



Banach J. Math. Anal. 6 (2012), no. 2, 38–57

BANACH **J**OURNAL OF **M**ATHEMATICAL **A**NALYSIS

ISSN: 1735-8787 (electronic)

www.emis.de/journals/BJMA/

A CUNTZ–KRIEGER UNIQUENESS THEOREM FOR SEMIGRAPH C^* -ALGEBRAS

BERNHARD BURGSTALLER

Communicated by M. Joița

ABSTRACT. Higher rank semigraph algebras are introduced by mixing concepts of ultragraph algebras and higher rank graph algebras. This yields a kind of higher rank generalisation of ultragraph algebras. We prove Cuntz–Krieger uniqueness theorems for cancelling semigraph algebras and aperiodic saturated semigraph algebras.

DOPPLER INSTITUTE FOR MATHEMATICAL PHYSICS, TROJANOVA 13, 12000 PRAGUE, CZECH REPUBLIC.

E-mail address: bernhardburgstaller@yahoo.de

Date: Received: 18 October 2011; Accepted: 29 January 2012.

2010 Mathematics Subject Classification. Primary 46L05; Secondary 46L55.

Key words and phrases. Higher rank semigraph algebra, ultragraph, labelled graph, Cuntz–Krieger uniqueness, aperiodic.