

Collection of topics of master's theses for 2020-2021 year

1.	Ballistic design of the Earth remote sensing spacecraft
2.	Simulation of the motion of a satellite with a jet engine in near-earth space
3.	Study of the motion of a spacecraft with a propulsion system in low orbits
4.	Research and development of tasks for optimization of technological processes
5.	Investigation of methods for processing satellite images to assess the degree of forest damage
6.	Development of a control system for the angular motion of a small spacecraft for remote sensing of the Earth
7.	Development of a virtual stand for simulation of controlled flight of a jet rocket
8.	The study of systems of orientation and stabilization of spacecrafts
9.	Research on technologies for transmitting and processing data from radar satellites
10.	Research on launching small spacecraft into a sun synchronous orbit
11.	Development of methods for designing remote sensing spacecraft based on system analyses
12.	Calculation of the satellite power supply system on the Dave B14 platform by Planet company
13.	Creation of software for preliminary calculation of the number of remote sensing satellites for full coverage of the territory of the Republic of Kazakhstan per day
14.	Development of a cruise missile flight control system based on fuzzy logic
15.	Development of a control system for a four-seat combined aircraft
16.	Design development of a three-stage solid-fuel space rocket
17.	Study of the transport- launch container for launching nanosatellites into the target orbit
18.	Development of a global positioning system-receiver for high-speed mobile systems
19.	Development of inertial and satellite navigation systems for cruise missiles
20.	Design and development of technology for manufacturing a construction of a three-stage solid fuel ballistic rocket
21.	Design and development of manufacturing technology for a monoblock solid-propellant rocket with a flight range of -500 km
22.	Investigation of the corrosion properties of reinforcing coatings obtained on titanium BT1-0 by microarc oxidation
23.	Design and calculation of a line for hardening of valve metals for space purposes using the method of plasma electrolytic oxidation
24.	Development of cruise missile with a flight range of 3000 km
25.	Development of motion and navigation systems for small spacecraft
26.	Development of a system for assessing the probability of collisions of KazEOSat spacecrafts
27.	Monitoring of development of Almaty regions Uyghur district land use system on EOS PC
28.	Development of a software package for a spacecraft angular motion control system
29.	Design of a system for secure data transmission from mobile objects via open telecommunication channels
30.	Investigation of the properties of high-strength aluminum alloy for the manufacture of air vehicle parts
31.	Analysis of the organization of agricultural landscapes based on remote methods and GIS technologies: on the example of the lower course of the Syrdarya river
32.	Development of methods for geological interpretation of satellite images on the example of mount Mugodzhary

33.	Development of a control system for unmanned vehicles based on programmable logic devices
34.	Analysis of anthropogenic landscapes of the Karaganda region on the Land Viewer portal
35.	Modeling the movement of the launch vehicle on the boost phase
36.	Creation of a computer model of the movement of a rocket with a vertical launch
37.	Study of the effect of wind on the movement of the rocket on the post-boost phase
38.	Using the Land Viewer program to detect and determine the area of agricultural landscapes in the Akmola region
39.	Modeling of satellite systems of personal communication
40.	Development of data simulator for satellite systems of space navigation
41.	Design and development of technology for the manufacture of stratospheric capsule
42.	Development of mathematical models for the production of products of the rocket and space complex by numerical methods
43.	Design and development of technology for the manufacture of a cruise missile, flight range 300 km
44.	Investigation of the effect of corrosion damage on structural elements of aircraft
45.	Investigation of the mechanical properties of aircraft parts made of titanium alloys
46.	Design of high-resolution optical system for earth remote sensing spacecraft.
47.	Design of the hull and mechanical interface for the optical payload of the Earth remote sensing spacecraft
48.	Development of a Software package for calculating the power supply system of spacecraft in low orbits
49.	Investigation of the possibility of improving the maneuvering algorithm of the KazEOSat-1 spacecraft
50.	Development of an algorithm for determining the position of a geostationary spacecraft for an on-board computer
51.	Development of a program for calculating optimal maneuvers when a spacecraft lands in a given area of the Earth's surface
52.	Determination of areas of launch vehicle stages fall by modeling their movement
53.	Simulation of the ultra-small spacecraft motion
54.	Development of a software module for determining the orbit of a spacecraft by radio measurements
55.	Development of aerostatic tethered aircraft control system
56.	Development of the project of assembly shop for composite details of aircraft
57.	Development of the layout of an ultralight aircraft with a micro turbo jet engine
58.	Development of the layout of a tethered aerostatic diskoplan.
59.	Algorithm for determining the spatial orientation or the longitudinal axis of the nanosatellite
60.	Calculation of the x-band communication channel for the Build 14 Dove platform in low orbit
61.	Design of universal platforms for small spacecraft
62.	Investigation of the spacecraft internal communication systems
63.	Improvement of the technological process of mechanical processing of the roller bearing separator of the transport and installation unit of the missile complex
64.	Improvement of the technological process of mechanical processing of the drive shaft of the transport and installation unit of the missile complex
65.	Development of an unmanned aerial vehicle control device
66.	Processing of radar images for monitoring the earth's surface of the Sharyn River
67.	Classification of satellite images from Sentinel-2A for agro- landscape processing

68.	Analysis and calculation of NDVI from multispectral images remote sensing images
69.	Design of a nanosatellite weighing up to 5 kg to study the earth's magnetic field
70.	Investigation of the properties of oxide coatings on titanium and its alloy obtained by plasma electrolytic oxidation
71.	Study of the features of the removal of a spacecraft from a geostationary orbit
72.	The control algorithm of the engines of the spacecraft stabilization
73.	Uncontrolled motion of satellites relative to the center of mass in low orbits
74.	Creating a program for Sun interference prediction for geostationary orbit satellites
75.	Investigation of the dynamics of a gravity-stable low-altitude CubeSat class nanosatellite with a passive damper
76.	Development and implementation of algorithms for automatic UAV flight by inertial navigation systems
77.	Development of a system for digital processing of satellite navigation systems data testing
78.	Development of microcontroller control system for nanosatellite power supply modes
79.	Development of mathematical model of organization and planning of production by simplex method
80.	Development of technology for vacuum forming aircraft hulls
81.	Development of the imethional model of the system of the technological complex taking info account the fuzziness of the information
82.	Development of a full-cycle testing program for nanosatellites weighing up to 5kg launched by Ariane rockets
83.	Development and research of automated system prosessing information in the data distribution system
84.	Development of structure and blacks of computer system of choice and decision – making of management of objects
85.	Development of sun sensors for nanosatellites

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