Stability of functional differential systems with a finite number of delays

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We present several results dealing with asymptotic properties of a real two-dimensional differential system with unbounded nonconstant delays. The sufficient conditions for the stability and asymptotic stability of solutions are given. Used methods are based on the transformation of the considered real system to one equation with complex-valued coefficients. Asymptotic properties are studied by means of Lyapunov-Krasovskii functional. The results generalize some previous ones (see [1]–[5]), where the asymptotic properties for two-dimensional systems with one or more constant delays or one nonconstant delay were studied. This is a joint work with Zdeněk Šmarda, Brno, Czech Republic.

References

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