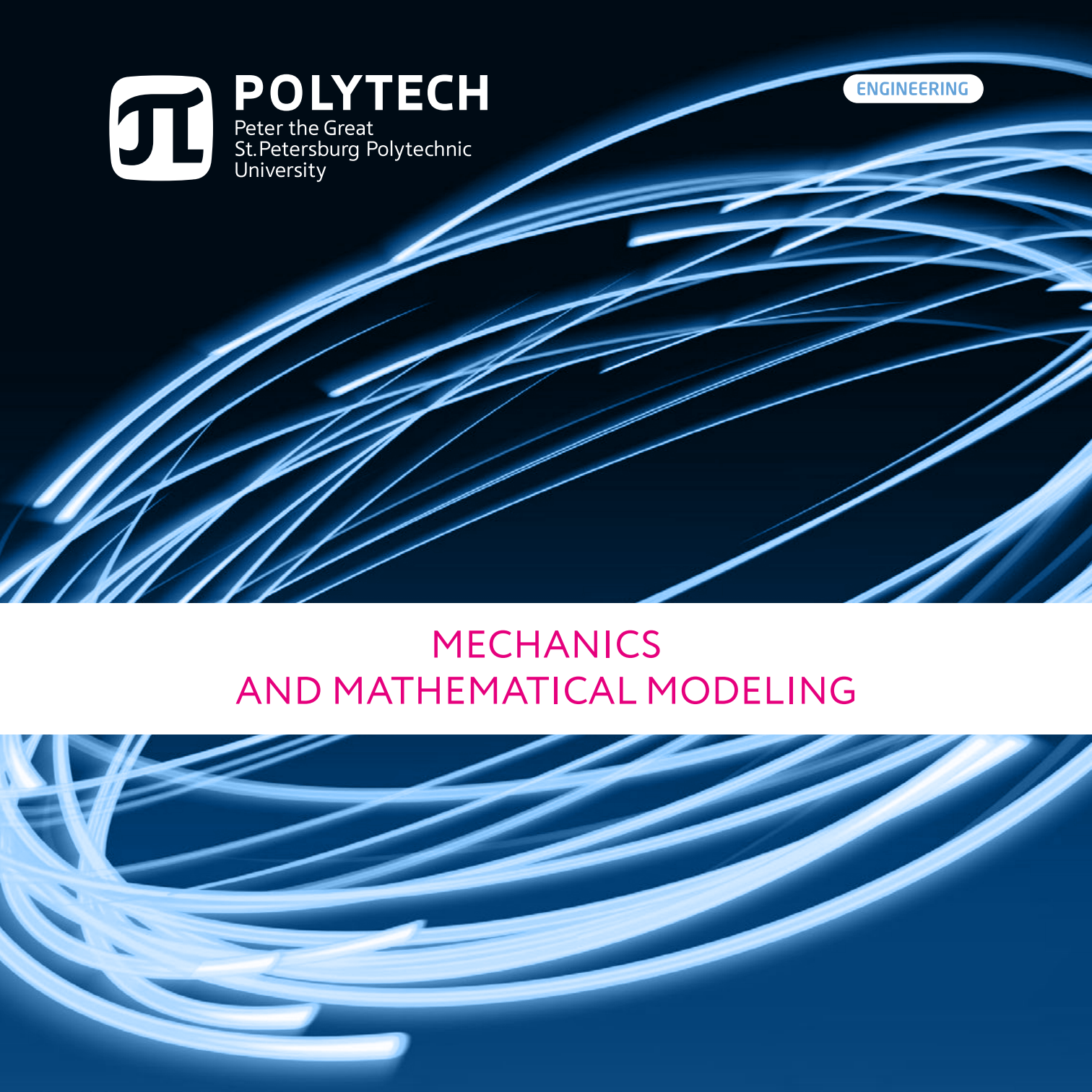
POLYTECH
Peter the Great
St.Petersburg Polytechnic
University
ENGINEERING
MECHANICS
AND MATHEMATICAL MODELING

PROGRAM NAME: Mechanics and Mathematical Modeling

AWARD: Master of Science

MODE OF STUDY: full-time

COURSE DURATION: 2 years: 3 semesters at SPbPU + 1 semester at a partner university (optional)

PROGRAM OUTLINE: The program is aimed at training highly professional scientists and engineers with the background and practical experience in mechanics of porous media and multiphase media, computational mechanics, mathematical modeling and simulations, and distributed computing. Special focus is set on oil and gas production, namely, simulation of hydraulic fracturing, geophysical and hydrodynamic methods for oil and gas well testing, development of oil and gas fields, rock mechanics.

CURRICULUM (GENERAL MODULES):

MODULES	ECTS
Computational Mechanics	13
Mathematical Modeling and Simulations	21
Mechanics Fundamentals	16
Modern Problems in Mechanics of Oil and Gas	17
Personal Research Project	38
Master's Thesis	15
Total	120

ENTRY REQUIREMENTS: Bachelor's, Specialist's or Master's degree in a relevant area is required / English language proficiency - B+ (CEFR B2) / Exam Test in a relevant field of studies / Interview in English with a program coordinator (in person or via Skype)

PARTNERS:

- Italy — University of Turin
- Russia – LLC "Gazpromneft Science & Technology Centre"
- Germany – Technical University of Berlin
- Germany – Otto von Guericke University Magdeburg
- France — Ecole Polytechnique
- Russia — Institute for Problems in Mechanical Engineering RAS

CAREER OPPORTUNITIES: Our graduates will be able to get a challenging and a well-paid job in research institutes, centers and laboratories, as well as in R&D and engineering departments of oil and gas, car-making, power and engineering, aerospace industries and others.