(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/03/2018

(21) Application No.201831009700 A
(43) Publication Date : 06/04/2018

(54) Title of the invention : SOLAR OPERATED MICROCONTROLLER BASED AUTOMATED CRICKET-PITCH SOIL FLATTER MACHINE

(51) International classification	:A01B49/06	(71)**Name of Applicant :**
(31) Priority Document No	:NA	**1)GURU NANAK INSTITUTE OF TECHNOLOGY**
(32) Priority Date	:NA	Address of Applicant :157/F, NILGUNJ ROAD, KOLKATA-700114, WEST BENGAL, INDIA
(33) Name of priority country	:NA	(72)**Name of Inventor :**
(86) International Application No	:NA	**1)MR. SOURISH MITRA**
Filing Date	:NA	**2)PROF.(DR.) SANTANU KUMAR SEN**
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
This invention relates to a Solar Operated Microcontroller Based Automated Cricket-pitch Soil Flatter machine and in particular, this invention relates to a Soil Flatter machine which is flattening land or breaking up large clumps of soil. More particularly, this present invention relates a soil flatter machine which is based on microprocessor. Furthermore, this invention also relates to the machine which has the beneficial effects of having saving manpower cost, reducing labor intensity, and having safety and reliability.

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(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/03/2018

(21) Application No.201831009701 A
(43) Publication Date : 06/04/2018

(54) Title of the invention : A SYSTEM FOR ALIGNING THE GENOMIC SEQUENCES.

(51) International classification	:C12Q 1/68	(71)**Name of Applicant :** **1)GURU NANAK INSTITUTE OF TECHNOLOGY** Address of Applicant :157/F, NILGUNJ ROAD, KOLKATA-700114, WEST BENGAL, INDIA
(31) Priority Document No	:NA	(72)**Name of Inventor :** **1)MS. IPSITA SAHA** **2)PROF.(DR.) SANTANU KUMAR SEN**
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
This invention relates to a system for aligning the genomic sequences and in particular, this invention relates to a system for aligning the genomic sequences in which the Raspberry Pi based microcomputer is used that can detect cancerous genomic sequence. This invention relates to a system for aligning the genomic sequences wherein Linux kernel is secure in the terms of any malware attack or viruses and worms. Furthermore, this invention also relates to a system for aligning the genomic sequences which has the beneficial effects of having is light-weight and compact,and having safety and reliable.

No. of Pages : 20 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/03/2018

(21) Application No.201831009702 A
(43) Publication Date : 06/04/2018

(54) Title of the invention : A SYSTEM FOR DNA SEQUENCE ALIGNMENT.

(51) International classification	:C12Q 1/68
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No	:NA
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(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
Filing Date	:NA

(71)**Name of Applicant :**
1)GURU NANAK INSTITUTE OF TECHNOLOGY
Address of Applicant :157/F NILGUNJ ROAD, KOLKATA-700114, WEST BENGAL, INDIA
(72)**Name of Inventor :**
1)MR. MOLOY DHAR
2)PROF.(DR.) SANTANU KUMAR SEN

(57) Abstract :
This invention relates to a Biometric authentication apparatus and in particular, this invention relates to a Biometric authentication apparatus wherein hand biometrics applied to images acquired from a mobile device. This invention also relates to a Biometric authentication apparatus which can identifying individuals based on features extracted from hand pictures obtained with a low-quality camera embedded on a mobile device. Furthermore, this invention also relates to a Biometric authentication apparatus wherein since the authentication is performed through a combination of biometric information and context information that are acquired, reliability and security of the authentication can be heightened.

No. of Pages : 17 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/03/2018

(21) Application No.201831009703 A
(43) Publication Date : 06/04/2018

(54) Title of the invention : A SYSTEM FOR DNA SEQUENCE ALIGNMENT

(51) International classification	:C12Q 1/68	(71)**Name of Applicant :** **1)GURU NANAK INSTITUTE OF TECHNOLOGY** Address of Applicant :157/F NILGUNJ ROAD, PANIHATI, KOLKATA-700114, WEST BENGAL, INDIA
(31) Priority Document No	:NA	(72)**Name of Inventor :** **1)PROF.(DR.) SANTANU KUMAR SEN** **2)MR.DEBRAJ ROY**
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
This invention relates to a system for DNA Sequence Alignment and in particular, this invention relates to a system for DNA Sequence Alignment in which the Content-to-Address Memory (CTAM) and Augmented Binary Search Processor (ABSP) that uses parallel pipelined architecture. This invention relates to a system for DNA Sequence Alignment which focuses on the hardware-based solution to this problem by utilizing the broad concept of Associative Memory (AM). Furthermore, this invention also relates to a system for DNA Sequence Alignment which has the beneficial effects of having remarkable high-speed, saving power cost, reducing labor intensity, and having safety and reliability and low cost.

No. of Pages : 26 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/03/2018

(21) Application No.201831009704 A
(43) Publication Date : 06/04/2018

(54) Title of the invention : A ROBOTIC SYSTEM HAVING ACCELEROMETER SENSOR.

(51) International classification :G06F 3/041
(31) Priority Document No :NA
(32) Priority Date :NA
(33) Name of priority country :NA
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(72)**Name of Inventor :**
1)RISHI RAJ SINGH
2)RITUPARNA DAS
3)KOUSHIK PAL

(57) Abstract :
This invention relates to a robotic system having accelerometer sensor and in particular, this invention relates to a robotic system which can perform different task on the bases of human hand gesture. This invention also relates to a robotic system which consists of Microcontroller, DC motor and Accelerometer Sensor. Furthermore, this invention also relates to a robotic system has the advantages of being simple in structure, flexible to control, small in size, convenient to carry, and high in propulsion power in each posture.

No. of Pages : 21 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/03/2018

(21) Application No.201831009706 A
(43) Publication Date : 06/04/2018

(54) Title of the invention : LOW LATENCY WAVELENGTH-DIVISION MULTIPLEXING SYSTEM COUPLED WITH A SHORT RANGE SURFACE PLASMON POLARITON WAVEGUIDE.

(51) International classification	:G02B6/293	(71)**Name of Applicant :**
(31) Priority Document No	:NA	**1)GURU NANAK INSTITUTE OF TECHNOLOGY**
(32) Priority Date	:NA	Address of Applicant :157/F NILGUNJ ROAD, KOLKATA-700114, WEST BENGAL, INDIA
(33) Name of priority country	:NA	(72)**Name of Inventor :**
(86) International Application No	:NA	**1)MRS. BAPITA ROY**
Filing Date	:NA	**2)MRS. PARAMITA BANERJEE**
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
A low latency wavelength-division multiplexing system coupled with a short range surface plasmon polariton waveguide, comprising: a metal substrate, which has atop surface; a hollow metallic block periodic structure, wherein the hollow metallic block periodic structure is operable in a predetermined working frequency band and defines a forbidden band regime; the hollow metallic block periodic structure comprising a plurality of unit cell blocks that is spaced from each other by a predetermined interval, the unit cell blocks being arranged at a sub-wavelength period in a one-dimensional line-up direction to line up on the top surface of the metal substrate, each of the unit cell blocks generating an electromagnetic field distribution in the working frequency band; a low frequency spoof surface plasmon polariton transmission mode being introduced in the forbidden band regime of the hollow metallic block periodic structure; wherein each of the unit cell blocks comprises a channel space; and under the low frequency spoof surface plasmon polariton transmission mode, the hollow metallic block periodic structure provides a structure of an antenna, the electromagnetic field distribution of each of the unit cell blocks being mostly confined in a channel space of the unit cell block; each of the unit cell blocks comprises: a body; a penetration section, which penetrates through the body by extending in a horizontal penetration direction so as to define the channel space in the body, the channel space being delimited by a left section, a right section opposite to the left section, and a horizontal top section between the left section and the right section; and an open slot, which is formed in the horizontal top section by extending in the horizontal penetration direction so as to divide the horizontal top section into a left top section and a right top section.

No. of Pages : 15 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/03/2018

(21) Application No.201831009707 A
(43) Publication Date : 06/04/2018

(54) Title of the invention : LOW-FREQUENCY HEATING PROCESS IN THE TRANSFORMER.

(51) International classification	:H02M 5/16	(71)**Name of Applicant :** **1)GURU NANAK INSTITUTE OF TECHNOLOGY** Address of Applicant :157/F NILGUNJ ROAD, KOLKATA-700114, WEST BENGAL, INDIA
(31) Priority Document No	:NA	(72)**Name of Inventor :** **1)SUMAN GHOSH** **2)SHYAMAL ROY**
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
The present invention relates to a low-frequency heating process in the transformer. More particularly, the present invention relates to the low-frequency heating process in the transformer while vacuum by using hot oil circulation. The present invention relates to the low-frequency heating process in the transformer_which-has-the-advantages of-stable-and-reliable operation.

No. of Pages : 16 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/03/2018

(21) Application No.201831009708 A
(43) Publication Date : 06/04/2018

(54) Title of the invention : PARABOLIC MIRROR BASED SOLAR LIGHT TUNNEL SYSTEM.

(51) International classification	:F21W 131/101	(71)**Name of Applicant :** **1)GURU NANAK INSTITUTE OF TECHNOLOGY** Address of Applicant :157/F NILGUNJ ROAD, KOLKATA-700114, WEST BENGAL, INDIA
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	(72)**Name of Inventor :** **1)MR. SISIR MAZUMDER** **2)MR. SUSOVAN DUTTA** **3)MS. MADHUMITA CHAKRABORTY** **4)MS. RIKTA MAJUMDER**
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
This invention relates to a Parabolic Mirror based Solar Light tunnel system and in particular, this invention relates to a Parabolic Mirror based Solar Light tunnel system in which light energy is distributed through branch-tunnels within the room. This invention relates to a Parabolic Mirror based Solar Light tunnel system wherein the Solar light tunnels will supply sunlight to the residential buildings and homes. Furthermore, this invention also relates to a Parabolic Mirror based Solar Light tunnel system which has the beneficia1 effects of having saving cost and having safety and reliability.

No. of Pages : 14 No. of Claims : 5

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(19) INDIA
(22) Date of filing of Application :16/03/2018

(21) Application No.201831009709 A
(43) Publication Date : 06/04/2018

(54) Title of the invention : ANTIOXIDANT EXTRACT FROM PEANUT HULLS.

(51) International classification :C09K15/34,
(31) Priority Document No :NA
(32) Priority Date :NA
(33) Name of priority country :NA
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)**Name of Applicant :**
1)GURU NANAK INSTITUTE OF TECHNOLOGY
Address of Applicant :157/F NILGUNJ ROAD,PANIHATI, KOLKATA-700114, WEST BENGAL, INDIA
(72)**Name of Inventor :**
1)DR. KAKALI BANDYOPADHYAY
2)SHAIREE GANGULY

(57) Abstract :
A method for the extracting polyphenol from peanut hulls comprising the steps of: collectingPeanut hulls followed by freezing, drying and ground into fine powder; obtaining extract, by dissolving the peanut hulls (0.5 g) in 5mL methanol for 24 hours by maceration at a refrigerated temperature; filtering the extract and the residue was extracted again under same conditions for two times; and conductingevaporation for the collected filtrates in a Rotary Vacuum Evaporator at 35°C.

No. of Pages : 18 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/03/2018

(21) Application No.201831009710 A
(43) Publication Date : 13/04/2018

(54) Title of the invention : A REMOTE CONTROL SYSTEM FOR CONTROLLING A SURVEILLANCE VEHICLE INCLUDING A CAMERA WITH A SMART PHONE

(51) International classification	:G05D1/10	(71)**Name of Applicant :**
(31) Priority Document No	:NA	**1)GURU NANAK INSTITUTE OF TECHNOLOGY**
(32) Priority Date	:NA	Address of Applicant :157/F NILGUNJ ROAD, KOLKATA-700114, WEST BENGAL, INDIA
(33) Name of priority country	:NA	(72)**Name of Inventor :**
(86) International Application No	:NA	**1)MR. SUDEEP GHOSH**
Filing Date	:NA	**2)MS.TRISHITA GHOSH,**
(87) International Publication No	: NA	**3)MS. BAISAKHI DAS**
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
A remote control system for controlling a surveillance vehicle including a camera with a smart phone comprising: a smart phone programmed with an application adapted to communicate with a programmable microcontroller located on the vehicle to: receive sensor data from the programmable microcontroller defining speed and steering direction of the vehicle and transmit control signals to the programmable microcontroller for controlling the speed, direction of the vehicle and camera elevation on the vehicle, a surveillance vehicle comprising: a radio antenna adapted for communication with the smart phone, a camera, compass unit, a GPS unit, a power source, a plurality of DC drive motor and a programmable microcontroller (including sensors).

No. of Pages : 23 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :16/03/2018

(21) Application No.201831009705 A
(43) Publication Date : 06/04/2018

(54) Title of the invention : DUAL CONDENSER DISTILLATION SYSTEM

(51) International classification	:C02F 1/04	(71)**Name of Applicant :** **1)GURU NANAK INSTITUTE OF TECHNOLOGY** Address of Applicant :157/F NILGUNJ ROAD, KOLKATA-700114, WEST BENGAL, INDIA
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	(72)**Name of Inventor :** **1)ADHISH KUMAR HAKRABARTY**
(86) International Application No	:NA	
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(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
A distillation system comprising: an evaporation conduit; an intake conduit and a return conduit in communication between a source of solution and the evaporation conduit, communication of the intake conduit and the return conduit with the evaporation conduit being unrestricted; adual condensing conduit with individually connected pressure vaives; a distillate conduit in communication with the condensing conduit; a transfer system connecting the evaporation conduit and the condensing conduit for transferring distillate vapour from the evaporation conduit to the condensing conduit to condense the distillate vapour in the condensing conduit; and a vacuum pump connected to at least one of the evaporation and condensing conduits for evacuating air from the evaporation and condensing conduits.

No. of Pages : 13 No. of Claims : 3