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**Generalized canonical commutation relations:  
representations and stability of universal enveloping  
 $C^*$ -algebra.** (English. English summary)

*Symmetry in nonlinear mathematical physics, Part 1, 2 (Kyiv, 2001),*  
456–460, *Pr. Inst. Mat. Nats. Akad. Nauk Ukr. Mat. Zastos.*, 43, Part  
1, 2, *Natsional. Akad. Nauk Ukraïni, Inst. Mat., Kiev*, 2002.

The authors consider a deformation of CCR which they call GCCR  
and which is characterized by the identities

$$a_i^* a_i = 1 + \alpha_i a_i a_i^* - \sum_{j < i; k_j \geq i} (1 - \alpha_j) a_j a_j^*,$$

$$a_i^* a_j = \lambda_{i,j} \alpha_i a_j a_i^*, \quad a_j a_i = \lambda_{i,j} \alpha_i a_i a_j, \quad i < j, \quad k_i \geq j,$$

$$a_i^* a_j = \lambda_{i,j} a_j a_i^*, \quad a_j a_i = \lambda_{i,j} a_i a_j, \quad i < j, \quad k_i < j,$$

$$0 < \alpha_i < 1, \quad |\lambda_{i,j}| = 1, \quad i, j = 1, \dots, d, \quad i \neq j.$$

The irreducible representations of GCCR are classified, the universal bounded representation studied, and the  $K$ -theory for the twisted commutation relation computed.

{For the entire collection see 2003b:00031}

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