasonal Landsat Imagery across Taiwan from 1998 to 2017. *Remote Sens Environ.* **2019**, *225*, 317–327. [\[CrossRef\]](#)
118. de Sousa, A.M.; Viana, C.D.; Garcia, G.P.B.; Grohmann, C.H. Monitoring Geological Risk Areas in the City of São Paulo Based on Multi-Temporal High-Resolution 3D Models. *Remote Sens.* **2023**, *15*, 3028. [\[CrossRef\]](#)
119. Di, Y.; Wei, Y.; Tan, W.; Xu, Q. Research on Development Characteristics and Landslide Dam Hazard Prediction of Zhuangfang Landslide in the Upper Reaches of the Nu River. *Sustainability* **2023**, *15*, 15036. [\[CrossRef\]](#)
120. Robiati, C.; Mastrantonio, G.; Francioni, M.; Eyre, M.; Coggan, J.; Mazzanti, P. Contribution of High-Resolution Virtual Outcrop Models for the Definition of Rockfall Activity and Associated Hazard Modelling. *Land* **2023**, *12*, 191. [\[CrossRef\]](#)
121. Morante, F.; Aguilar, M.; Ramírez, G.; Blanco, R.; Carrión, P.; Briones, J.; Berrezueta, E. Evaluation of Slope Stability Considering the Preservation of the General Patrimonial Cemetery of Guayaquil, Ecuador. *Geosciences* **2019**, *9*, 103. [\[CrossRef\]](#)
122. Cao, H.; Ma, G.; Liu, P.; Qin, X.; Wu, C.; Lu, J. Multi-Factor Analysis on the Stability of High Slopes in Open-Pit Mines. *Appl. Sci.* **2023**, *13*, 5940. [\[CrossRef\]](#)
123. Li, Y.; Shen, J.; Huang, M.; Peng, Z. Debris Flow Classification and Risk Assessment Based on Combination Weighting Method and Cluster Analysis: A Case Study of Debris Flow Clusters in Longmenshan Town, Pengzhou, China. *Appl. Sci.* **2023**, *13*, 7551. [\[CrossRef\]](#)
124. Vanneschi, C.; Di Camillo, M.; Aiello, E.; Bonciani, F.; Salvini, R. SfM-MVS Photogrammetry for Rockfall Analysis and Hazard Assessment along the Ancient Roman via Flaminia Road at the Furlo Gorge (Italy). *ISPRS Int. J. Geoinf.* **2019**, *8*, 325. [\[CrossRef\]](#)
125. Lin, C.-S.; Chen, S.-H.; Chang, C.-M.; Shen, T.-W. Crack Detection on a Retaining Wall with an Innovative, Ensemble Learning Method in a Dynamic Imaging System. *Sensors* **2019**, *19*, 4784. [\[CrossRef\]](#) [\[PubMed\]](#)
126. Nooralishahi, P.; Ibarra-Castaneda, C.; Deane, S.; López, F.; Pant, S.; Genest, M.; Avdelidis, N.P.; Maldague, X.P.V. Drone-Based Non-Destructive Inspection of Industrial Sites: A Review and Case Studies. *Drones* **2021**, *5*, 106. [\[CrossRef\]](#)
127. da Silva, Y.; Andrade, F.; Sousa, L.; de Castro, G.; Dias, J.; Berger, G.; Lima, J.; Pinto, M. Computer Vision Based Path Following for Autonomous Unmanned Aerial Systems in Unburied Pipeline Onshore Inspection. *Drones* **2022**, *6*, 410. [\[CrossRef\]](#)
128. Forkan, A.R.M.; Kang, Y.-B.; Jayaraman, P.P.; Liao, K.; Kaul, R.; Morgan, G.; Ranjan, R.; Sinha, S. CorrDetector: A Framework for Structural Corrosion Detection from Drone Images Using Ensemble Deep Learning. *Expert. Syst. Appl.* **2022**, *193*, 116461. [\[CrossRef\]](#)

129. Kabbabe Poleo, K.; Crowther, W.J.; Barnes, M. Estimating the Impact of Drone-Based Inspection on the Levelised Cost of Electricity for Offshore Wind Farms. *Results Eng.* **2021**, *9*, 100201. [\[CrossRef\]](#)
130. Shafiee, M.; Zhou, Z.; Mei, L.; Dinmohammadi, F.; Karama, J.; Flynn, D. Unmanned Aerial Drones for Inspection of Offshore Wind Turbines: A Mission-Critical Failure Analysis. *Robotics* **2021**, *10*, 26. [\[CrossRef\]](#)
131. Jacobsen, R.H.; Matlekovic, L.; Shi, L.; Malle, N.; Ayoub, N.; Hageman, K.; Hansen, S.; Nyboe, F.F.; Ebeid, E. Design of an Autonomous Cooperative Drone Swarm for Inspections of Safety Critical Infrastructure. *Appl. Sci.* **2023**, *13*, 1256. [\[CrossRef\]](#)
132. Kim, S.; Kim, S.; Lee, D.-E. Sustainable Application of Hybrid Point Cloud and BIM Method for Tracking Construction Progress. *Sustainability* **2020**, *12*, 4106. [\[CrossRef\]](#)
133. Manzoor, B.; Othman, I.; Pomares, J.C.; Chong, H.-Y. A Research Framework of Mitigating Construction Accidents in High-Rise Building Projects via Integrating Building Information Modeling with Emerging Digital Technologies. *Appl. Sci.* **2021**, *11*, 8359. [\[CrossRef\]](#)
134. Kolster, M.E.; Wigh, M.D.; Lima Simões da Silva, E.; Bjerg Vilhelmsen, T.; Døssing, A. High-Speed Magnetic Surveying for Unexploded Ordnance Using UAV Systems. *Remote Sens.* **2022**, *14*, 1134. [\[CrossRef\]](#)
135. Yoo, L.-S.; Lee, J.-H.; Lee, Y.-K.; Jung, S.-K.; Choi, Y. Application of a Drone Magnetometer System to Military Mine Detection in the Demilitarized Zone. *Sensors* **2021**, *21*, 3175. [\[CrossRef\]](#) [\[PubMed\]](#)
136. Mandirola, M.; Casarotti, C.; Peloso, S.; Lanese, I.; Brunesi, E.; Senaldi, I. Use of UAS for Damage Inspection and Assessment of Bridge Infrastructures. *Int. J. Disaster Risk Reduct.* **2022**, *72*, 102824. [\[CrossRef\]](#)
137. Baek, S.-C.; Lee, K.-H.; Kim, I.-H.; Seo, D.-M.; Park, K. Construction of Asbestos Slate Deep-Learning Training-Data Model Based on Drone Images. *Sensors* **2023**, *23*, 8021. [\[CrossRef\]](#)
138. de Smet, T.S.; Nikulin, A.; Balrup, N.; Graber, N. Successful Integration of UAV Aeromagnetic Mapping with Terrestrial Methane Emissions Surveys in Orphaned Well Remediation. *Remote Sens.* **2023**, *15*, 5004. [\[CrossRef\]](#)
139. Jenssen, R.O.R.; Eckerstorfer, M.; Jacobsen, S. Drone-Mounted Ultrawideband Radar for Retrieval of Snowpack Properties. *IEEE Trans. Instrum. Meas.* **2020**, *69*, 221–230. [\[CrossRef\]](#)
140. Kelm, K.; Antos, S.; McLaren, R. Applying the FFP Approach to Wider Land Management Functions. *Land* **2021**, *10*, 723. [\[CrossRef\]](#)
141. Manzoor, A.; Kim, K.; Pandey, S.R.; Kazmi, S.M.A.; Tran, N.H.; Saad, W.; Hong, C.S. Ruin Theory for Energy-Efficient Resource Allocation in UAV-Assisted Cellular Networks. *IEEE Trans. Commun.* **2021**, *69*, 3943–3956. [\[CrossRef\]](#)
142. Hesselbrandt, M.; Erlström, M.; Sopher, D.; Acuna, J. Multidisciplinary Approaches for Assessing a High Temperature Borehole Thermal Energy Storage Facility at Linköping, Sweden. *Energies* **2021**, *14*, 4379. [\[CrossRef\]](#)
143. Alsamhi, S.H.; Shvetsov, A.V.; Kumar, S.; Shvetsova, S.V.; Alhartomi, M.A.; Hawbani, A.; Rajput, N.S.; Srivastava, S.; Saif, A.; Nyangaresi, V.O. UAV Computing-Assisted Search and Rescue Mission Framework for Disaster and Harsh Environment Mitigation. *Drones* **2022**, *6*, 154. [\[CrossRef\]](#)
144. Salmoral, G.; Rivas Casado, M.; Muthusamy, M.; Butler, D.; Menon, P.; Leinster, P. Guidelines for the Use of Unmanned Aerial Systems in Flood Emergency Response. *Water* **2020**, *12*, 521. [\[CrossRef\]](#)
145. Burke, C.; McWhirter, P.R.; Veitch-Michaelis, J.; McAree, O.; Pointon, H.A.G.; Wich, S.; Longmore, S. Requirements and Limitations of Thermal Drones for Effective Search and Rescue in Marine and Coastal Areas. *Drones* **2019**, *3*, 78. [\[CrossRef\]](#)
146. Calamoneri, T.; Coro, F.; Mancini, S. A Realistic Model to Support Rescue Operations After an Earthquake via UAVs. *IEEE Access* **2022**, *10*, 6109–6125. [\[CrossRef\]](#)
147. Ho, Y.-H.; Tsai, Y.-J. Open Collaborative Platform for Multi-Drones to Support Search and Rescue Operations. *Drones* **2022**, *6*, 132. [\[CrossRef\]](#)
148. McRae, J.N.; Gay, C.J.; Nielsen, B.M.; Hunt, A.P. Using an Unmanned Aircraft System (Drone) to Conduct a Complex High Altitude Search and Rescue Operation: A Case Study. *Wilderness Environ. Med.* **2019**, *30*, 287–290. [\[CrossRef\]](#) [\[PubMed\]](#)
149. McRae, J.N.; Nielsen, B.M.; Gay, C.J.; Hunt, A.P.; Nigh, A.D. Utilizing Drones to Restore and Maintain Radio Communication During Search and Rescue Operations. *Wilderness Environ. Med.* **2021**, *32*, 41–46. [\[CrossRef\]](#) [\[PubMed\]](#)
150. Muhamat, A.A.; Zulkifli, A.F.; Ibrahim, M.A.; Sulaiman, S.; Subramaniam, G.; Mohamad, S.; Suzuki, Y. Realising the Corporate Social Performance (CSP) of Takaful (Islamic Insurance) Operators through Drone-Assisted Disaster Victim Identification (DVI). *Sustainability* **2022**, *14*, 5440. [\[CrossRef\]](#)
151. Fakhruddin, S.S.; Gharghan, S.K.; Al-Naji, A.; Chahl, J. An Advanced First Aid System Based on an Unmanned Aerial Vehicles and a Wireless Body Area Sensor Network for Elderly Persons in Outdoor Environments. *Sensors* **2019**, *19*, 2955. [\[CrossRef\]](#) [\[PubMed\]](#)
152. De Silvestri, S.; Pagliarini, M.; Tomasello, F.; Trojaniello, D.; Sanna, A. Design of a Service for Hospital Internal Transport of Urgent Pharmaceuticals via Drones. *Drones* **2022**, *6*, 70. [\[CrossRef\]](#)
153. Quintanilla García, I.; Vera Vélez, N.; Alcaraz Martínez, P.; Vidal Ull, J.; Fernández Gallo, B. A Quickly Deployed and UAS-Based Logistics Network for Delivery of Critical Medical Goods during Healthcare System Stress Periods: A Real Use Case in Valencia (Spain). *Drones* **2021**, *5*, 13. [\[CrossRef\]](#)
154. Du, L.; Li, X.; Gan, Y.; Leng, K. Optimal Model and Algorithm of Medical Materials Delivery Drone Routing Problem under Major Public Health Emergencies. *Sustainability* **2022**, *14*, 4651. [\[CrossRef\]](#)
155. Marturano, F.; Martellucci, L.; Chierici, A.; Malizia, A.; Di Giovanni, D.; d’Errico, F.; Gaudio, P.; Ciparisse, J.-F. Numerical Fluid Dynamics Simulation for Drones’ Chemical Detection. *Drones* **2021**, *5*, 69. [\[CrossRef\]](#)

156. Redi, A.A.N.P.; Sopha, B.M.; Asih, A.M.S.; Liperda, R.I. Collaborative Hybrid Aerial and Ground Vehicle Routing for Post-Disaster Assessment. *Sustainability* **2021**, *13*, 12841. [\[CrossRef\]](#)
157. Peña, P.F.; Ragab, A.R.; Luna, M.A.; Ale Isaac, M.S.; Campoy, P. WILD HOPPER: A Heavy-Duty UAV for Day and Night Firefighting Operations. *Heliyon* **2022**, *8*, e09588. [\[CrossRef\]](#)
158. Aydin, B.; Selvi, E.; Tao, J.; Starek, M. Use of Fire-Extinguishing Balls for a Conceptual System of Drone-Assisted Wildfire Fighting. *Drones* **2019**, *3*, 17. [\[CrossRef\]](#)
159. Robakowska, M.; Ślęzak, D.; Żuratyński, P.; Tyrańska-Fobke, A.; Robakowski, P.; Prędkiewicz, P.; Zorena, K. Possibilities of Using UAVs in Pre-Hospital Security for Medical Emergencies. *Int. J. Environ. Res. Public Health* **2022**, *19*, 10754. [\[CrossRef\]](#)
160. Beck, S.; Bui, T.; Davies, A.; Courtney, P.; Brown, A.; Geudens, J.; Royall, P. An Evaluation of the Drone Delivery of Adrenaline Auto-Injectors for Anaphylaxis: Pharmacists' Perceptions, Acceptance, and Concerns. *Drones* **2020**, *4*, 66. [\[CrossRef\]](#)
161. Yang, J.; Ding, Z.; Wang, L. The Programming Model of Air-Ground Cooperative Patrol Between Multi-UAV and Police Car. *IEEE Access* **2021**, *9*, 134503–134517. [\[CrossRef\]](#)
162. Alon, O.; Rabinovich, S.; Fyodorov, C.; Cauchard, J.R. First Step toward Gestural Recognition in Harsh Environments. *Sensors* **2021**, *21*, 3997. [\[CrossRef\]](#) [\[PubMed\]](#)
163. Earthperson, A.; Diaconeasa, M.A. Integrating Commercial-Off-The-Shelf Components into Radiation-Hardened Drone Designs for Nuclear-Contaminated Search and Rescue Missions. *Drones* **2023**, *7*, 528. [\[CrossRef\]](#)
164. Restás, Á. Drone Applications Fighting COVID-19 Pandemic—Towards Good Practices. *Drones* **2022**, *6*, 15. [\[CrossRef\]](#)
165. Chi, N.T.K.; Phong, L.T.; Hanh, N.T. The Drone Delivery Services: An Innovative Application in an Emerging Economy. *Asian J. Shipp. Logist.* **2023**, *39*, 39–45. [\[CrossRef\]](#)
166. Sookram, N.; Ramsewak, D.; Singh, S. The Conceptualization of an Unmanned Aerial System (UAS) Ship–Shore Delivery Service for the Maritime Industry of Trinidad. *Drones* **2021**, *5*, 76. [\[CrossRef\]](#)
167. Yaprak, Ü.; Kılıç, F.; Okumuş, A. Is the COVID-19 Pandemic Strong Enough to Change the Online Order Delivery Methods? Changes in the Relationship between Attitude and Behavior towards Order Delivery by Drone. *Technol. Forecast. Soc. Change* **2021**, *169*, 120829. [\[CrossRef\]](#) [\[PubMed\]](#)
168. Jasim, N.I.; Kasim, H.; Mahmoud, M.A. Towards the Development of Smart and Sustainable Transportation System for Foodservice Industry: Modelling Factors Influencing Customer's Intention to Adopt Drone Food Delivery (DFD) Services. *Sustainability* **2022**, *14*, 2852. [\[CrossRef\]](#)
169. Niglio, F.; Comite, P.; Cannas, A.; Pirri, A.; Tortora, G. Preliminary Clinical Validation of a Drone-Based Delivery System in Urban Scenarios Using a Smart Capsule for Blood. *Drones* **2022**, *6*, 195. [\[CrossRef\]](#)
170. Sham, R.; Siau, C.S.; Tan, S.; Kiu, D.C.; Sabhi, H.; Thew, H.Z.; Selvachandran, G.; Quek, S.G.; Ahmad, N.; Ramli, M.H.M. Drone Usage for Medicine and Vaccine Delivery during the COVID-19 Pandemic: Attitude of Health Care Workers in Rural Medical Centres. *Drones* **2022**, *6*, 109. [\[CrossRef\]](#)
171. Truog, S.; Maxim, L.; Matamba, C.; Blauvelt, C.; Ngwira, H.; Makaya, A.; Moreira, S.; Lawrence, E.; Ailstock, G.; Weitz, A.; et al. Insights Before Flights: How Community Perceptions Can Make or Break Medical Drone Deliveries. *Drones* **2020**, *4*, 51. [\[CrossRef\]](#)
172. Jones, R.W.; Despotou, G. Unmanned Aerial Systems and Healthcare: Possibilities and Challenges. In Proceedings of the 2019 14th IEEE Conference on Industrial Electronics and Applications (ICIEA), Xi'an, China, 19–21 June 2019; pp. 189–194.
173. Heiets, I.; Kuo, Y.-W.; La, J.; Yeun, R.C.K.; Verhagen, W. Future Trends in UAV Applications in the Australian Market. *Aerospace* **2023**, *10*, 555. [\[CrossRef\]](#)
174. Umeda, S.; Yoshikawa, N.; Seo, Y. Cost and Workload Assessment of Agricultural Drone Sprayer: A Case Study of Rice Production in Japan. *Sustainability* **2022**, *14*, 10850. [\[CrossRef\]](#)
175. Dams, B.; Chen, B.; Shepherd, P.; Ball, R.J. Development of Cementitious Mortars for Aerial Additive Manufacturing. *Appl. Sci.* **2023**, *13*, 641. [\[CrossRef\]](#)
176. Bridgelall, R. Reducing Risks by Transporting Dangerous Cargo in Drones. *Sustainability* **2022**, *14*, 13044. [\[CrossRef\]](#)
177. Konigsburg, J.A. Modern Warfare, Spiritual Health, and the Role of Artificial Intelligence. *Religions* **2022**, *13*, 343. [\[CrossRef\]](#)
178. Jan, S.U.; Khan, H.U. Identity and Aggregate Signature-Based Authentication Protocol for IoD Deployment Military Drone. *IEEE Access* **2021**, *9*, 130247–130263. [\[CrossRef\]](#)
179. Tubis, A.A.; Ryczyński, J.; Żurek, A. Risk Assessment for the Use of Drones in Warehouse Operations in the First Phase of Introducing the Service to the Market. *Sensors* **2021**, *21*, 6713. [\[CrossRef\]](#) [\[PubMed\]](#)
180. Salazar, F.; Martínez-García, M.S.; de Castro, A.; Chávez-Fuentes, C.; Cazorla, M.; Ureña-Aguirre, J.d.P.; Altamirano, S. UAVs for Business Adoptions in Smart City Environments: Inventory Management System. *Electronics* **2023**, *12*, 2090. [\[CrossRef\]](#)
181. Rábago, J.; Portuguese-Castro, M. Use of Drone Photogrammetry as An Innovative, Competency-Based Architecture Teaching Process. *Drones* **2023**, *7*, 187. [\[CrossRef\]](#)
182. Ma, B.; Wu, J.; Liu, W.; Chiaraviglio, L.; Ming, X. Combating Hard or Soft Disasters with Privacy-Preserving Federated Mobile Buses-and-Drones Based Networks. In Proceedings of the 2020 IEEE 21st International Conference on Information Reuse and Integration for Data Science (IRI), Las Vegas, NV, USA, 11–13 August 2020; pp. 31–36.
183. Garcia, M.; Maza, I.; Ollero, A.; Gutierrez, D.; Aguirre, I.; Viguria, A. Release of Sterile Mosquitoes with Drones in Urban and Rural Environments under the European Drone Regulation. *Appl. Sci.* **2022**, *12*, 1250. [\[CrossRef\]](#)
184. Matthews, G.A. New Technology for Desert Locust Control. *Agronomy* **2021**, *11*, 1052. [\[CrossRef\]](#)

185. Wudenska, M.; Muller, M.G.; Demmel, N.; Wedler, A.; Triebel, R.; Cremers, D.; Sturzl, W. Towards Robust Monocular Visual Odometry for Flying Robots on Planetary Missions. In Proceedings of the 2021 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Prague, Czech Republic, 27 September–1 October 2021; pp. 8737–8744.
186. Granati, G.; Cichella, F.; Lucidi, P. High-Tech Training for Birds of Prey. *Animals* **2021**, *11*, 530. [\[CrossRef\]](#)
187. McDonnell, S.; Torcivia, C. Preliminary Proof of the Concept of Wild (Feral) Horses Following Light Aircraft into a Trap. *Animals* **2020**, *10*, 80. [\[CrossRef\]](#)
188. Quan, L.; Zhang, Z.; Zhong, X.; Xu, C.; Gao, F. EVA-Planner: Environmental Adaptive Quadrotor Planning. In Proceedings of the 2021 IEEE International Conference on Robotics and Automation (ICRA), Xi'an, China, 30 May–5 June 2021; pp. 398–404.
189. Shao, Q.; Li, J.; Li, R.; Zhang, J.; Gao, X. Study of Urban Logistics Drone Path Planning Model Incorporating Service Benefit and Risk Cost. *Drones* **2022**, *6*, 418. [\[CrossRef\]](#)
190. Wei, S.X.; Dixit, A.; Tomar, S.; Burdick, J.W. Moving Obstacle Avoidance: A Data-Driven Risk-Aware Approach. *IEEE Control Syst. Lett.* **2023**, *7*, 289–294. [\[CrossRef\]](#)
191. Le Gall, K.; Lemarchand, L.; Dezan, C. Multi-Objective Optimization for an Online Re-Planning of Autonomous Vehicles. In Proceedings of the 2023 53rd Annual IEEE/IFIP International Conference on Dependable Systems and Networks Workshops (DSN-W), Porto, Portugal, 27–30 June 2023; pp. 48–51.
192. Alolaiwy, M.; Hawsawi, T.; Zohdy, M.; Kaur, A.; Louis, S. Multi-Objective Routing Optimization in Electric and Flying Vehicles: A Genetic Algorithm Perspective. *Appl. Sci.* **2023**, *13*, 10427. [\[CrossRef\]](#)
193. Hao, G.; Lv, Q.; Huang, Z.; Zhao, H.; Chen, W. UAV Path Planning Based on Improved Artificial Potential Field Method. *Aerospace* **2023**, *10*, 562. [\[CrossRef\]](#)
194. Teng, H.; Ahmad, I.; Msm, A.; Chang, K. 3D Optimal Surveillance Trajectory Planning for Multiple UAVs by Using Particle Swarm Optimization with Surveillance Area Priority. *IEEE Access* **2020**, *8*, 86316–86327. [\[CrossRef\]](#)
195. Al-kabi, H.; Mazinani, S.M. DNCS: New UAV Navigation with Considering the No-Fly Zone and Efficient Selection of the Charging Station. *Ain Shams Eng. J.* **2021**, *12*, 3669–3676. [\[CrossRef\]](#)
196. Abbass, M.A.B.; Kang, H.-S. Drone Elevation Control Based on Python-Unity Integrated Framework for Reinforcement Learning Applications. *Drones* **2023**, *7*, 225. [\[CrossRef\]](#)
197. Fan, Y.; Chu, S.; Zhang, W.; Song, R.; Li, Y. Learn by Observation: Imitation Learning for Drone Patrolling from Videos of a Human Navigator. In Proceedings of the 2020 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Las Vegas, NV, USA, 24 October 2020–24 January 2021; pp. 5209–5216.
198. Kim, D.; Lee, B.; Sung, S. Observability-Driven Path Planning Design for Securing Three-Dimensional Navigation Performance of LiDAR SLAM. *Aerospace* **2023**, *10*, 492. [\[CrossRef\]](#)
199. Qu, Z.; Willig, A. Sensorless and Coordination-Free Lane Switching on a Drone Road Segment—A Simulation Study. *Drones* **2022**, *6*, 411. [\[CrossRef\]](#)
200. Rakotonarivo, B.; Drougard, N.; Conversy, S.; Garcia, J. Supporting Drone Mission Planning and Risk Assessment with Interactive Representations of Operational Parameters. In Proceedings of the 2022 International Conference on Unmanned Aircraft Systems (ICUAS), Dubrovnik, Croatia, 21–24 June 2022; pp. 1091–1100.
201. Li, C.; Gu, W.; Zheng, Y.; Huang, L.; Zhang, X. An ETA-Based Tactical Conflict Resolution Method for Air Logistics Transportation. *Drones* **2023**, *7*, 334. [\[CrossRef\]](#)
202. Liu, C.; van Kampen, E.-J.; de Croon, G.C.H.E. Adaptive Risk-Tendency: Nano Drone Navigation in Cluttered Environments with Distributional Reinforcement Learning. In Proceedings of the 2023 IEEE International Conference on Robotics and Automation (ICRA), London, UK, 29 May–2 June 2023; pp. 7198–7204.
203. Hussein, M.; Nouacer, R.; Corradi, F.; Ouhammou, Y.; Villar, E.; Tieri, C.; Castiñeira, R. Key Technologies for Safe and Autonomous Drones. *Microprocess. Microsyst.* **2021**, *87*, 104348. [\[CrossRef\]](#)
204. Jane Fox, S. Drones: Foreseeing a “risky” Business? Policing the Challenge That Flies Above. *Technol. Soc.* **2022**, *71*, 102089. [\[CrossRef\]](#)
205. Hann, R.; Enache, A.; Nielsen, M.C.; Stovner, B.N.; van Beeck, J.; Johansen, T.A.; Borup, K.T. Experimental Heat Loads for Electrothermal Anti-Icing and De-Icing on UAVs. *Aerospace* **2021**, *8*, 83. [\[CrossRef\]](#)
206. Bui, S.T.; Luu, Q.K.; Nguyen, D.Q.; Le, N.D.M.; Loianno, G.; Ho, V.A. Tombo Propeller: Bioinspired Deformable Structure toward Collision-Accommodated Control for Drones. *IEEE Trans. Robot.* **2023**, *39*, 521–538. [\[CrossRef\]](#)
207. Kocsis Szürke, S.; Perness, N.; Földesi, P.; Kurhan, D.; Sysyn, M.; Fischer, S. A Risk Assessment Technique for Energy-Efficient Drones to Support Pilots and Ensure Safe Flying. *Infrastructures* **2023**, *8*, 67. [\[CrossRef\]](#)
208. Han Jie, C.; Hasrizam Che Man, M.; Sivakumar, A.K.; Huat Low, K. Preliminary Environmental Risk Consideration for Small UAV Ground Risk Mapping. In Proceedings of the 2022 Integrated Communication, Navigation and Surveillance Conference (ICNS), Dulles, VA, USA, 5–7 April 2022; pp. 1–11.
209. Barbeau, M.; Garcia-Alfaro, J.; Kranakis, E. Risky Zone Avoidance Strategies for Drones. In Proceedings of the 2021 IEEE Canadian Conference on Electrical and Computer Engineering (CCECE), London, ON, Canada, 12–17 September 2021; pp. 1–6.
210. Kim, I.; Kim, H.; Kim, I.; Ohn, S.; Chi, S. Event-Based Emergency Detection for Safe Drone. *Appl. Sci.* **2022**, *12*, 8501. [\[CrossRef\]](#)
211. Hong, J.-K. Vibration Prediction of Flying IoT Based on LSTM and GRU. *Electronics* **2022**, *11*, 1052. [\[CrossRef\]](#)
212. Huang, S.; Liao, F.; Teo, R.S.H. Fault Tolerant Control of Quadrotor Based on Sensor Fault Diagnosis and Recovery Information. *Machines* **2022**, *10*, 1088. [\[CrossRef\]](#)

213. Lee, J.-H.; Hong, J.-K. Comparative Performance Analysis of Vibration Prediction Using RNN Techniques. *Electronics* **2022**, *11*, 3619. [\[CrossRef\]](#)
214. Yuan, B.; Ma, W.; Wang, F. High Speed Safe Autonomous Landing Marker Tracking of Fixed Wing Drone Based on Deep Learning. *IEEE Access* **2022**, *10*, 80415–80436. [\[CrossRef\]](#)
215. Bektash, O.; Pedersen, J.N.; Ramirez Gomez, A.; la Cour-Harbo, A. Automated Emergency Landing System for Drones: SafeEYE Project. In Proceedings of the 2020 International Conference on Unmanned Aircraft Systems (ICUAS), Athens, Greece, 1–4 September 2020; pp. 1056–1064.
216. Myeong, W.; Myung, H. Development of a Wall-Climbing Drone Capable of Vertical Soft Landing Using a Tilt-Rotor Mechanism. *IEEE Access* **2019**, *7*, 4868–4879. [\[CrossRef\]](#)
217. Serrano, J.R.; Tiseira, A.O.; García-Cuevas, L.M.; Varela, P. Computational Study of the Propeller Position Effects in Wing-Mounted, Distributed Electric Propulsion with Boundary Layer Ingestion in a 25 Kg Remotely Piloted Aircraft. *Drones* **2021**, *5*, 56. [\[CrossRef\]](#)
218. Hou, W.; Fang, T.; Pei, Z.; He, Q.-C. Integrated Design of Unmanned Aerial Mobility Network: A Data-Driven Risk-Averse Approach. *Int. J. Prod. Econ.* **2021**, *236*, 108131. [\[CrossRef\]](#)
219. Gao, Y.; Liu, Y.; Wen, Q.; Lin, H.; Chen, Y. Secure Drone Network Edge Service Architecture Guaranteed by DAG-Based Blockchain for Flying Automation under 5G. *Sensors* **2020**, *20*, 6209. [\[CrossRef\]](#)
220. Ma, M.; Xu, Y.; Wang, Z.; Fu, X.; Gui, G. Decentralized Learning and Model Averaging Based Automatic Modulation Classification in Drone Communication Systems. *Drones* **2023**, *7*, 391. [\[CrossRef\]](#)
221. Shukla, P.; Nasrin, S.; Darabi, N.; Gomes, W.; Trivedi, A.R. MC-CIM: Compute-in-Memory with Monte-Carlo Dropouts for Bayesian Edge Intelligence. *IEEE Trans. Circuits Syst. I Regul. Pap.* **2023**, *70*, 884–896. [\[CrossRef\]](#)
222. Westbrooke, V.; Lucock, X.; Greenhalgh, I. Drone Use in On-Farm Environmental Compliance: An Investigation of Regulators' Perspectives. *Sustainability* **2023**, *15*, 2153. [\[CrossRef\]](#)
223. Le Roy, F.; Roland, C.; Le Jeune, D.; Diguët, J.-P. Risk Assessment of SDR-Based Attacks with UAVs. In Proceedings of the 2019 16th International Symposium on Wireless Communication Systems (ISWCS), Oulu, Finland, 27–30 August 2019; pp. 222–226.
224. Svatý, Z.; Nouzovský, L.; Mičunek, T.; Frydryn, M. Evaluation of the Drone-Human Collision Consequences. *Heliyon* **2022**, *8*, e11677. [\[CrossRef\]](#)
225. Zhu, R.; Yang, Z.; Chen, J. Conflict Risk Assessment between Non-Cooperative Drones and Manned Aircraft in Airport Terminal Areas. *Appl. Sci.* **2022**, *12*, 10377. [\[CrossRef\]](#)
226. Uddin, Z.; Altaf, M.; Bilal, M.; Nkenyereye, L.; Bashir, A.K. Amateur Drones Detection: A Machine Learning Approach Utilizing the Acoustic Signals in the Presence of Strong Interference. *Comput. Commun.* **2020**, *154*, 236–245. [\[CrossRef\]](#)
227. Morio, J.; Levasseur, B.; Bertrand, S. Drone Ground Impact Footprints with Importance Sampling: Estimation and Sensitivity Analysis. *Appl. Sci.* **2021**, *11*, 3871. [\[CrossRef\]](#)
228. Jeelani, I.; Gheisari, M. Safety Challenges of UAV Integration in Construction: Conceptual Analysis and Future Research Roadmap. *Saf. Sci.* **2021**, *144*, 105473. [\[CrossRef\]](#)
229. Ažaltovič, V.; Škvareková, I.; Pecho, P.; Kandra, B. Calculation of the Ground Casualty Risk during Aerial Work of Unmanned Aerial Vehicles in the Urban Environment. *Transp. Res. Procedia* **2020**, *44*, 271–275. [\[CrossRef\]](#)
230. Ren, X.; Cheng, C. Model of Third-Party Risk Index for Unmanned Aerial Vehicle Delivery in Urban Environment. *Sustainability* **2020**, *12*, 8318. [\[CrossRef\]](#)
231. Lercel, D.J.; Hupy, J.P. Exploring the Use of Geographic Information Systems to Identify Spatial Patterns of Remote UAS Pilots and Possible National Airspace Risk. *Safety* **2023**, *9*, 18. [\[CrossRef\]](#)
232. Pascarella, D.; Gigante, G.; Vozella, A.; Bieber, P.; Dubot, T.; Martinavarró, E.; Barraco, G.; Li Calzi, G. A Methodological Framework for the Risk Assessment of Drone Intrusions in Airports. *Aerospace* **2022**, *9*, 747. [\[CrossRef\]](#)
233. Frixione, M.G.; Salvadeo, C. Drones, Gulls and Urbanity: Interaction between New Technologies and Human Subsidized Species in Coastal Areas. *Drones* **2021**, *5*, 30. [\[CrossRef\]](#)
234. Howell, L.G.; Allan, B.M.; Driscoll, D.A.; Ierodiaconou, D.; Doran, T.A.; Weston, M.A. Attenuation of Responses of Waterbirds to Repeat Drone Surveys Involving a Sequence of Altitudes and Drone Types: A Case Study. *Drones* **2023**, *7*, 497. [\[CrossRef\]](#)
235. Lenzi, J.; Felege, C.J.; Newman, R.; McCann, B.; Ellis-Felege, S.N. Feral Horses and Bison at Theodore Roosevelt National Park (North Dakota, United States) Exhibit Shifts in Behaviors during Drone Flights. *Drones* **2022**, *6*, 136. [\[CrossRef\]](#)
236. Sorrell, K.; Dawlings, F.; Mackay, C.; Clarke, R. Routine and Safe Operation of Remotely Piloted Aircraft Systems in Areas with High Densities of Flying Birds. *Drones* **2023**, *7*, 510. [\[CrossRef\]](#)
237. Thomas, K.; Granberg, T.A. Quantifying Visual Pollution from Urban Air Mobility. *Drones* **2023**, *7*, 396. [\[CrossRef\]](#)
238. Wang, G.; Zhang, T.; Song, C.; Yu, X.; Shan, C.; Gu, H.; Lan, Y. Evaluation of Spray Drift of Plant Protection Drone Nozzles Based on Wind Tunnel Test. *Agriculture* **2023**, *13*, 628. [\[CrossRef\]](#)
239. Aldaej, A.; Ahanger, T.A.; Atiquzzaman, M.; Ullah, I.; Yousufudin, M. Smart Cybersecurity Framework for IoT-Empowered Drones: Machine Learning Perspective. *Sensors* **2022**, *22*, 2630. [\[CrossRef\]](#)
240. Alissa, K.A.; Alotaibi, S.S.; Alrayes, F.S.; Aljebreen, M.; Alazwari, S.; Alshahrani, H.; Ahmed Elfaki, M.; Othman, M.; Motwakel, A. Crystal Structure Optimization with Deep-Autoencoder-Based Intrusion Detection for Secure Internet of Drones Environment. *Drones* **2022**, *6*, 297. [\[CrossRef\]](#)
241. Jacobsen, R.H.; Marandi, A. Security Threats Analysis of the Unmanned Aerial Vehicle System. In Proceedings of the 2021 IEEE Military Communications Conference (MILCOM), San Diego, CA, USA, 29 November–2 December 2021; pp. 316–322.

242. Ahmed, M.; Cox, D.; Simpson, B.; Aloufi, A. ECU-IoFT: A Dataset for Analysing Cyber-Attacks on Internet of Flying Things. *Appl. Sci.* **2022**, *12*, 1990. [\[CrossRef\]](#)
243. Westerlund, O.; Asif, R. Drone Hacking with Raspberry-Pi 3 and WiFi Pineapple: Security and Privacy Threats for the Internet-of-Things. In Proceedings of the 2019 1st International Conference on Unmanned Vehicle Systems-Oman (UVS), Muscat, Oman, 5–7 February 2019; pp. 1–10.
244. Sontowski, S.; Gupta, M.; Laya Chukkapalli, S.S.; Abdelsalam, M.; Mittal, S.; Joshi, A.; Sandhu, R. Cyber Attacks on Smart Farming Infrastructure. In Proceedings of the 2020 IEEE 6th International Conference on Collaboration and Internet Computing (CIC), Atlanta, GA, USA, 1–3 December 2020; pp. 135–143.
245. Satheesh Kumar, M.; Vimal, S.; Jhanjhi, N.Z.; Dhanabalan, S.S.; Alhumyani, H.A. Blockchain Based Peer to Peer Communication in Autonomous Drone Operation. *Energy Rep.* **2021**, *7*, 7925–7939. [\[CrossRef\]](#)
246. Tanveer, M.; Khan, A.U.; Shah, H.; Chaudhry, S.A.; Naushad, A. PASKE-IoD: Privacy-Protecting Authenticated Key Establishment for Internet of Drones. *IEEE Access* **2021**, *9*, 145683–145698. [\[CrossRef\]](#)
247. Hamadi, R.; Ghazzai, H.; Massoud, Y. Reinforcement Learning Based Intrusion Detection Systems for Drones: A Brief Survey. In Proceedings of the 2023 IEEE International Conference on Smart Mobility (SM), Thuwal, Saudi Arabia, 19–21 March 2023; pp. 104–109.
248. Wu, M.; Zhu, Z.; Xia, Y.; Yan, Z.; Zhu, X.; Ye, N. A Q-Learning-Based Two-Layer Cooperative Intrusion Detection for Internet of Drones System. *Drones* **2023**, *7*, 502. [\[CrossRef\]](#)
249. Lei, Y.; Zeng, L.; Li, Y.-X.; Wang, M.-X.; Qin, H. A Lightweight Authentication Protocol for UAV Networks Based on Security and Computational Resource Optimization. *IEEE Access* **2021**, *9*, 53769–53785. [\[CrossRef\]](#)
250. Jahan, F.; Sun, W.; Niyaz, Q. A Non-Cooperative Game Based Model for the Cybersecurity of Autonomous Systems. In Proceedings of the 2020 IEEE Security and Privacy Workshops (SPW), San Francisco, CA, USA, 21 May 2020; pp. 202–207.
251. Nalamati, M.; Kapoor, A.; Saqib, M.; Sharma, N.; Blumenstein, M. Drone Detection in Long-Range Surveillance Videos. In Proceedings of the 2019 16th IEEE International Conference on Advanced Video and Signal Based Surveillance (AVSS), Taipei, Taiwan, 18–21 September 2019; pp. 1–6.
252. Taha, B.; Shoufan, A. Machine Learning-Based Drone Detection and Classification: State-of-the-Art in Research. *IEEE Access* **2019**, *7*, 138669–138682. [\[CrossRef\]](#)
253. Yang, J.; Gu, H.; Hu, C.; Zhang, X.; Gui, G.; Gacanin, H. Deep Complex-Valued Convolutional Neural Network for Drone Recognition Based on RF Fingerprinting. *Drones* **2022**, *6*, 374. [\[CrossRef\]](#)
254. Sun, Y.; Zhi, X.; Han, H.; Jiang, S.; Shi, T.; Gong, J.; Zhang, W. Enhancing UAV Detection in Surveillance Camera Videos through Spatiotemporal Information and Optical Flow. *Sensors* **2023**, *23*, 6037. [\[CrossRef\]](#)
255. Alam, S.S.; Chakma, A.; Rahman, M.H.; Bin Mofidul, R.; Alam, M.M.; Utama, I.B.K.Y.; Jang, Y.M. RF-Enabled Deep-Learning-Assisted Drone Detection and Identification: An End-to-End Approach. *Sensors* **2023**, *23*, 4202. [\[CrossRef\]](#)
256. Ashush, N.; Greenberg, S.; Manor, E.; Ben-Shimol, Y. Unsupervised Drones Swarm Characterization Using RF Signals Analysis and Machine Learning Methods. *Sensors* **2023**, *23*, 1589. [\[CrossRef\]](#)
257. Medaiyese, O.O.; Ezuma, M.; Lauf, A.P.; Adeniran, A.A. Hierarchical Learning Framework for UAV Detection and Identification. *IEEE J. Radio Freq. Identif.* **2022**, *6*, 176–188. [\[CrossRef\]](#)
258. Ciaburro, G.; Iannace, G. Improving Smart Cities Safety Using Sound Events Detection Based on Deep Neural Network Algorithms. *Informatics* **2020**, *7*, 23. [\[CrossRef\]](#)
259. Fan, Y.; Li, O.; Liu, G. An Object Detection Algorithm for Rotary-Wing UAV Based on AWin Transformer. *IEEE Access* **2022**, *10*, 13139–13150. [\[CrossRef\]](#)
260. Yang, T.; Li, Z.; Zhang, F.; Xie, B.; Li, J.; Liu, L. Panoramic UAV Surveillance and Recycling System Based on Structure-Free Camera Array. *IEEE Access* **2019**, *7*, 25763–25778. [\[CrossRef\]](#)
261. Davies, L.; Vagapov, Y.; Grout, V.; Cunningham, S.; Anuchin, A. Review of Air Traffic Management Systems for UAV Integration into Urban Airspace. In Proceedings of the 2021 28th International Workshop on Electric Drives: Improving Reliability of Electric Drives (IWED), Moscow, Russia, 27–29 January 2021; pp. 1–6.
262. McCarthy, T.; Pforte, L.; Burke, R. Fundamental Elements of an Urban UTM. *Aerospace* **2020**, *7*, 85. [\[CrossRef\]](#)
263. Yi, J.; Zhang, H.; Wang, F.; Ning, C.; Liu, H.; Zhong, G. An Operational Capacity Assessment Method for an Urban Low-Altitude Unmanned Aerial Vehicle Logistics Route Network. *Drones* **2023**, *7*, 582. [\[CrossRef\]](#)
264. Martinez, C.; Sanchez-Cuevas, P.J.; Gerasimou, S.; Bera, A.; Olivares-Mendez, M.A. SORA Methodology for Multi-UAS Airframe Inspections in an Airport. *Drones* **2021**, *5*, 141. [\[CrossRef\]](#)
265. Sanjab, A.; Saad, W.; Basar, T. A Game of Drones: Cyber-Physical Security of Time-Critical UAV Applications with Cumulative Prospect Theory Perceptions and Valuations. *IEEE Trans. Commun.* **2020**, *68*, 6990–7006. [\[CrossRef\]](#)
266. Ajakwe, S.O.; Ihekoronye, V.U.; Kim, D.-S.; Lee, J.-M. ALIEN: Assisted Learning Invasive Encroachment Neutralization for Secured Drone Transportation System. *Sensors* **2023**, *23*, 1233. [\[CrossRef\]](#)
267. Allouch, A.; Koubaa, A.; Khalgui, M.; Abbes, T. Qualitative and Quantitative Risk Analysis and Safety Assessment of Unmanned Aerial Vehicles Missions Over the Internet. *IEEE Access* **2019**, *7*, 53392–53410. [\[CrossRef\]](#)
268. Alharbi, A.; Poujade, A.; Malandrakis, K.; Petrunin, I.; Panagiotakopoulos, D.; Tsourdos, A. Rule-Based Conflict Management for Unmanned Traffic Management Scenarios. In Proceedings of the 2020 AIAA/IEEE 39th Digital Avionics Systems Conference (DASC), San Antonio, TX, USA, 11–15 October 2020; pp. 1–10.

269. Minucci, F.; Vinogradov, E.; Pollin, S. Avoiding Collisions at Any (Low) Cost: ADS-B Like Position Broadcast for UAVs. *IEEE Access* **2020**, *8*, 121843–121857. [\[CrossRef\]](#)
270. Pedro, D.; Matos-Carvalho, J.P.; Azevedo, F.; Sacoto-Martins, R.; Bernardo, L.; Campos, L.; Fonseca, J.M.; Mora, A. FFAU—Framework for Fully Autonomous UAVs. *Remote Sens.* **2020**, *12*, 3533. [\[CrossRef\]](#)
271. Shan, L.; Li, H.-B.; Miura, R.; Matsuda, T.; Matsumura, T. A Novel Collision Avoidance Strategy with D2D Communications for UAV Systems. *Drones* **2023**, *7*, 283. [\[CrossRef\]](#)
272. Zhang, N.; Liu, H.; Ng, B.F.; Low, K.H. Collision Probability between Intruding Drone and Commercial Aircraft in Airport Restricted Area Based on Collision-Course Trajectory Planning. *Transp. Res. Part C Emerg. Technol.* **2020**, *120*, 102736. [\[CrossRef\]](#)
273. Campana, I.; Bergesio, L.; Besada, J.A.; de Miguel, G. Air Tracking and Monitoring for Unmanned Aircraft Traffic Management. In Proceedings of the 2019 Integrated Communications, Navigation and Surveillance Conference (ICNS), Herndon, VA, USA, 9–11 April 2019; pp. 1–9.
274. Kuru, K.; Pinder, J.M.; Watkinson, B.J.; Ansell, D.; Vinning, K.; Moore, L.; Gilbert, C.; Sujit, A.; Jones, D. Toward Mid-Air Collision-Free Trajectory for Autonomous and Pilot-Controlled Unmanned Aerial Vehicles. *IEEE Access* **2023**, *11*, 100323–100342. [\[CrossRef\]](#)
275. Vagal, V.; Markantonakis, K.; Shepherd, C. A New Approach to Complex Dynamic Geofencing for Unmanned Aerial Vehicles. In Proceedings of the 2021 IEEE/AIAA 40th Digital Avionics Systems Conference (DASC), San Antonio, TX, USA, 3–7 October 2021; pp. 1–7.
276. Silalahi, S.; Ahmad, T.; Studiawan, H. Transformer-Based Named Entity Recognition on Drone Flight Logs to Support Forensic Investigation. *IEEE Access* **2023**, *11*, 3257–3274. [\[CrossRef\]](#)
277. Covaciu, F.; Iordan, A.-E. Control of a Drone in Virtual Reality Using MEMS Sensor Technology and Machine Learning. *Micromachines* **2022**, *13*, 521. [\[CrossRef\]](#)
278. Koç, D.; Seçkin, A.Ç.; Satı, Z.E. Evaluation of Participant Success in Gamified Drone Training Simulator Using Brain Signals and Key Logs. *Brain Sci.* **2021**, *11*, 1024. [\[CrossRef\]](#)
279. Chen, Y.-C.; Huang, C. Smart Data-Driven Policy on Unmanned Aircraft Systems (UAS): Analysis of Drone Users in U.S. Cities. *Smart Cities* **2021**, *4*, 78–92. [\[CrossRef\]](#)
280. Henderson, I.L. Examining New Zealand Unmanned Aircraft Users’ Measures for Mitigating Operational Risks. *Drones* **2022**, *6*, 32. [\[CrossRef\]](#)
281. Pérez-Castán, J.A.; Gómez Comendador, F.; Cardenas-Soria, A.B.; Janisch, D.; Arnaldo Valdés, R.M. Identification, Categorisation and Gaps of Safety Indicators for U-Space. *Energies* **2020**, *13*, 608. [\[CrossRef\]](#)
282. Kim, J.J.; Kim, I.; Hwang, J. A Change of Perceived Innovativeness for Contactless Food Delivery Services Using Drones after the Outbreak of COVID-19. *Int. J. Hosp. Manag.* **2021**, *93*, 102758. [\[CrossRef\]](#) [\[PubMed\]](#)
283. Valencia-Arias, A.; Rodríguez-Correa, P.A.; Patiño-Vanegas, J.C.; Benjumea-Arias, M.; De La Cruz-Vargas, J.; Moreno-López, G. Factors Associated with the Adoption of Drones for Product Delivery in the Context of the COVID-19 Pandemic in Medellín, Colombia. *Drones* **2022**, *6*, 225. [\[CrossRef\]](#)
284. Cawthorne, D.; Devos, A. Capability Caution in UAV Design. In Proceedings of the 2020 International Conference on Unmanned Aircraft Systems (ICUAS), Athens, Greece, 1–4 September 2020; pp. 1572–1581.
285. Kim, K. User Preferences in Drone Design and Operation. *Drones* **2022**, *6*, 133. [\[CrossRef\]](#)
286. Del-Real, C.; Díaz-Fernández, A.M. Lifeguards in the Sky: Examining the Public Acceptance of Beach-Rescue Drones. *Technol. Soc.* **2021**, *64*, 101502. [\[CrossRef\]](#)
287. Pheh, Y.H.; Kyi Hla Win, S.; Foong, S. Spherical Indoor Coandă Effect Drone (SpICED): A Spherical Blimp SUAS for Safe Indoor Use. *Drones* **2022**, *6*, 260. [\[CrossRef\]](#)
288. Singletary, A.; Swann, A.; Chen, Y.; Ames, A.D. Onboard Safety Guarantees for Racing Drones: High-Speed Geofencing with Control Barrier Functions. *IEEE Robot. Autom. Lett.* **2022**, *7*, 2897–2904. [\[CrossRef\]](#)
289. Gluck, T.; Kravchik, M.; Chocron, S.; Elovici, Y.; Shabtai, A. Spoofing Attack on Ultrasonic Distance Sensors Using a Continuous Signal. *Sensors* **2020**, *20*, 6157. [\[CrossRef\]](#)
290. Borowik, G.; Koźdoń-Dębecka, M.; Strzelecki, S. Mutable Observation Used by Television Drone Pilots: Efficiency of Aerial Filming Regarding the Quality of Completed Shots. *Electronics* **2022**, *11*, 3881. [\[CrossRef\]](#)
291. Alamouri, A.; Lampert, A.; Gerke, M. An Exploratory Investigation of UAS Regulations in Europe and the Impact on Effective Use and Economic Potential. *Drones* **2021**, *5*, 63. [\[CrossRef\]](#)
292. Barbeau, M.; Garcia-Alfaro, J.; Kranakis, E. Research Trends in Collaborative Drones. *Sensors* **2022**, *22*, 3321. [\[CrossRef\]](#) [\[PubMed\]](#)
293. Öz, E.; Heikkilä, E.; Tiisanen, R. Development of an Organisational Certification Process for Specific Category Drone Operations. *Drones* **2022**, *6*, 278. [\[CrossRef\]](#)

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