

## **The study module of automatic transmissions based on the universal differential mechanism**

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### **Abstract**

© 2014 Ildar Ilgizarovich Salakhov and Hakimzyan Amirovich Fashiev. The existing differential mechanisms - the planetary systems, which are the basis for creation of automatic transmissions are analyzed, the prospects for the application and development of planetary automatic transaxles are examined. The kinematic diagrams of differential mechanisms, which are the part of developed universal differential mechanism structure and the very mechanism, are presented. Its key structural parameters, kinematic connection between parts, which are summarized in the table, are detected. The design procedure of the universal differential mechanism, which is associated with the design philosophy and internal gear ratios, determined in accordance with the required gear ratio transmission is expounded.

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### **Keywords**

Automatic transmission, The planetary system, Universal differential mechanism