| cases | doc_1 | doc_2 | decision | id |
|---|---|---|---|---|
| | | | NOT DUPLICATES | 458 |

**doc_1**

| | |
|---|---|
| authors | • T. Burton |
| title | Linear differential equations with periodic coefficients |
| publication_date | 1966-02-01 00:00:00 |
| source | SupportedSources.SEMANTIC_SCHOLAR |
| journal | |
| volume | 17 |
| doi | 10.1090/S0002-9939-1966-0190442-4 |
| urls | • https://www.semanticscholar.org/paper/07cf6a7c4fc000e5c73ba05730acbdcc73589757 |
| id | id-1476862070907743021 |
| abstract | where X is an n dimensional column vector and A(t) is an nXn matrix whose elements are continuous periodic functions of a real variable t. Epstein [2] has shown that if A (t) is periodic and odd then all solutions of (1) are periodic. Also, using formulae from differential geometry, Epstein obtained a necessary condition that all solutions of (1) be periodic provided that A (t) is 3 X 3, skew symmetric, and periodic. We show that if A(t) is skew symmetric and periodic, then every solution of (1) is almost periodic. This theorem is important for two reasons. First, it is of interest in itself. Second, Epstein has shown that the solutions of (1) depend on those of two systems, one of which is symmetric and the other skew symmetric. The coefficients of the symmetric system will be periodic if the solutions of the skew symmetric system are periodic with the same period as the original system. Since the fundamental solution matrix of (1) can be expressed as X(t) =P(t) Y(t) where P(t) is periodic and Y(t) =exp Dt is the fundamental solution matrix of Y' = D Y with D constant, one would be reluctant to use Epstein's technique of separating (1) into two systems unless he could be sure that both of the resulting systems would have solutions of a correspondingly simple form as that of (1). Our theorem enables us to show that the fundamental solution matrix of the symmetric system can be expressed as F(t) exp Dt where F(t) is almost periodic and D is constant. |
| versions | |

**doc_2**

| | |
|---|---|
| authors | • V. A. Iï¸ Aï¸¡kubovich<br>• V. M. StarzhinskiÄ |
| title | Linear differential equations with periodic coefficients |
| publication_date | None |
| source | SupportedSources.SEMANTIC_SCHOLAR |
| journal | |
| volume | |
| doi | |
| urls | • https://www.semanticscholar.org/paper/af13dd6a756acc2162a8292dde96c3267b02b393 |
| id | id-7316430106813155187 |
| abstract | None |
| versions | |