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Abstracts of Short Communications and Posters

Section:

17. Control Theory and Optimization

1991 MS Classification: 49, 65, 90
Vasiliev, Oleg, and Srochko, Vladimir, Irkutsk State University, Russia
High quality computational methods for optimal control problems
The main classes of optimal control problems are considered from positions of effective numerical solving. The basis of the proposed approach is connected with nonstandard approximations (variations) of the cost functionals together with a procedure of phase regularization. As a result the series of new methods with high characteristics of quality is constructed and analyzed – methods of phase linearization, quasigradient procedures, methods of nonlocal improvement. Each method realizes the new optimality condition which strengthens the maximum principle and its corollaries.
Reference: O. V. Vasiliev, Optimization methods, World Federation Publishers Company, Atlanta, USA, 1996.