



Math for the people, by the people.

Iwasawa decomposition

Canonical name	IwasawaDecomposition
Date of creation	2013-03-22 14:32:29
Last modified on	2013-03-22 14:32:29
Owner	mathwizard (128)
Last modified by	mathwizard (128)
Numerical id	7
Author	mathwizard (128)
Entry type	Theorem
Classification	msc 15A99
Related topic	MatrixFactorization

Let A be an invertible matrix with real coefficients. Then there exist unique matrices O , D , U , such that

1. $A = ODU$.
2. O is an orthogonal matrix.
3. D is a diagonal matrix with positive diagonal entries.
4. U is a unit upper triangular matrix.