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Azərbaycan Milli Elmlər Akademiyası



National Academy of Sciences of Azerbaijan

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Academician Akif Gadjiev - honorable life of scientist

If life was faithful, today a prominent mathematician, honored scientist, doctor of physical, mathematical sciences, professor, academician, vise-president of Azerbaijan National Academy of Sciences, academisian, secretary of the section of Physico-mathematical and Technical Sciences of ANAS Akif Gadjiev would be 80. Unfortunately, our scientific society, his colleagues, followers and family members will hild without him this event organized by the Institute of Mathematics and Mechanics by the decision of the Presidium of Azerbaijan National Academy of Sciences and



devoted to the 80-th anniversary of Akif Gadjiev, one of the bright representatives of Azerbaijan mathematics school.

Akif Jafar oglu Gadjiev opened his eyes to the world in the family of prominent literary critic, scientist, critic, professor, public and political figure Jafar Khandan on December 8, 1937. The rich traditions of this family, the scientific and intelligent environment predetermined the future way of life of Akif Gadjiev.

In 1955, he graduated from secondary school No3 in Baku and at the same year he joined the mathematics and mechanics faculty of Azerbaijan State University. After graduating from the University in 1960 he was sent to the Institute of Mathematics and Mechanics of the Azerbaijan Academy of Sciences and he began to work as a junior research associate at the, Functions theory, department of this institute. Here, supervised by the prominent scientist, acad. Ibrahim Ibrahimov he conducts his first scientific, research works.

In 1961-1967 Akif Gadjiev worked as a scientific secretary of IMM and 1961 participated in the international Conference in Tiflis, devoted to 70-th anniversary of academician Nikolay Muskheleshvili and in the same year he participated in the All Union Conference on Function Theory.

December 6–8, 2017 Baku, Azerbaijan

Integrable Systems with Dissipation in Dynamics

Shamolin Maxim V.

Lomonosov Moscow State University, Russian Federation

The systems with position spaces as two-dimensional manifolds are arising in many problems of dynamics. The phase spaces of such systems naturally become the tangent bundles to them. For example, the study of three-dimensional pendulum on a spherical hinge in a medium flow leads to a dynamical system on the tangent bundle to two-dimensional sphere with a special metric on it. This metric is induced by an additional group of symmetries. In this case the dynamical systems have the variable dissipation, and the complete list of first integrals consists of the transcendental functions expressed in terms of a finite combination of elementary functions. There is also a class of problems on the motion of a point in two-dimensional surface with the metric which is induced by the Euclidean metric of a comprehensive space. The activity shows the integrability of certain classes of systems on the tangent bundles of two-dimensional manifolds. In this case, the force fields have the variable dissipation and generalize the previously considered [1].

Keywords: Dynamical system, Dissipation, Integrability, Transcendental First Integral

References

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