

REFERENCES

- [1] Wikipedia-Multirotor <https://en.wikipedia.org/wiki/Multirotor>
- [2] Sphere drones- Applications <https://spheredrones.com.au/>
- [3] 14 Different Types of Drones Explained with Photos- Aerocorner blog <https://aerocorner.com/blog/types-of-drones/>
- [4] AUAV- DRONE TYPES: MULTI-ROTOR VS FIXED-WING VS SINGLE ROTOR VS HYBRID VTOL
<https://www.auav.com.au/articles/drone-types/>
- [5] T-Drones-Multirotor Drone & UAV: Everything You Need to Know
<https://www.t-drones.com/blog/multirotor-drone-guide.html#:~:text=Moving%20a%20multirotor%20drone%20forward,to%20propel%20the%20drone%20forward.>
- [6] How drones monitor environmental changes-Coverdrone
<https://www.coverdrone.com/how-drones-monitor-environmental-changes/#:~:text=Drones%20equipped%20with%20sensors%20can,can%20be%20put%20into%20place.>
- [7] MathWorks- Documentation- What is Model Predictive Control
<https://in.mathworks.com/help/mpc/gs/what-is-mpc.html>
- [8] Scentroid- Drone Based Environmental Monitoring and Air Quality Analyzer.
<https://scentroid.com/products/analyzers/dr1000-flying-lab/#:~:text=Drone%20Based%20Environmental%20Monitoring&text=This%20includes%20the%20monitoring%20of,%2C%20and%20much%2C%20much%20more!>
- [9] Madoors product- Fire fighting drone-Fire extinguisher drone system https://www.madoors.com.tr/en/product/fire-fighting-drone-fire-extinguisher-drone-systems#toc_genel_oz
- [10] Madoors Fire Extinguishing Drones-MDRS-FED-6P – catalog <https://www.madoors.com.tr/storage/catalogs/November2023/HLjvEQY030L3CB1fC8gd.pdf>
- [11] Aeromotus- DJI Matrice 600 Pro – Drone Fire extinguishing ball drop system <https://www.aeromotus.com/product/drone-fire-extinguishing-system-matrice-600-pro/>
- [12] China Factory Electric Power Agriculture Uav 30L Autonomous Obstacle Avoidance Foldable Intelligent Controller Agricultural Drone with Panoramic Camera-MadeinChina

- [13] IOTECH- Best Agriculture Drone for Spraying Fertilizer and Pesticides in India <https://iotechworld.com/best-agriculture-drone-for-spraying-fertilizer-and-pesticides-in-india/>
- [14] Drones for Spraying Pesticides-Opportunities and Challenges: Erdal Ozkan; Ohio-line; <https://ohioline.osu.edu/factsheet/fabe-540>
- [15] Nastaran Reza Nazar Zadeh, Ameralden H. Abdulwakil, Mike Joshua R. Amar, Bernadette Durante, Christian Vincent Nico Reblando Santos; Fire-fighting UAV with shooting mechanism of fire extinguishing ball for smart city; *Indonesian Journal of Electrical Engineering and Computer Science*, Vol. 22, No. 3, June **2021**, pp. 1320-1326; ISSN: 2502-4752, DOI: 10.11591/ijeecs.v22.i3.pp1320-1326
- [16] Mrs. Sumitha C, Sharathkumar N, Sudheer B, Ravinandan N; Smart Drone Fire Extinguisher; *International Journal Of Creative Research Thoughts(IJCRT)* ISSN:2320-2882 Volume 11, Issue 5, May **2023**; <https://ijcrt.org/papers/IJCRT2305948.pdf>
- [17] Raghul A, Sarankumar M, Rajprasath B, Krishna Prasath P, Muruganatham S; Design and Fabrication of Fire Extinguishing Drone Using CO2 Ball and Sprayer; *Ijrasnet Journal For Research in Applied Science and Engineering Technology*; ISSN : 2321-9653; **2022**; <https://doi.org/10.22214/ijrasnet.2022.46944>
- [18] Ali Magdi Sayed Soliman, Suleyman Cinar Cagan, Berat Baris Buldum.; The design of a rotary-wing unmanned aerial vehicle–payload drop mechanism for fire-fighting services using fire-extinguishing balls., *SN Applied sciences.*, Article number: 1259 **2019**.
- [19] Abdel Ilah N. Alshbatat Raj; Heuristic Optimization Technique to Locate and Avoid Buried Landmines: Drone-based Approach, *Information Technology, and Computer Science*, **2018**
- [20] Agoston Rastas., Drone Applications for Supporting Disaster Management. *World Journal of Engineering and Technology.*, vol 3, **2015**
- [21] Burchan Aydin, Emre Selvi, Jian Tao, Michael J Starek, “Use of Fire-Extinguishing Balls for a Conceptual System of Drone-Assisted Wildfire Fighting”, volume 3. **2019**
- [22] Casbeer. D.W; Beard. R.W; McLain.T.W; Li. S.M; Mehra.R.K; Forest fire monitoring with multiple small UAVs., **In Proceedings of the IEEE American Control Conference, 2005**
- [23] Craig B. Clements, Shiyuan Zhong, Scott Goodrick, Ju Li, Brian E. Potter, Xindi Bian, Warren E. Heilman, Joseph J. Charney, Ryan Perna, Meongdo Jang, Daegyun Lee, Monica Patel, Susan Street, and Glenn Aumann.; Observing the dynamics of wildland grass fires: FireFlux—A field validation experiment., *Bulletin of the American Meteorological Society .*, vol 9, **2007**
- [24] Connie Phan, Hugh H.T. Liu; A cooperative UAV/UGV platform for wildfire detection and fighting, *Asia Simulation Conference - 7th International Conference on System Simulation and Scientific Computing.*, **2008**

- [25] Omer Ozkan; Sezgin Kilic; UAV routing by simulation-based optimization approaches for forest fire risk mitigation; *Springer- Annals of Operations Research* **2023** 320:937–973; <https://doi.org/10.1007/s10479-021-04393-6>
- [26] Martinez-de Dios, J. R., Merino, L., Caballero, F., Ollero, A., Viegas, D. X. Experimental results of automatic fire detection and monitoring with uavs. *Forest Ecology and Management* **2006** 234S, 232 <https://doi.org/10.1016/j.foreco.2006.08.259>
- [27] Kumar, M., Cohen, K., HomChaudhuri, B. Cooperative control of multiple uninhabited aerial vehicles for monitoring and fighting wildfires. *Journal of Aerospace Computing, Information and Communication*, **2011** 8(1), 1–16. <https://doi.org/10.2514/1.48403>
- [28] Ghamry, K. A., Zhang, Y. . Fault-tolerant cooperative control of multiple uavs for forest fire detection and tracking mission. In *3rd conference on control and fault-tolerant systems (SysTol)* **2016** (pp. 133–138), IEEE.
- [29] Cruz, H., Eckert, M., Meneses, J., Martinez, J.F. Efficient forest fire detection index for application in unmanned aerial systems (UASs). *Sensors*, 16(6:893), 1–16. **2016** <https://doi.org/10.3390/s16060893>
- [30] Yuan, C., Liu, Z., Zhang, Y. Fire detection using infrared images for uav-based forest fire surveillance. In *International conference on unmanned aircraft systems (ICUAS)* (pp. 567–572), IEEE **2017**
- [31] Ambrosia, V. G., Wegener, S., Zajkowski, T., Sullivan, D. V., Buechel, S., Enomoto, F., et al. The ikhana unmanned airborne system (uas) western states fire imaging missions: From concept to reality (2006–2010). *Geocarto International*, **2011**. 26(2), 85–101. <https://doi.org/10.1080/10106049.2010.539302>
- [32] Huy X. Pham, Hung M. La, David Feil-Seifer, and Matthew Deans; A Distributed Control Framework for a Team of Unmanned Aerial Vehicles for Dynamic Wildfire Tracking; *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)* September 24–28, Vancouver, BC, Canada **2017**
- [33] Guanrui Li, Alex Tuncel, Giuseppe Loianno; Learning Model Predictive Control for Quadrotors; *International Conference on Robotics and Automation (ICRA)*; Philadelphia, PA, USA ; 23-27 May; **2022**; DOI: 10.1109/ICRA46639.2022.9812077; <https://ieeexplore.ieee.org/document/9812077?denied=>
- [34] Mina Kamel, Michael Burri; Roland Siegwart; Linear vs Nonlinear MPC for Trajectory Tracking Applied to Rotary Wing Micro Aerial Vehicles; *IFAC-PapersOnLine* Volume 50, Issue 1, Pages 3463-3469; July **2017**; <https://doi.org/10.1016/j.ifacol.2017.08.849>
- [35] Weihua Zhao, Tiau Hiong Go; Quadcopter formation flight control combining MPC and robust feedback linearization; *Journal of the Franklin Institute*, Volume 351, Issue 3, Pages 1335-1355, March **2014**, <https://doi.org/10.1016/j.jfranklin.2013.10.021>

- [36] Jan Dentler, Somasundar Kannan, Miguel Angel Olivares Mendez, Holger Voos; A real-time model predictive position control with collision avoidance for commercial low-cost quadrotors; *IEEE Multi-Conference on Systems and Control Applications (CCA)* September 19-22,Buenos Aires, Argentina, **2016**
- [37] Yi Feng, Cong Zhang, Stanley Baek, Samir Rawashdeh, Alireza Mohammadi; Autonomous Landing of a UAV on a Moving Platform Using Model Predictive Control; *MDPI-Drones*, 2, 34; **2018**; doi:10.3390/drones2040034
- [38] Danilo Saccani, Leonardo Cecchin, Lorenzo Fagiano; Multitrajectory Model Predictive Control for Safe UAV Navigation in an Unknown Environment; *IEEE TRANSACTIONS ON CONTROL SYSTEMS TECHNOLOGY*, VOL. 31, NO. 5, SEPTEMBER **2023**
- [39] Yeonsik Kang, J. Karl Hedrick; Linear Tracking for a Fixed-Wing UAV Using Nonlinear Model Predictive Control; *IEEE TRANSACTIONS ON CONTROL SYSTEMS TECHNOLOGY*, VOL. 17, NO. 5, SEPTEMBER **2009**
- [40] Younes Al Younes, Martin Barczyk; Nonlinear Model Predictive Horizon for Optimal Trajectory Generation;*MDPI- Robotics*, 10(3), 90, **2021**; <https://doi.org/10.3390/robotics10030090>
- [41] Dong Wang, Quan Pan, Yang Shi, Jinwen Hu, Chunhui Zha; Efficient Nonlinear Model Predictive Control for Quadrotor Trajectory Tracking: Algorithms and Experiment; *IEEE TRANSACTIONS ON CYBERNETICS*, VOL. 51, NO. 10, OCTOBER, **2021**
- [42] Mike Allenspach , Guillaume Jacques Joseph Ducard ; Nonlinear model predictive control and guidance for a propeller-tilting hybrid unmanned air vehicle ;*Automatica*, 132 -109790, **2021**, <https://www.sciencedirect.com/science/article/pii/S0005109821003101>
- [43] Benotsmane, R.; Vásárhelyi.J.; Towards Optimization of Energy Consumption of Tello Quad-Rotor with Mpc Model Implementation.*MDPI- Energies*; 15, 9207.**2022**; <https://doi.org/10.3390/en15239207>
- [44] Michael Neunert, Cedric de Crousaz, Fadri Furrer, Mina Kamel, Farbod Farshidian, Roland Siegwart, Jonas Buchli; Fast Nonlinear Model Predictive Control for Unified Trajectory Optimization and Tracking; *IEEE International Conference on Robotics and Automation (ICRA)*, Stockholm, Sweden, May 16-21, **2016**
- [45] Mohit Mehndiratta, Efe Camci, Erdal Kayacan; Automated Tuning of Nonlinear Model Predictive Controller by Reinforcement Learning; *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*,Madrid, Spain, October 1-5, **2018**
- [46] Dario Lunni, Angel Santamaria-Navarro, Roberto Rossi, Paolo Rocco, Luca Bascetta, Juan Andrade-Cetto; Nonlinear Model Predictive Control for Aerial Manipulation; *International Conference on Unmanned Aircraft Systems (ICUAS)*, Miami, FL, USA, June 13-16, **2017**

- [47] Ahmed T. Hafez, Anthony J. Marasco, Sidney N. Givigi, Mohamad Iskandarani, Shahram Yousef, Camille Alain Rabbath; Solving Multi-UAV Dynamic Encirclement via Model Predictive Control; *IEEE TRANSACTIONS ON CONTROL SYSTEMS TECHNOLOGY*, VOL. 23, NO. 6, NOVEMBER **2015**
- [48] Quan Yuan; Jingyuan Zhan; Xiang Li; Outdoor flocking of quadcopter drones with decentralized model predictive control; *ISA Transactions* Volume 71, Part 1, November **2017**, Pages 84-92
- [49] Yunlong Song; Davide Scaramuzza; Policy Search for Model Predictive Control With Application to Agile Drone Flight; *IEEE TRANSACTIONS ON ROBOTICS*, VOL. 38, NO. 4, AUGUST **2022**
- [50] Rabab Benotsmane, Ahmad Reda, József Vársárhelyi; Model Predictive Control for Autonomous Quadrotor Trajectory Tracking; *2022 23rd International Carpathian Control Conference (ICCC)* ;IEEE**2022**; DOI: 10.1109/ICCC54292.2022.9805883
- [51] Hyunsoo Yang; Yongseok Lee; Sang Yun Jeon; Dongjun Lee; Multi-rotor drone tutorial: systems, mechanics, control and state estimation; *Intel Serv Robotics* 10:79-93; **2017**; DOI:10.1007/s11370-017-0224-y
- [52] Andrea Carron; Melanie N. Zeilinger; Model Predictive Coverage Control; *IFAC PapersOnLine* 53-2; 6107–6112 **2020**
- [53] M. Ibrahim, J. Matschek, B. Morabito, R. Findeisen; Hierarchical Model Predictive Control for Autonomous Vehicle Area Coverage; *IFAC PapersOnLine* Volume 52-Issue 15 ,Pages 418-423. textbf2019 <https://www.sciencedirect.com/science/article/pii/S2405896319317033>
- [54] Tripicchio, P.; Unetti, M.; D’Avella, S.; Avizzano, C.A.; Smooth Coverage Path Planning for UAVs with Model Predictive Control Trajectory Tracking. *MDPI Electronics* **2023**, 12(10), 2310. <https://doi.org/10.3390/electronics12102310>
- [55] David H. Shim;H. Jin Kim; Shankar Sastry; Decentralized Nonlinear Model Predictive Control of Multiple Flying Robots; *Proceedings of the 42nd IEEE Conference on Decision and Control* Maui, Hawaii USA, December **2003**
- [56] Gonzalo Garcia; Shahriar Keshmiri; Nonlinear Model Predictive Controller for Navigation, Guidance and Control of a Fixed-Wing UAV; *AIAA Guidance, Navigation, and Control Conference*;Portland, Oregon; 08-11 August **2011** <https://doi.org/10.2514/6.2011-6310>
- [57] Kunwu Zhang; Kunwu Zhang; Huaiyuan Sheng; Robust Nonlinear Model Predictive Control Based Visual Servoing of Quadrotor UAVs; *IEEE/ASME TRANSACTIONS ON MECHATRONICS* VOL. 26, NO.2, APRIL **2021**
- [58] H. Jin Kim; David H. Shim; Shankar Sastry; Nonlinear Model Predictive Tracking Control for Rotorcraft-based Unmanned Aerial Vehicles; *Proceedings of the American Control Conference*; Anchorage, AK May 8-10, **2002**

- [59] Nathan Slegers; Jason Kyle; Mark Costello; Nonlinear Model Predictive Control Technique for Unmanned Air Vehicles; *JGCD- Journal of Guidance, Control and Dynamics*; Volume 29, Number 5; September **2006**; <https://doi.org/10.2514/1.21531>
- [60] Ali Khastavan; Farzad A. Shirazi ; Arash Vahedi ; Mohammad Jafar Sadigh ; Non-linear Model Predictive Control of UAVs for Optimal Path Planning and Obstacle Avoidance; *Proceedings of the 10th RSI International Conference on Robotics and Mechatronics (ICRoM 2022)*, Tehran, Iran, Nov. 15-18, **2022**, DOI: 10.1109/ICRoM57054.2022.10025074
- [61] Pengkai Ru; Kamesh Subbarao; Nonlinear Model Predictive Control for Unmanned Aerial Vehicles; *MDPI-Aerospace* , 4(2), 31; **2017**; <https://doi.org/10.3390/aerospace4020031>
- [62] Mathias Bos; Bart Theys; Jan Swevers; Goele Pipeleers; Modeling and Identification of Multirotor Drone Dynamics for Onboard MPC Motion Planning; *12th International Micro Air Vehicle Conference*; IMAV2021-3 ; NOVEMBER 17th TO 19th 2021, PUEBLA, MEXICO <http://www.imavs.org/papers/2021/3.pdf>
- [63] Shin, Hyo-Sang; Thak, Min-Jea ; Kim, Hyoun-Jin; Nonlinear Model Predictive Control for Multiple UAVs Formation Using Passive Sensing; *International Journal of Aeronautical and Space Sciences* Volume 12 Issue 1; Pages.16-23 **2011** <https://doi.org/10.5139/IJASS.2011.12.1.16>
- [64] Enrico Landolfi; Francesco Junior Minervini ; Nicola Minervini ; Vincenzo De Bellis; Enrica Malfi; Ciro Natale; Integration of a Model Predictive Control with a Fast Energy Management Strategy for a Hybrid Powertrain of a Connected and Automated Vehicle; *World Electr. Veh. J.* 12(3), 159; **2021** <https://doi.org/10.3390/wevj12030159>
- [65] Arthur Richards; Jonathan How; Decentralized Model Predictive Control of Cooperating UAVs; *43rd IEEE Conference on Decision and Control*; Atlantis, Paradise Island, Bahamas; December 14-17, **2004**
- [66] Siri Mathisen; Kristoffer Gryte; Sebastien Gros; Tor Arne Johansen; Precision Deep-Stall Landing of Fixed-Wing UAVs Using Nonlinear Model Predictive Control; *J Intell Robot Syst* 101, 24; **2021** <https://doi.org/10.1007/s10846-020-01264-3>
- [67] Recalde, L.F.; Guevara, B.S.; Carvajal, C.P.; Andaluz, V.H.; Varela-Aldás, J.; Gandolfo, D.C. System Identification and Nonlinear Model Predictive Control with Collision Avoidance Applied in Hexacopters UAVs; *Sensors*; 22(13), 4712; **2022**; <https://doi.org/10.3390/s22134712>
- [68] Sihao Sun, Angel Romero, Philipp Foehn, Elia Kaufmann, Davide Scaramuzza; A Comparative Study of Nonlinear MPC and Differential-Flatness-Based Control for Quadrotor Agile Flight; *IEEE Transactions on Robotics*, **2022**; <https://arxiv.org/pdf/2109.01365>
- [69] Magnus Gålfalk; Sören Nilsson Påledal; David Bastviken; Sensitive Drone Mapping of Methane Emissions without the Need for Supplementary Ground-Based

Measurements; *ACS Earth Space Chem.* 5, 10, 2668–2676 Publication Date: July 28, **2021**; <https://doi.org/10.1021/acsearthspacechem.1c00106> Copyright-© 2021 The Authors. Published by American Chemical Society. CC-BY 4.0

- [70] Bo Yang; Timothy L. Hawthorne; Margot Hensing-Lewis; Emmett J. Duffy; Luba Y. Reshitnyk; Michael Feinman; Hunter Searson; Developing an Introductory UAV/Drone Mapping Training Program for Seagrass Monitoring and Research. *MDPI-Drones* 4(40):70; November **2020**; DOI:10.3390/drones4040070 https://www.researchgate.net/deref/http%3A%2F%2Fwww.mdpi.com%2Fjournal%2Fdrones?_tp=eyJjb250ZXh0Ijp7ImZpcnNOUGFnZSI6Il9kaXJlY3QiLCJwYXd1IjoicHVibGljYXRpb24ifX0
- [71] Frank Mascarich; Mihir Kulkarni; Paolo De Petris; Taylor Wilson; Kostas Alexis; Autonomous mapping and spectroscopic analysis *Springer-Autonomous Robots* **2023** 47:139–160 <https://doi.org/10.1007/s10514-022-10064-7>
- [72] Andrey V. Savkin; Hailong Huang; Asymptotically Optimal Deployment of Drones for Surveillance and Monitoring. *Sensors* doi:10.3390/s19092068 **2019**, 19, 2068; www.mdpi.com/journal/sensors
- [73] Zhang, J.; Huang, H. Occlusion-Aware UAV Path Planning for Reconnaissance and Surveillance. *MDPI- Drones* **2021**, 5, 98 <https://doi.org/10.3390/drones5030098>
- [74] Andrey v. Savkin; Hailong Huang; Proactive Deployment of Aerial Drones for Coverage over Very Uneven Terrains: A Version of the 3D Art Gallery Problem *MDPI-Sensors*; **2019**, 19, 1438; doi:10.3390/s19061438 www.mdpi.com/journal/sensors
- [75] Xu, C.; Zhang, K.; Jiang, Y.; Niu, S.; Yang, T.; Song, H. Communication Aware UAV Swarm Surveillance Based on Hierarchical Architecture *MDPI- Drones* **2021**, 5, 33. <https://doi.org/10.3390/drones5020033>
- [76] Katrin Becker, Martin Oehler; Oskar von Stryk; 3D Coverage Path Planning for Efficient Construction Progress Monitoring; *IEEE International Symposium on Safety, Security, and Rescue Robotics (SSRR)* **2022**; <https://arxiv.org/pdf/2302.00968>
- [77] Furkan Cakmak , Sirma Yavuz; A 3D navigation algorithm switching between way-point and Bezier curves based local plans for micro air vehicles; *Engineering Science and Technology, an International Journal*, Volume 48, December **2023**, <https://doi.org/10.1016/j.jestch.2023.101560>
- [78] Gamil Ahmed, Tarek Sheltami, Ashraf Mahmoud, Ansar Yasar; Energy-Efficient UAVs Coverage Path Planning Approach; *Computer Modeling in Engineering and Sciences-CMES*, vol.136, no.3; **2023**; DOI: 10.32604/cmcs.2023.022860 ; <https://www.techscience.com/CMES/v136n3/51821/pdf>
- [79] Pablo Gonzalez-de-Santos, Angela Ribeiro, Cesar Fernandez-Quintanilla, Francisca Lopez-Granados, Michael Brandstötter, Slobodanka Tomic, Stefania Pedrazzi, Andrea Peruzzi, Gonzalo Pajares, George Kaplanis, Manuel Perez-Ruiz, Constantino Valero, Jaime del Cerro, Marco Vieri, Gilles Rabatel, Benoit Deblide; Fleets of robots for environmentally-safe pest control in agriculture *Springer: Precision Agric* (2017) 18:574–614 DOI 10.1007/s11119-016-9476-3

- [80] Hilton Thunay; Kaouther Moussa; Ahmad Hably; Nicolas Marchand; Distributed Finite-Time Coverage Control of Multi-Quadrotor Systems with Switching Topology; *MDPI-Mathematics*; 11, 2621; **2023** <https://doi.org/10.3390/math11122621>
- [81] Hu Teng, Ishtiaq Ahmad, Alamgir MSM , Ktunghi Chang; 3D Optimal Surveillance Trajectory Planning for Multiple UAVs by Using Particle Swarm Optimization With Surveillance Area Priority; *IEEE Access* PP(99):1-12 **2020** DOI:10.1109/ACCESS.2020.2992217
- [82] Takumi Shimizu , Shunya Yamashita ;Takeshi Hatanaka; Kuniaki Uto; Martina Mammarella and Fabrizio Dabbene; Angle-Aware Coverage Control for 3-D Map Reconstruction With Drone Networks *IEEE CONTROL SYSTEMS LETTERS* VOL. 6 **2022**
- [83] Kensuke Nakamura, Mar'ia Santos, and Naomi Ehrich Leonard; Decentralized Learning With Limited Communications for Multi-robot Coverage of Unknown Spatial Fields; *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)* October 23-27,, Kyoto, Japan , **2022**, DOI: 10.1109/IROS47612.2022.9981665
- [84] Mac Schwager, James McLurkin, and Daniela Rus; Distributed Coverage Control with Sensory Feedback for Networked Robots; Published in Robotics: Science and Systems II, August 16-19,. University of Pennsylvania, Philadelphia, Pennsylvania, USA, **2006** DOI:10.15607/RSS.2006.II.007 <https://www.roboticsproceedings.org/rss02/p07.pdf>
- [85] Federico Pratissoli, Beatrice Capelli, Lorenzo Sabattini; On Coverage Control for Limited Range Multi-Robot Systems; *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)* October 23-27,Kyoto, Japan , **2022**, DOI: 10.1109/IROS47612.2022.9982002
- [86] Ali Aminzadeh; A. M. Khoshnood; Multi-UAV cooperative search and coverage control in post-disaster assessment: experimental implementation **Springer- Intelligent Service Robotics 2023** <https://doi.org/10.1007/s11370-023-00476-4>
- [87] Iago Z. Biundini; Aurelio G. Melo; Fabr'icio O. Coelho; Leonardo M. Hon' orio; Andr'e L. M. Marcato; Milena Faria Pinto; Experimentation and Simulation with Autonomous Coverage Path Planning for UAVs *Journal of Intelligent & Robotic Systems* **2022** 105: 46; <https://doi.org/10.1007/s10846-022-01654-9>
- [88] Mohd Khan; Quadcopter Flight Dynamics; *INTERNATIONAL JOURNAL OF SCIENTIFIC & TECHNOLOGY RESEARCH*; ISSN 2277-8616; VOLUME 3, ISSUE 8, AUGUST **2014**
- [89] Abdel ilahalshbatat, Abdel-Hamid Soliman, Anwar alassaf; Fuzzy-based obstacle avoidance system for quadrotor unmanned aerial vehicle, *International Journal of Soft Computing and Artificial Intelligence*, vol 5, **2017**
- [90] Marina H. Murillo, Alejandro C. Limache, Pablo S. Rojas Fredini, Leonardo L. Giovanini; Generalized nonlinear optimal predictive control using iterative state-space trajectories: Applications to autonomous flight of UAVs; *International Journal of Control, Automation, and Systems*, 13(2):361-370, ISSN:1598-6446; **2015**;

DOI 10.1007/s12555-013-0416-y <https://link.springer.com/article/10.1007/s12555-013-0416-y>

- [91] Syed UA, Kunwar F. Cellular Automata Based Real-Time Path-Planning for Mobile Robots. *International Journal of Advanced Robotic Systems*;11(7).**2014**; doi:10.5772/58544; <https://journals.sagepub.com/doi/10.5772/58544>
- [92] Ioannis Karafyllidis, Adonios Thanailakis; A model for predicting forest fire spreading using cellular Automata; *Elsevier- Ecological Modelling* 99, 87-97; **1997**; [https://doi.org/10.1016/S0304-3800\(96\)01942-4](https://doi.org/10.1016/S0304-3800(96)01942-4)
- [93] Yashar Tavakoli, H.Haj Seyyed Javadi, Sepideh Adabi; A Cellular Automata Based Algorithm for Path Planning in Multi-Agent Systems with A Common Goal; *IJC-SNS International Journal of Computer Science and Network Security*, VOL.8 No.7, July, **2008**
- [94] Ioannidis, K., Sirakoulis, G. Ch., & Andreadis, I; A PATH PLANNING METHOD BASED ON CELLULAR AUTOMATA FOR COOPERATIVE ROBOTS. *Applied Artificial Intelligence*, 25(8), 721–745. **2011** <https://doi.org/10.1080/08839514.2011.606767>
- [95] S Dicheva; Y Bestaou; 3D waypoint generation in a dynamic environment for an airborne launch mission; *Proceedings of the Institution of Mechanical Engineers Part G Journal of Aerospace Engineering*; October **2012** ;226(G10); DOI:10.1177/0954410011419565
- [96] Ghamry, K. A., Kamel, M. A., Zhang, Y. Cooperative forest monitoring and fire detection using a team of uavs-ugvs. In *International conference on unmanned aircraft systems (ICUAS)* (pp. 1206–1211), IEEE.**2016**
- [97] Yuan, C., Zhang, Y., Liu, Z. A survey on technologies for automatic forest fire monitoring, detection and fighting using uavs and remote sensing techniques. *Canadian Journal of Forest Research* **2015** 45(7), 783–792. <https://doi.org/10.1139/cjfr-2014-0347>
- [98] Aníbal Olleron , Luís Merino., Control and perception techniques for aerial robotic, *Annual Reviews in Control*, Volume 28, Issue 2, 2004.
- [99] Bas Vergouw, Huub Nagel, Geert Bondt and Bart Custers Drone Technology: Types, Payloads, Applications, Frequency Spectrum Issues, and Future Developments., *The Future of Drone Use 1 st (online).*,**2016**
- [100] Syed Agha Hassnain Mohsan, Nawaf Qasem Hamood Othman, Yanlong Li, Mohammed H. Alsharif, Muhammad Asghar Khan; Unmanned aerial vehicles (UAVs): practical aspects, applications, open challenges, security issues, and future trends; *Intelligent Service Robotics*, 16:109–137; **2023**; <https://doi.org/10.1007/s11370-022-00452-4>
- [101] Chao Zhai; Zhaoxu Wang; Jie Dou; Multi agent coverage control for enhanced geo-hazard monitoring: a brief review *Control Theory and Technology* **2021** 19:418–420 <https://doi.org/10.1007/s11768-021-00057-9>

- [102] Sunan Huang, Rodney Swee Huat Teo, Wai Lun Leong, Niki Martinel, Gian Luca Forest, Christian Micheloni; Coverage Control of Multi-Unmanned Aerial Vehicles: A Short Review ; *Unmanned Systems, Vol. 6, No. 2* 1–14. *World Scientific Publishing Company* **2018** DOI: 10.1142/S2301385018400046
- [103] Huan Nguyen, Mina Kamel, Kostas Alexis, Roland Siegwart; Model Predictive Control for Micro Aerial Vehicles: A Survey; *European Control Conference (ECC)*; Delft, Netherlands; July; **2021**; DOI: 10.23919/ECC54610.2021.9654841; <https://ieeexplore.ieee.org/document/9654841?denied=>
- [104] Taua M.Cabreira; Lisane B.Brisolara; Ferreira Paulo R.Jr.; Survey on Coverage Path Planning with Unmanned Aerial Vehicles. *Drones*-doi:10.3390/drones3010004 **2019**, 3, 4; www.mdpi.com/journal/drones
- [105] Goerzen, C.; Kong, Z.; Mettler, B. A survey of motion planning algorithms from the perspective of autonomous UAV guidance. *J. Intell. Robot. Syst.* **2010**, , 57, 65. DOI 10.1007/s10846-009-9383-1
- [106] Dadkhah, N.; Mettler, B. Survey of motion planning literature in the presence of uncertainty: Considerations for UAV guidance. *J. Intell. Robot. Syst.* **2012**, 65, 233–246.
- [107] Kanellakis, C.; Nikolakopoulos, G. Survey on computer vision for UAVs: Current developments and trends. *J. Intell. Robot. Syst.* **2017**, 87, 141–168.
- [108] Kanistras, K.; Martins, G.; Rutherford, M.J.; Valavanis, K.P. A Survey of Unmanned Aerial Vehicles (UAVs) for Traffic Monitoring. In Proceedings of the 2013 International Conference on Unmanned Aircraft Systems (ICUAS), Atlanta, GA, USA, 28–31 May 2013; pp. 221–234.
- [109] Colomina, I.; Molina, P. Unmanned aerial systems for photogrammetry and remote sensing: A review. *ISPRS J. Photogramm. Remote Sens.* **2014**, 92, 79–97.
- [110] Choset, H. Coverage for robotics—A survey of recent results. *Ann. Math. Artif. Intell.* **2001**; pp. 113–126.
- [111] Juliá, M.; Gil, A.; Reinoso, O. A comparison of path planning strategies for autonomous exploration and mapping of unknown environments. *Autonomous Robots* **2012**, 33, 427–444
- [112] Frattolillo, F.; Brunori, D.; Iocchi, L.; Scalable and Cooperative Deep Reinforcement Learning Approaches for Multi-UAV Systems: A Systematic Review. *Drones* **2023**, 7,236;<https://doi.org/10.3390/drones7040236>
- [113] An Introduction to Nonlinear Model Predictive Control -Rolf Findeisen, Frank Allgower
- [114] MathWorks-MATLAB
<https://in.mathworks.com/products/matlab.html>
- [115] Cratecode- Exploring MATLAB Toolboxes and Add-Ons
<https://cratecode.com/info/matlab-toolboxes>

- [116] Wikipedia-MATLAB
<https://en.wikipedia.org/wiki/MATLAB>
- [117] Sebbane, B. Y. A First Course in Aerial Robots and Drones *Chapman & Hall/CRC Artificial Intelligence and Robotics Series (1st ed.)* Chapman and Hall/CRC **2022**
- [118] GlobalSpec- Aerodynamics of multirotor drones
<https://insights.globalspec.com/article/18303/aerodynamics-of-multirotor-drones#:~:text=Multirotor%20drone%20flight,climb%2C%20dive%2C%20or%20bank.>
- [119] Shenzhen GC Electronics Co.Ltd- <https://www.4fpv.com/Product/136528.html>
- [120] MathWorks-Model Predictive Control Toolbox
<https://in.mathworks.com/products/model-predictive-control.html>
- [121] Navigation Toolbox - MathWorks
<https://in.mathworks.com/products/navigation.html>
- [122] Mapping - MathWorks
<https://in.mathworks.com/help/nav/mapping.html>
- [123] Occupancy Grids - MathWorks
<https://in.mathworks.com/help/nav/ug/occupancy-grids.html>
- [124] occupancyMap - MathWorks
<https://in.mathworks.com/help/nav/ref/occupancymap.html>
- [125] Optimization Toolbox - MathWorks
<https://in.mathworks.com/products/optimization.html>
- [126] Symbolic Math Toolbox- MathWorks
<https://in.mathworks.com/help/symbolic/index.html>
- [127] Multiobjective Optimization - MathWorks
<https://in.mathworks.com/discovery/multiobjective-optimization.html>
- [128] Y. Sakawa. "Trajectory planning of a free-flying robot by using the optimal control." *Optimal Control Applications and Methods*, Vol. 20, 1999, pp. 235-248.
- [129] MathWorks Documentation-Trajectory Optimization and Control of Flying Robot Using Nonlinear MPC<https://in.mathworks.com/help/mpc/ug/trajectory-optimization-and-control-of-flying-robot-using-nonlinear-mpc.html>
- [130] Simon, Dan. *Optimal State Estimation: Kalman, H Infinity, and Nonlinear Approaches*. Hoboken, NJ: John Wiley and Sons, 2006.
- [131] Van der Merwe, Rudolph, and Eric A. Wan. "The Square-Root Unscented Kalman Filter for State and Parameter-Estimation." 2001 IEEE International Conference on Acoustics, Speech, and Signal Processing. Proceedings (Cat. No.01CH37221), 6:3461-64. Salt Lake City, UT, USA: IEEE, 2001.
[https://doi.org/10.1109/ICASSP.2001.940586.](https://doi.org/10.1109/ICASSP.2001.940586)

- [132] MathWorks- Landing a Vehicle Using Multistage Nonlinear MPC
<https://in.mathworks.com/help/mpc/ug/landing-rocket-with-mpc-example.html>
- [133] ChatGPT <https://chatgpt.com/?oai-dm=1>
- [134] Cellular Automaton- Wikipedia https://en.wikipedia.org/wiki/Cellular_automaton
- [135] Chapter 7: Cellular Automata-Ryunosuke Satoro-The Nature of Code by Daniel Shiffman <https://natureofcode.com/cellular-automata/>
- [136] Cellular Automaton –Wolfram MathWorld <https://mathworld.wolfram.com/CellularAutomaton.html>
- [137] Computation in Cellular Automata:A Selected Review- Melanie Mitchell-
 In T. Gramss, S. Bornholdt, M. Gross, M. Mitchell, and T. Pellizzari, Nonstandard Computation, pp. 95–140. Weinheim: VCH Verlagsgesellschaft, **1998**. <https://melaniemitchell.me/PapersContent/ca-review.pdf>
- [138] Stephen Wolfram;Computation Theory of Cellular Automata; *Commun. Math. Phys.* 96, 15- 57; **1984** <https://content.wolfram.com/sw-publications/2020/07/computation-theory-cellular-automata.pdf>