STABILITY RESULTS FOR $C^*$-UNITARIZABLE GROUPS

RACHID EL HARTI$^1$ AND PAULO R. PINTO$^2$*

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ABSTRACT. We say that a locally compact group $G$ is $C^*$-unitarizable if its full group $C^*$-algebra $C^*(G)$ satisfies Kadison’s similarity problem (SP), i.e. every bounded representation of $C^*(G)$ on a Hilbert space is similar to a $*$-representation. We prove that locally compact and unitarizable groups are $C^*$-unitarizable. For discrete groups, we prove that $C^*$-unitarizable passes to quotients. Moreover, a given discrete group is $C^*$-unitarizable whenever we can find a normal and $C^*$-unitarizable subgroup with amenable quotient.

$^1$ DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCES, FACULTY OF SCIENCES AND TECHNIQUES, UNIVERSITY HASSAN I, BP 577. 26000 SETTAT, MOROCCO.
E-mail address: relharti@gmail.com

$^2$ DEPARTMENT OF MATHEMATICS, INSTITUTO SUPERIOR TÉCNICO, AV. ROVISCO PAIS, 1049-001 LISBOA, PORTUGAL.
E-mail address: ppinto@math.ist.utl.pt

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* Corresponding author.

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