Title (en)
METHOD AND DEVICE FOR OPTICS BASED QUANTUM RANDOM NUMBER GENERATION

Title (de)
VERFAHREN UND VORRICHTUNG ZUR OPTIKBASIERTEN QUANTENZUFALLSZAHLENGENERIERUNG

Title (fr)
PROCÉDÉ ET DISPOSITIF DE GÉNÉRATION DE NOMBRES ALÉATOIRES QUANTIQUES À BASE OPTIQUE

Publication
EP 3375130 A1 20180919 (EN)

Application
EP 16795249 A 20161031

Priority
• US 201514937202 A 20151110
• EP 2016076200 W 20161031

Abstract (en)
[origin: WO2017080860A1] A method and device for generating random numbers based on an optical process of quantum nature. According to one exemplary aspect, the method includes randomly emitting photons from a light source and absorbing the emitted photons by a photon sensor having a plurality of pixels. Furthermore, respective minimum entropy levels can be calculated for each of the pixels of the photon sensor and a randomness extractor can be associated with each of pixels based on the calculated minimum entropy level of that pixel. After this calibration, the method and device generates a number of high-entropy bits used for generating a random number.

IPC 8 full level
H04L 9/08 (2006.01); **G06N 99/00** (2010.01)

CPC (source: CN EP)
G06F 7/58 (2013.01 - EP); **G06F 7/588** (2013.01 - CN); **H04L 9/0662** (2013.01 - CN); **H04L 9/0852** (2013.01 - CN EP); G06N 10/00 (2018.12 - EP)

Citation (search report)
See references of WO 2017080860A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2017080860 A1 20170518; CN 107066236 A 20170818; CN 107066236 B 20210810; EP 3375130 A1 20180919

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EP 2016076200 W 20161031; CN 201610990894 A 20161110; EP 16795249 A 20161031