



## STRENGTHS OF THE INTERNATIONAL MASTER'S PROGRAM

Profound knowledge and expertise in Metallic Materials structure and properties

Extensive training in practical research and problem solving

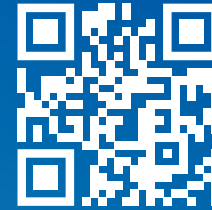
New materials and technology development

Modern software tools for metals and alloys processes

Forecasting properties and structure



## CONTACT INFORMATION



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## PROFESSIONAL NAVIGATION AND ADMISSION DEPARTMENT



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**MISIS**  
UNIVERSITY

Building  
a Better  
Future

## ADVANCED METALLIC MATERIALS AND ENGINEERING



2024



The program is focused on practical competences for further career development in applied research and engineering. It provides a unique opportunity for meaningful research and achievements along with academic training, supervised by our leading scientists. Profound training in all modern scientific and applied issues of Metallic Materials includes:

- METALLIC MATERIALS: STRUCTURE, PROPERTIES AND APPLICATION
- THERMODYNAMIC COMPUTATION AND ANALYSIS OF PHASE DIAGRAMS OF MULTICOMPONENT SYSTEMS
- MODELLING AND OPTIMIZATION IN PHYSICAL METALLURGY
- DEVELOPMENT OF METALLIC MATERIALS
- THERMAL AND THERMOMECHANICAL TREATMENT OF SPECIAL STEELS AND ALLOYS
- THERMODYNAMICS AND KINETICS IN MATERIALS SCIENCE
- MODERN EQUIPMENT AND TECHNIQUES FOR INVESTIGATION OF STRUCTURE AND PROPERTIES OF METALLIC ALLOYS
- DIFFUSION IN SOLIDS
- MECHANICAL SPECTROSCOPY OF METALLIC MATERIALS  
AMORPHOUS METALLIC ALLOYS  
CORROSION AND PROTECTION OF THE METALLIC MATERIALS  
ADVANCED TECHNOLOGIES OF THE METALLIC MATERIALS PRODUCTION



**Professor Igor Golovin**  
PhD & DSc

Ten years experience of working abroad: EPFL Switzerland, TUBS Germany, Cambridge Uni, UIB. International and national grants DGF, DAAD, The Royal Society, UIB, RFBR, RNF. Invited lectures in different countries (Germany, Spain, Italy, Japan, China, Brazil), co-author of seven books and over 200 research papers.



**Professor Alexey Solonin**  
PhD

Department of Physical Metallurgy of Non-ferrous Metals, Coordinator of the program Advanced Metallic Materials and Engineering, the area of scientific interests includes non-ferrous metallurgy, metal composite materials, metallic materials modelling.



**Professor Akihisa Inoue**  
PhD & DSc

World-leading material scientist. Life member of Japan Academy, life foreign member of the US National Academy of Engineering. Other honors include The Japan Academy Prize, James C. McGroody Prize for New Materials, Acta Materialia Gold Medal Award.

## SKILLS AND CAREER OPPORTUNITIES

The Department's alumni pursue successful careers in space/ aircraft and automotive industries, metallurgy, new materials design in Russia, Europe, USA, China and other countries. Throughout the program students are welcome to participate in research projects for our local and international customers: Russian Aluminum Inc., Ilyushin Aircrafts JSC, Alcoa, European Aeronautic Defense and Space Company (EADS), Audi AG, Volkswagen Group and others. Audi AG, Volkswagen Group and others.

## NUST MISIS IS ONE OF THE LEADING AND MOST DYNAMIC UNIVERSITIES AND R&D CENTERS IN RUSSIA

Full-tuition scholarships available to our top international students

Excellent research base and close relations with R&D centers and universities around the world

World-leading and top Russian scientists and professors

High demand occupations

Top-notch infrastructure

International student support office and International Friendship Club student organization

Friendly international atmosphere

Strong relations with the largest Russian and international companies – Metalloinvest, Rosatom, Evraz, IBS, Gazprom, etc.

