

8th International Conference on Symmetries and Integrability of Difference
Equations (SIDE8) **June 22–28, 2008**
8^e Conférence internationale “Symétrie et intégrabilité des équations aux
différences” (SIDE8) **22–28 juin, 2008**

Symmetries of discrete dynamical systems in a two-dimensional lattice

Sébastien Tremblay
Département de Mathématiques
Université du Québec à Trois-Rivières
C.P. 500
Trois-Rivires (Québec), G9A 5H7
CANADA

`sebastien.tremblay@uqtr.ca`

Abstract

A class of nonlinear differential-difference equations in a two-dimensional hexagonal lattice is investigated under the Lie point symmetries that it allows.

The system can be interpreted as atomic displacements u_{nm} normal to the surface, where (n, m) locate the lattice point on the coordinate system.

In collaboration with I. Ste-Marie.