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MQ-8B Fire Scout Unmanned Helicopter • U.S. Navy (2019) China's new unmanned helicopter completes maiden flight in Jiangxi UAVOS \u0026 TITRA Alpin Unmanned Helicopter Successful Flight

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Navy Develops a Radio-Controlled UAV Torpedo. The first radio-controlled UAV was the Curtiss N2C-2.

A Not-So-Short History of Unmanned Aerial Vehicles (UAV ...

Main article: Aerial torpedo. The US Navy began experimenting with radio-controlled aircraft during the 1930s as well, resulting in the Curtiss N2C-2drone in 1937. The N2C-2 was remotely controlled from another aircraft, called a TG-2.

History of unmanned aerial vehicles - Wikipedia

Director of Aircraft Certification Service Policy and Innovation. Dr. Michael C. Romanowski said, "The development of airworthy, durable, and reliable unmanned aircraft is a crucial step forward ...

Airborne-Unmanned 12.02.20: Drone Certs, Drone Pilot ...

“ Since November, the development of an unmanned helicopter for a long-range radar patrol has been underway, which will track small and low-speed enemy drones at low and extremely low altitudes and...

Russia to Soon Develop Unmanned Helo-Radar Complex to ...

Since the U.S. isn’t the only country devoting resources to the research and development of UAVs, advancements in the realm are critical to competitive defense capabilities. Lockheed Martin has offered an array of unmanned technologies, ranging from the X-44 Manta prototype to the Indago 3 unmanned drone.

A Complete Guide To Lockheed Martin's Unmanned Aircraft ...

The development of UAS is a significant technological advance.

PROTECTING AGAINST THE THREAT OF UNMANNED AIRCRAFT SYSTEMS ...

Development. The RQ-170 Sentinel was developed by Lockheed Martin's Skunk Works as a stealth unmanned aerial vehicle (UAV). Journalists have noted design similarities between the RQ-170 and previous stealth and UAV programs such as the RQ-3 DarkStar and Polecat. It is a tailless flying wing aircraft, with pods, presumably for sensors or SATCOMs, built into the upper surface of each wing.

Lockheed Martin RQ-170 Sentinel - Wikipedia

UAV manufacturers often build in specific autonomous operations, such as: Self-level: attitude stabilization on the pitch and roll axes. Altitude hold: The aircraft maintains its altitude using barometric pressure and/or GPS data. Hover/position hold: Keep level pitch and roll, stable yaw heading ...

Unmanned aerial vehicle - Wikipedia

Pegaz 011 (development) Rapier Unmanned Helicopter with weapons (development) High Speed Target Drone UCAV for long range, high speed strike capability (development) Tip-Jet Helicopter (development) Kobac

Reconnaissance; BPL SILA 750C Long range Reconnaissance with weapons (development) Gavran 2K Reconnaissance; Nikola Tesla-300 Reconnaissance

List of unmanned aerial vehicles - Wikipedia
FAA Home Unmanned Aircraft Systems Research & Development Research & Development. Share; Share on Facebook; Tweet on Twitter; The FAA collaborates internally and maintains extensive partnerships across government, industry, and academia to develop integrated research plans that support the development of regulations, policies, procedures, guidance, and standards for drone operations.

Research & Development - Federal Aviation Administration
UNMANNED AIRCRAFT SYSTEMS (UAS) RESARCH AND DEVELOPMENT, JANUARY 21, 2015. Chairman Smith, Ranking Member Johnson, Members of the Committee: Thank you for the opportunity to appear before you today to discuss unmanned aircraft systems (UAS).

Unmanned Aircraft Systems (UAS) Research and Development ...
Home; Computers; Boeing, General Atomics, and Kratos to develop unmanned aircraft to demonstrate teaming with piloted planes. Skyborg is one of three Vanguard programs to field systems rapidly by ...

unmanned teaming aircraft | Military & Aerospace Electronics
The Unmanned Aircraft Systems Collegiate Training Initiative (UAS-CTI) is a new program designed for universities, colleges, and technical schools by the FAA to recognize institutions that prepare students for careers in UAS or drones. Post-secondary institutions with UAS curriculums that want to be recognized as UAS-CTI participants now have ...

UAS Collegiate Training Initiative
The Northrop Grumman MQ-8C Fire Scout is an unmanned helicopter developed by Northrop Grumman for use by the United States Navy.

Northrop Grumman MQ-8C Fire Scout - Wikipedia
Unmanned Aircraft System Traffic Management (UTM) is a "traffic management" ecosystem for uncontrolled operations that is separate from, but complementary to, the FAA's Air Traffic Management (ATM) system. UTM development will ultimately identify services, roles and responsibilities, information architecture, data exchange protocols, software ...

Unmanned Aircraft System Traffic Management (UTM)
With this successful flight, the world ' s first unmanned aircraft system, which is called Curtis N-9, was born. In the late 1930s, the U.S. Navy returned to the development of drones. This was highlighted by the Navy Research Lab ' s development of the Curtis N2C-2 drone. (See Figure 1).

UAS History | GEOG 892: Unmanned Aerial Systems
Development of Technologically Advanced Pocket Size Unmanned Helicopter to Drive Market Growth Unmanned aerial vehicles (UAV) have become an important part of military operations, especially, for intelligence, surveillance, and reconnaissance support.

Unmanned Helicopter Market Size, Share | Global Report ...
The VSR700 is Airbus ' tactical unmanned aerial system (UAS) designed to fulfil the demanding requirements of global navies and those of armies in the 21st century ' s contested and highly agile battlefields and seas. The VSR700 offers the best endurance of any vertical takeoff/landing unmanned aerial vehicle (VUAV) in its class today.

This collection compiles the seminal contributions of Michio Sugeno on fuzzy systems and technologies. Fuzzy Modeling & Control: Selected Works of Sugeno serves as a singular resource that provides a clear, comprehensive treatment of fuzzy control systems. The book comprises two parts fuzzy system identification and modeling systems control Each part outlines the fundamentals of fuzzy logic and covers essential material for understanding the mathematical and modeling details in Sugeno's works. Introductory chapters include extended summaries of each paper or group of papers, suggesting where the theories discussed might be useful in application.

In the Long War, formerly called the Global War on Terror, the armed forces of the United States have utilized unmanned aerial vehicles (UAVs) extensively to support combat, security, and stability operations. The concept of unmanned flight is nothing new to the military. Experiments with pilotless aircraft began at the end of World War I. The historical development of these aircraft and the Army's long use of aerial platforms for reconnaissance provide valuable insight into the future possibilities and potential pitfalls of UAVs.Mr. John Blom's study describes the way that aircraft have been integrated into ground units since World War I. Mr. Blom traces this integration through World War II and the creation of an independent Air Force. In the ninety years since World War I, the quantity of aircraft organic to ground units has constantly expanded. In this period, many of the same debates between the Army and Air Force that continue today over UAVs first appeared.This study addresses past and current systems, and does not address systems under development. The technological development of UAVs possesses as deep a history as the Army's use of aircraft for aerial reconnaissance. Mr. Blom details the long development of UAVs that has led the military to where it is today. Understanding this past may provide clues into where this technology may be going, and what problems could lie ahead.

Unmanned Aircraft Systems (UAS) have seen unprecedented levels of growth during the last decade in both military and civilian domains. It is anticipated that civilian applications will be dominant in the future, although there are still barriers to be overcome and technical challenges to be met. Integrating UAS into, for example, civilian space, navigation, autonomy, see-detect-and-avoid systems, smart designs, system integration, vision-based navigation and training, to name but a few areas, will be of prime importance in the near future. This special volume is the outcome of research presented at the International Symposium on Unmanned Aerial Vehicles, held in Orlando, Florida, USA, from June 23-25, 2008, and presents state-of-the-art findings on topics such as: UAS operations and integration into the national airspace system; UAS navigation and control; micro-, mini-, small UAVs; UAS simulation testbeds and frameworks; UAS research platforms and applications; UAS applications. This book aims at serving as a guide tool on UAS for engineers and practitioners, academics, government agencies and industry. Previously published in the Journal of Intelligent and Robotic Systems, 54 (1-3, 2009).

A heterogeneous UAV-UGV system with adaptable operational procedures/protocols for asset coordination, cooperation, decision-making, efficient communication and processing between its assets, meeting mission objectives is modeled and evaluated experimentally, by simulation and using prototype systems. The research has resulted in i) Development of a processing system for UGVs/UAVs that incorporate an on-board processing vision systems using low cost and highly adaptable motherboards meeting strict payload capabilities of miniature aerial vehicles and ground vehicles, including building and testing of four UGVs and one unmanned helicopter that utilize this system; ii) Development of a proposed FPGA based autopilot design that allows for future system improvements by providing an easily programmed, dedicated hardware platform that will work with extremely small payload capacity vehicles and compliment the existing system by removing tight timing requirements for low level controls and data acquisition from the existing processing system; iii) Designing and testing decentralized PID and fuzzy logic, LQR, and model predictive controllers for small unmanned helicopters; iv) Testing and implementing in hardware UGVs as heterogeneous swarms not maintaining one particular formation but having the ability to modify formation in the event of member or configuration loss, or addition of new team member; v) Incorporating MANET technology to allow a group of vehicles to extend the area of coverage by relying information from distant sources to the main station through 'routing' vehicles; vi) Development of localization techniques and vision based navigation; vii) Development of a proposed design for a UGV based mobile landing platform along with an analysis of available batteries and power requirements that led to recommendations for improvement of the endurance.

Unmanned Rotorcraft Systems explores the research and development of fully-functional miniature UAV (unmanned aerial vehicle) rotorcraft, and provides a complete treatment of the design of autonomous miniature rotorcraft UAVs. The unmanned system is an integration of advanced technologies developed in communications, computing, and control areas, and is an excellent testing ground for trialing and implementing modern control techniques. Included are detailed expositions of systematic hardware construction, software systems integration, aerodynamic modeling; and automatic flight control system design. Emphasis is placed on the cooperative control and flight formation of multiple UAVs, vision-based ground target tracking, and landing on moving platforms. Other issues such as the development of GPS-less indoor micro aerial vehicles and vision-based navigation are also discussed in depth: utilizing the vision-based system for accomplishing ground target tracking, attacking and landing, cooperative control and flight formation of multiple unmanned rotorcraft; and future research directions on the related areas.

Vision plays a fundamental role for living beings by allowing them to interact with the environment in an effective and efficient way. The ultimate goal of Machine Vision is to endow artificial systems with adequate capabilities to cope with not a priori predetermined situations. To this end, we have to take into account the computing constraints of the hosting architectures and the specifications of the tasks to be accomplished, to continuously adapt and optimize the visual processing techniques. Nevertheless, by exploiting the low?cost computational power of off?the?shell computing devices, Machine Vision is not limited any more to industrial environments, where situations and tasks are simplified and very specific, but it is now pervasive to support system solutions of everyday life problems.

The advance in robotics has boosted the application of autonomous vehicles to perform tedious and risky tasks or to be cost-effective substitutes for their - man counterparts. Based on their working environment, a rough classi cation of the autonomous vehicles would include unmanned aerial vehicles (UAVs), - manned ground vehicles (UGVs), autonomous underwater vehicles (AUVs), and autonomous surface vehicles (ASVs). UAVs, UGVs, AUVs, and ASVs are called UVs (unmanned vehicles) nowadays. In recent decades, the development of - manned autonomous vehicles have been of great interest, and different kinds of autonomous vehicles have been studied and developed all over the world. In part- ular, UAVs have many applications in emergency situations; humans often cannot come close to a dangerous natural disaster such as an earthquake, a ood, an active volcano, or a nuclear disaster. Since the development of the rst UAVs, research efforts have been focused on military applications. Recently, however, demand has arisen for UAVs such as aero-robotsand ying robotsthat can be used in emergency situations and in industrial applications. Among the wide variety of UAVs that have been developed, small-scale HUAVs (helicopter-based UAVs) have the ability to take off and land vertically as well as the ability to cruise in ight, but their most importantcapability is hovering. Hoveringat a point enables us to make more eff- tive observations of a target. Furthermore, small-scale HUAVs offer the advantages of low cost and easy operation.

Unmanned Aircraft Systems delivers a much needed introduction to UAV System technology, taking an integrated approach that avoids compartmentalising the subject. Arranged in four sections, parts 1-3 examine the way in which various engineering disciplines affect the design, development and deployment of UAS. The fourth section assesses the future challenges and opportunities of UAS. Technological innovation and increasingly diverse applications are two key drivers of the rapid expansion of UAS technology. The global defence budget for UAS procurement is expanding, and in the future the market for civilian UAVs is expected to outmatch that of the military. Agriculture, meteorology, conservation and border control are just a few of the diverse areas in which UAVs are making a significant impact; the author addresses all of these applications, looking at the roles and technology behind both fixed wing and rotorcraft UAVs. Leading aeronautical consultant Reg Austin co-founded the Bristol International Remotely Piloted Vehicle (RPV) conferences in 1979, which are now the longest-established UAS conferences worldwide. In addition, Austin has over 40 years' experience in the design and development of UAS. One of Austin's programmes, the "Sprite UAV System" has been deployed around the world and operated by day and night, in all weathers.