FTA – DEVELOPMENT PRIORITIES FOR INTERNATIONAL SCIENTIFIC AND EDUCATIONAL COOPERATION

GENERAL INFORMATION

EDUCATION

- More than 5000 students
- Specialities of higher education - 39
- Specialities of secondary vocational education - 30
- Faculties - 6
- Departments - 20
- Foreign students - 450

SCIENTIFIC POTENTIAL

- Postgraduate scientific specialities – 8
- Dissertation Council
- Departments in cooperation with mainstay city enterprises – 8
- Scientific Laboratories – 3 (plan to open – 3 new)
- Unique equipment

CAMPUS

- Total area – 42576 sq. meters.
- Hostel – 320 places
- Computer classes – 23
- Modern computers – 670
- multimedia classes - 41
- Internet electronic-library system

EMPLOYEES

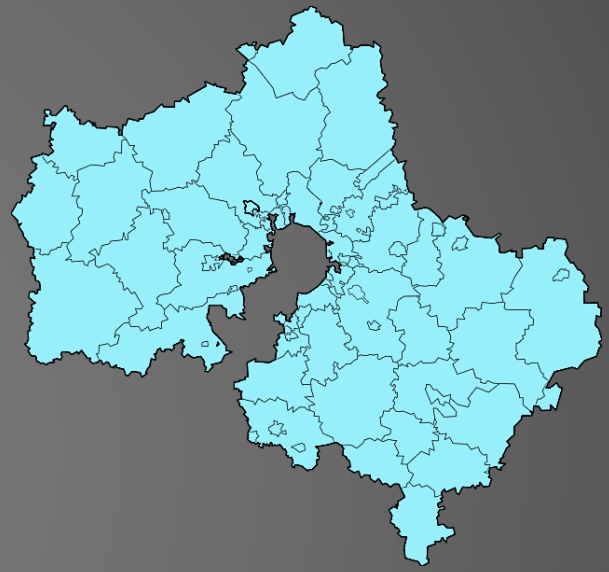
- Total employees – 466
- Professors – 242
- Having a degree – 70%
- Scientific workers-lecturers from industrial enterprise - 57

EDUCATION BUILDINGS HOSTELS NEW BUILDING

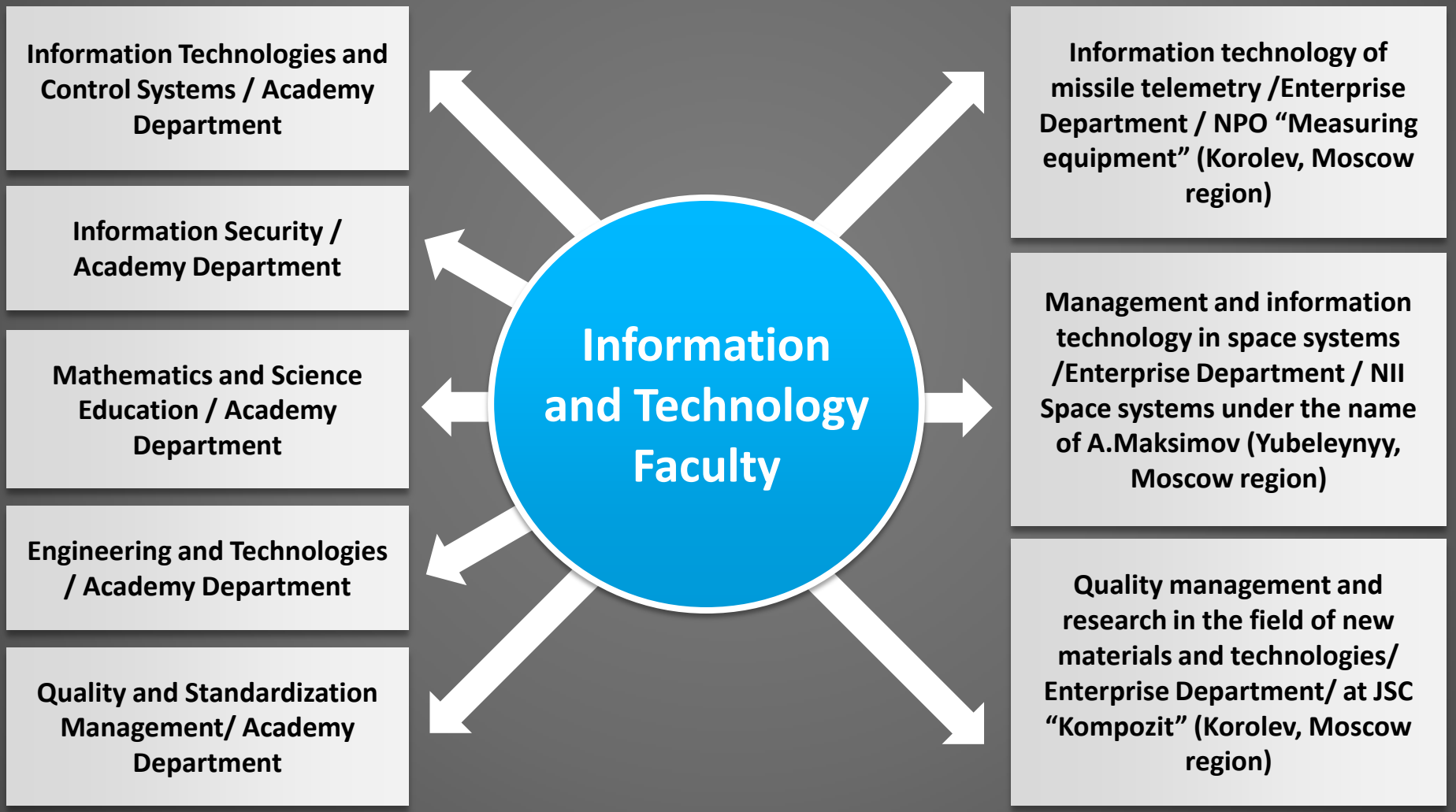
KOROLYOV

«The Finance and Technology Academy (FTA)» are located in Korolyov. Korolyov is an industrial and science city in Moscow region, Russia, well known as the cradle of Russian space exploration. Population: 183,402

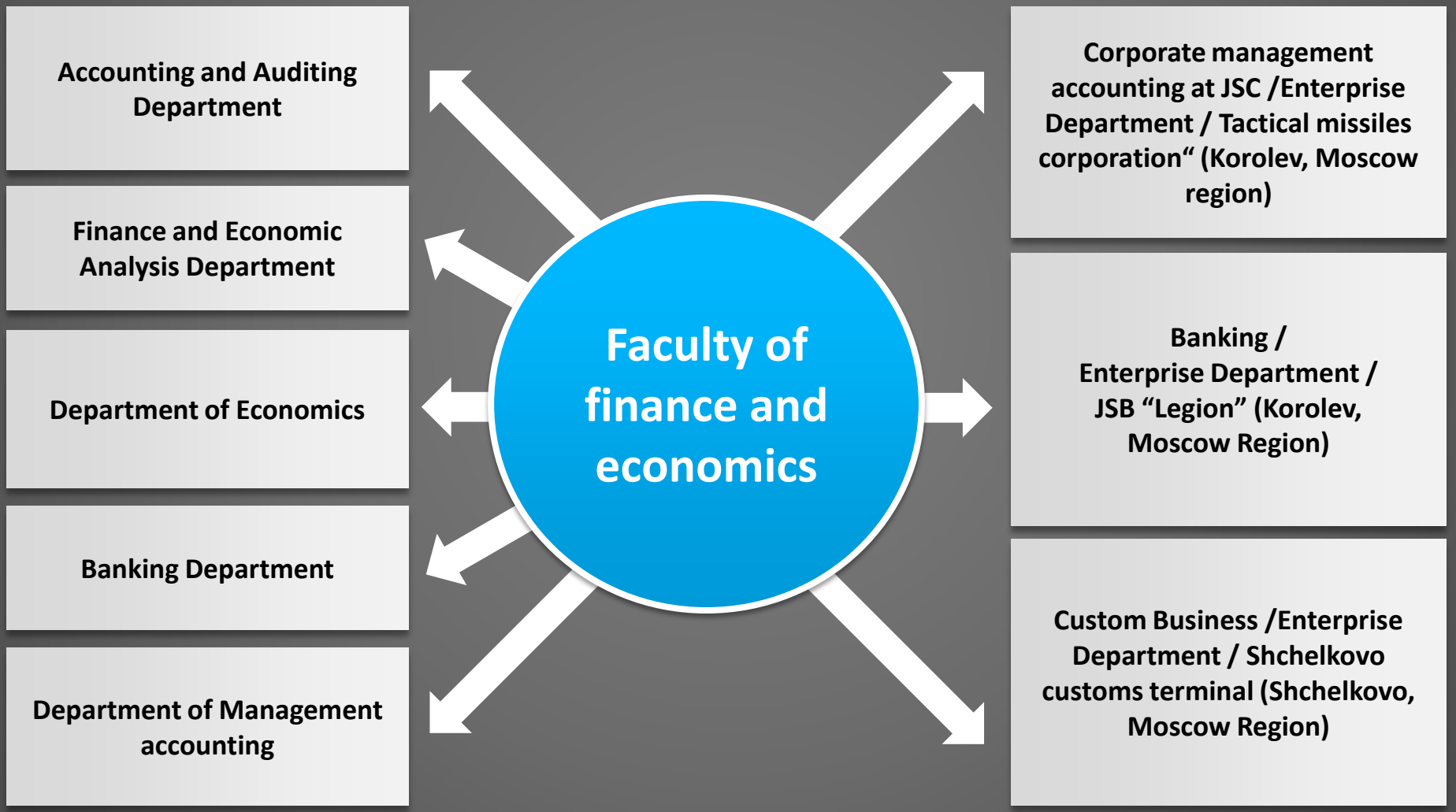
Mission Control Center is located in Korolyov.
Korolyov hosts the International Space Olympics, an annual competition for young people, to promote space related research.



INFORMATION AND TECHNOLOGY FACULTY



FACULTY OF FINANCE AND ECONOMICS



SOCIAL-HUMANITIES FACULTY

Social-Humanities Faculty

- Department of Social and Humanities
- Department of Applied Psychology
- Department of Foreign Languages
- Scientific and educational center for humanities and social and economic researches
- Linguistic Centre “LINGUA” including foreign languages courses and the courses of the Russian language for foreigners

TECHNOLOGICAL UNIVERSITY

To meet the demands for highly qualified personnel of industrial enterprises governor of the Moscow region at the meeting on the development of the city Korolev charged to develop proposals for the establishment of Technological University on the basis of Financial-Technological academy

A. Y. Vorobyev, 16 of March 2014

COOPERATION WITH MAINSTAY SPACE CITY ENTERPRISES

JSC "Kompozit"

Enterprise Department	Laboratories
1	1 PLAN: 1

NPO "Measuring equipment"

Enterprise Department	Laboratories
1 PLAN: 1	PLAN: 1

NII Space systems under the name of A.Maksimov

Enterprise Department
1 PLAN: 1

Isayev chemical design engineering bureau

Enterprise Department
1

UNIVERSITY

ФИНАНСОВО-ТЕХНОЛОГИЧЕСКАЯ АКАДЕМИЯ

Cum nobis in futuro

ФТА

ACADEMY

S.P. KOROLEV ROCKET AND SPACE CORPORATION «ENERGIA»

Enterprise Department
PLAN: 3

Tactical missiles Corporation JSC

Enterprise Department
1 PLAN: 3

Legion Bank

Enterprise Department
1

Central Engineering Research Institute TsNIIMash for Machine Building

Enterprise Department	Laboratories
PLAN: 1	1

THE DEPARTMENT “QUALITY MANAGEMENT AND RESEARCH IN THE FIELD OF NEW MATERIALS AND TECHNOLOGIES” AT JSC “KOMPOZIT”

JSC "Composite" - Materials Research leading enterprise of the Federal Space Agency. Performs research and technological development work on the creation and comprehensive study of the properties of materials.

TODAY:

The head of department – professor Timofeev A. N., Vice CEO JSC «Komposit», Academician of the Russian Academy of Cosmonautics by KE Tsiolkovsky , Ph.D

Mission: "Training for innovation in the field of new materials and technologies .“

The main research areas:
Development of new composite materials for national security and civil proceedings .
Development of new coating technologies .
Development of materials and designs for farms and mirrors in space.

Special subjects:

- Mechanical and physical properties of materials
- Theory and technology of production, processing and recycling of materials and coatings
- Test methods for composite structures
- Theory of the structure of materials
- Modeling and optimization of materials and processes

PROSPECTIVES:

- Joint international Russian-Chinese laboratory «Materials science»
- Joint Russian-Chinese scientific project in material science

JSC «KOMPOZIT»

LABORATOTIES

1. Laboratory heterogeneous synthesis of advanced materials

Laboratory equipment :

- In 2013 purchased: CNC Machine BZT PFE 500 PX, asher EKPS 50 Microscope Altami UCMOS14000KPA, Portable combined hardness, porosimeter; Academic software license ACE + modeling of physical processes
- Planned to purchase in 2014: Press APVM-904/63-600-600-2, 3D laser scanner Faro Focus 3D-20
- 2015: braiding (Braiding) machine Herzog RF 1/144-100

Work plan:

Laboratory work, participation of students, post-graduate research in conjunction with the composite of

2. Joint international Russian-Chinese laboratory «Materials science»

Work plan:

- Signing the cooperation agreements in May 2014
- Preparing joint applications for funding by the national government resources

RUSSIAN-CHINESE COOPERATION

- Sign the science cooperation agreement
- Establish the «Materials science» laboratory for research in fields:
  - High-temperature metal materials
  - CVI pyrocarbon
  - Ceramic matrix materials
  - Nano-ceramics
  - HIP and 3D printing materials
  - Inter-metallic alloys
  - Thermal control paintings
  - Modelling/simulations of production processes
- Apply for funding to local government, national and international institutions
- Hold international seminars to exchange research informations
- Exchange research students or reseachers for conducting cooperative research
- Development and exchange of equipment and devices
- Publish papers, make conference presentations and apply for patents

SCIENTIFIC COOPERATION PROPOSAL IN MAKING INTERMETALLIDE ALLOY-BASED ITEMS

1.	The University of Shanghai will perform melting using the vacuum casting with crystallization in a magnetic field and deliver to OJST “Kompozit" the cast slubs of Ni3A1, NiAl or TiAl intermetallide alloy, 55...60 mm in diameter, 450...500 mm long, in the amount of 2 pieces.
2.	The University of Shanghai will analyze the structure and the quality of the cast slub for non-metal inclusions and submit the analysis results to OJSC “Kompozit”.
3.	OJSC “Kompozit” will make powder (grains) of this material, of which will make an experimental compact workpiece using the hot isostatic compaction method.
4.	Financial-technological Academy (FTA) will investigate the structure, the granulometric composition of the powder, as well as the structure and the mechanical properties of the compact workpiece, and submit the results to the University of Shanghai.
5.	FTA and the University of Shanghai will prepare and present the investigation results jointly at an international conference.

THANK YOU FOR YOUR ATTENTION!

NPO “MEASURING EQUIPMENT”

NPO IT - leading center of the telemetry and sensor equipment, microelectronics for rocket and space technology in the field of measuring instruments, remote sensing

TODAY:

Department “Information technology of missile telemetry”
The head of department - CEO,
Chief designer of NPO «Measuring equipment» prof.
Artemyev Y. V.

Special subjects:

- Designing Sensor-transformative telemetry equipment
- Theoretical bases of designing telemetry antennas
- Standards of modern telemetry
- Fundamentals of the theory of radio telemetry systems
- Fundamentals of Radio Engineering
- Designing systems for collecting and processing missile telemetry
- Through designing tract radio telemetry
- Information-measuring system of rocket and space technology
- Design of digital devices and pulse

NII SPACE SYSTEMS UNDER THE NAME OF A.MAKSIMOV

NII Space Systems - leading center of development and investigation of new information, industrial, operational and resource-saving technologies, as well as scientific and technical support for creating, testing and targeted application of advanced rocket and space vehicles

TODAY:

Department "Management and information technology in space systems"

The head of department – professor Vokin G. G.

Special subjects:

- Space navigation, communication and control
- Control system launch vehicle and spacecraft
- Basics ballistics missiles and spacecraft
- Fundamentals of building rockets and spacecraft
- Outobjects systems and telemetry launch vehicle and spacecraft
- Terrestrial and space-based systems for monitoring natural resources
- Radio equipment of space systems
- Remote Sensing

ISAYEV CHEMICAL DESIGN ENGINEERING BUREAU

TODAY:

- **Department: «Technique and technology of rocket engine»**
- **Specialities:**
- Aircraft and spacecraft engines
- Production of aircraft and spacecraft engines
- Research and development in the field of spacecraft engines

Isayev chemical design engineering bureau has experience and capabilities to design and develop :
- liquid fuel rocket engines and boosters with values up to 50 ton thrust ;
- engines and propulsion systems for manned and unmanned spacecraft ;
- impulse engines one - and two-component values thrust from 0.5 kgs to 250 kgs ;
- components and assemblies LRE cameras, turbo pump assemblies , gas generators , regulators, valves, tanks and components for gas cylinders , stainless steel , aluminum and titanium alloys ; high-efficiency pumps for different liquids ;
- units for different purposes , similar aggregates liquid fuel rocket engines and propulsion systems .

S.P. KOROLEV ROCKET AND SPACE CORPORATION «ENERGIA»

OAO RSC Energia has been conducting activities in rocket-space industry since 1946 when the team of specialists developing long-range ballistic missiles was organized under the leadership of S.P. Korolev, the Chief Designer of rocket-space system and the founder of practical cosmonautics.
The enterprise initiated practically all lines of activity related to national rocket and space technology.

TODAY:

- Plans to open 3 Departments:
- Design and manufacture of aircraft and spacecrafts (2015)
- Industrial Management (2016)
- Intelligent Systems and Robotics (2016)
- Research in the field of insurance spaceflight
- Training speciality: «Automation of technological processes and production»

TACTICAL MISSILES CORPORATION JSC

Tactical Missiles Corporation JSC

Strategic targets which lead to the Corporation establishment consisted in keeping and developing of missilery's research and production capacity, supplying national defense capability, resource mobilization needed for highly effective guided missiles and air-based, ground-based, sea-based weapon systems production, also in strengthening military positions of Russia in world armament market.

TODAY:

- Department «CORPORATE MANAGEMENT ACCOUNTING»
- **Plans to open 2 Departments:**
- Automatic control system of missile and aircraft "(2014)
- Information security (2015)
- **Training speciality:** Aircraft and Spacecraft Control Systems
- Research and development in the design of missile technology long-range

BANK «LEGION»

КОММЕРЧЕСКИЙ БАНК ЛЕГИОН

In its activities, the Bank "Legion" combines standard banking products with a personal touch to customers in operational issues in all areas of service. The basis of the effective functioning of the Bank is well-developed system of internal control and risk management.

TODAY:

- Department «Banking»
- Research on improving business process management of financial institutions
- Special subjects:
- banking
- Market securities and exchange business
- Money, credit, banks
- Actual problems of Finance
- Financial markets and financial credit institutions

CENTRAL ENGINEERING RESEARCH INSTITUTE FOR MACHINE BUILDING (TSNIIMASH)

The Central Research Institute for Machine Building, Federal State Unitary Enterprise is a head scientific and research institution of the Federal Space Agency. For over 60 years the Institute has been participating in development of substantially all launch vehicles (LV), manned spacecraft (SC), orbital stations and unmanned SC.

TODAY:

- Plans to open Department:
- DESIGN AND PRODUCTION OF SPECIAL EQUIPMENT (2015)
- New specialities:
- Designing technology machines and systems
- engineering Technology
- Research and implementation of space segment alert emergency situations