Title (en)

QUANTUM RANDOM NUMBER GENERATOR BASED ON DIFFRACTION OF HIGH-ORDER GRATING

Title (de)

AUF DIFFRAKTION EINES GITTERS HÖHERER ORDNUNG BASIERENDER QUANTENZUFALLSZAHLENGENERATOR

Title (fr)

GÉNÉRATEUR DE NOMBRES ALÉATOIRES QUANTIQUES SUR LA BASE DE LA DIFFRACTION D'UN RÉSEAU DE RANG SUPÉRIEUR

Publication

EP 2359236 A4 20120425 (EN)

Application

EP 09829365 A 20091103

Priority

- MY 2009000183 W 20091103
- MY PI20084373 A 20081103

Abstract (en)

[origin: WO2010062161A2] A method and apparatus (10) for generating random numbers using high-order grating (12) by wave diffraction of emitting photons from the grating (12) is disclosed. The apparatus (10) includes a particle source (11) capable of emitting a source of particles, a high-order grating (12) including output surfaces (22, 23), said high-order grating being disposed in relation to said particle source so that said source of particles encounter said high-order grating (12) for diffraction and particle which goes through constructive interference emits through either output surfaces (22, 23) of said grating (12), and at least one detector for capturing said emitted particle to a random signal to be processed for outputting a random number.

IPC 8 full level

G06F 7/58 (2006.01); **G06F 17/00** (2006.01); **H03K 3/84** (2006.01)

CPC (source: EP)

B82Y 10/00 (2013.01); **G06F 7/588** (2013.01); **H04L 9/0852** (2013.01)

Citation (search report)

- [A] US 6430345 B1 20020806 - DULTZ WOLFGANG [DE], et al
- [A] US 2007016534 A1 20070118 - HARRISON KEITH A [GB], et al
- See references of WO 2010062161A2

Designated contracting state (EPC)

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WO 2010062161 A2 20100603; **WO 2010062161 A3 20100722**; EP 2359236 A2 20110824; EP 2359236 A4 20120425; MY 146870 A 20121015

DOCDB simple family (application)

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