FMF Scientific priorities are:

- Information and Communication Technology
- Nanosciences, Nanotechnologies, Materials and new Production Technologies
- Transport (including aeronautics)

Scientists faculty conducting research on this topic:

- "Investigation of current problems of the theory of random processes, mathematical analysis and boundary value problems of mathematical physics"
- "Investigation of the influence of the statistical characteristics of partially coherent beams when used in optical communication systems"
- "Influence of magnetic field on self-oscillating processes on the interfaces surface conductor-electrolyte"
- "Theoretical and experimental studies of morphology and optical properties of photochemically / thermally synthesized nanoscale particles with characteristic spectra of surface plasmon resonance"
- "The theory of structural-parametric geometric modeling as a means of optimizing complex processes aided design and manufacturing"
- "Development of optical methods and means of measuring the concentration of fiber suspension systems for process control parameters of cellulose paper materials"
- "Electronic processes in large electric fields in silicon carbide politypah"
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- Research of qualitative and spectral characteristics of dynamic systems
- Statistical evaluation of characteristics and construction of mathematical models of random processes and fields
- Development of methods for studying solutions of differential-operator equations and equations with partial derivatives of parabolic type
- Chaos and solitons of oscillatory systems
- Processing of hazardous carbon-containing waste using plasma technologies
- Physico-topological modeling of processes in vacuum devices with induction control