

JANUARY 2017

A prediction method for real-time large-scale solar Photo-voltaic energy production forecasting

Bing Dong, Zhaoxuan Li
Mechanical Engineering

Multistage therapeutic delivery system

Robert Lyle Hood, Teja Guda, Gold Hood,
Forhad Akhter, Joseph Pearson
Mechanical/ Biomedical Engineering

A mechanism for drug release from an implantable drug reservoir

Ruyan Guo, Robert Lyle Hood, Amir Jafari
Neda Habibi
Mechanical Engineering
Electrical & Computer

A method for propagation control of THz waves

Ruyan Guo, Amar S. Bhalla, Soutik Betal,
Moumita Dutta
Electrical & Computer

Nanorobot that allows remote controlled cell targeting, permeation and transport

Ruyan Guo, Amar S. Bhalla, Soutik Betal,
Moumita Dutta
Electrical & Computer

Image and video processing systems and methods

Artyom M Grigoryan, Sos Agaian
Electrical & Computer

A timing system to reduce hyperventilation

Brant Tyler Bennett, Carter Steven
Baumgartner, David Miles Jackson, Rodolfo
Garcia
Electrical & Computer

Electrosensitive drug delivery

Anson Joo Leng Ong, Teja Guda, Solaleh
Miar
Biomedical Engineering

FEBRUARY 2017

An enzyme purification technique

Francis K Yoshimoto, Michal Siller
Chemistry

A small molecule enzymatic inhibitor as a potential therapeutic to treat obesity

Francis K Yoshimoto
Chemistry

A method to optimize building energy cost and occupancy predictions

Bing Dong, Jeff Xu, Zhaoxuan Li
Mechanical Engineering

A medical device designed to slow and prevent hemorrhaging

Hannah Mae Jones, Madaleine Marie Farrer,
Brian Nathaniel Ke-Han Ruliffson, Jozse
Hernandez Trevino
Biomedical Engineering

An integrated device for real time electrical property study of targeted biological cells

Ruyan Guo, Amar S Bhalla, Anand Kumar
Ramasubramanian, Soutik Betal, Moumita
Dutta, Amit Kumar Saha
Electrical & Computer Engineering

A device for the detection of dental cavities

Anson Joo Leng Ong, Alan William Kosub,
Steven Jim DeLeon, Daniella Bojado, Frank
Rodriguez DeLuna
Biomedical Engineering

MARCH 2017

Forming hierarchical representations of semi-structured data to perform analysis on applications for computer vision

Sos Agaian
Electrical & Computer
Non-UTSA Inventors: Aaron Greenblatt

The incorporation of a buffer system capable of drastically decreasing solid deposit formation in the after treatment systems of diesel engine.

Ryan Christian Hartley, Zachary John
Tonzetich
Chemistry

A device that allows detecting and tracking of targets with guided aiming to hit the target.

Raafat Seif, Carmina Francia, Melvin
Stubblefield, Yonggun Lee, Elizabeth Martin,
Federico Berlanga
Mechanical Engineering

An EEG system is used to sense user mental states which can be fed to a VR system used to control the VR content.

Jianqiu Zhang, Yufei Huang, Zijing Mao,
Lenis Mauricio Merino
Electrical & Computer

A sock that can detect foot skin integrity between sensors.

Tiffany Addyson Bunnell,
Erin Pitre Pollet, Carol Ann Cordova,
Kristen Joy Steinke
Biomedical Engineering

A medical device that is to be used for the purpose of treating trauma induced hypothermia.

Katie Marie Alex, Jasmine Paulette King,
Travis Kotzur, Kennedi Wilson, Abbey
Rhenae Vela
Biomedical Engineering

A device that uses a controlled LED source that strongly attracts selected genus of obnoxious flying insects to a trapping/killing system.

Robert Lyle Hood, Gold Hood, Roy Matthew
Ringrose, Richard Raymond Leach
Mechanical Engineering

A robotic invention that would serve to provide a physical extension to the fingers while also providing a degree of pressure sensing and movement control

Corinne Nawn, Robert Lyle Hood, Carlyn
Abbott, Caroline Campbell, Sarah Robinson
Biomedical/ Mechanical Engineering

A mathematical framework to optimize power grid performance for energy consumption, power grid cost, and frequency regulation

Bing Dong, Nikolaos Gatsis, Zhaoxuan Li,
Ahmad Taha, Ankur Pipri
Mechanical Engineering/Electrical &
Computer

A dual purpose integrated circuit designed for efficient computation.

Eugene Britto John, Safwat Mostafa Noor
Electrical & Computer

APRIL 2017

A system designated to alert healthcare givers to the formation of pressure ulcers in sedentary and immobilized patients

Mario Hernandez, Casey Whitney, Meryem
Bousfiha, U-Ter Aondo Grace Jia
Biomedical Engineering

MAY 2017

Material features that enable for high sufficient gas separation and high capacity gas storage

Banglin Chen, Ruibiao Lin
Chemistry

JUNE 2017

An adjustable surface stiffness treadmill

Amir Jafari
Mechanical Engineering

An actuator with a wide range stiffness adjustment

Amir Jafari
Mechanical Engineering

An ExoMuscle technology that matches the flexibility and performance of human skeletal muscles

Amir Jafari
Mechanical Engineering

A social media application that assists in dating and friendships

Alan Eduardo Padilla
Business Management

JULY 2017

A method that connects indoor environment control system with human productivity based on brain signal

Bing Dong, Yufei Huang, Tapsya Nayak, Tinghe Zhang
Mechanical Engineering

A low-cost prototype to harvest thermal energy from pavement and convert into electric power

Samer Dessouky, Utpal Datta, Athanassios T. Papagiannakis
Civil & Environmental Engineering

Software to optimize the code for high performance computing

Harry Millwater, Juan Ocampo, Nathan Crosby
Mechanical Engineering

AUGUST 2017

A new memory allocator designed to improve security by protecting against common heap-based attacks

Tongping Liu, Hongyu Liu, Sam Albert Silvestro
Electrical & Computer

A microfluidic flow system whose main purpose is to assist in the study cell growth in vitro and emulate cell to cell interaction in the human body

Robert Lyle Hood, Christopher R Rathbone, Carlyn Abbott, Adrian-Joseph Macapinlac Alapag, Marcus Jorge Haraway, Victor Rene Palos, Jose Ignacio Aguilera, Brandon DeMont'e Durham
Mechanical & Biomedical Engineering

An automated system designed for cancer detection and Gleason scoring of different cancer tissue using artificial intelligence

Sos Aгаian, Foram Mahendra Sanghavi
Electrical & Computer

A technique that detects certain classes of cyber attacks on the Global Positioning System (GPS)

David Akopian, Ali Khalajmehrabadi, Nikolaos Gatsis, Ahmad Taha
Electrical & Computer

Compounds that can be applied in the development of point-of-care electrochemical devices for use in doctors' offices, hospitals, rural clinics, and limited resource areas

Stanton McHardy, Waldemar Gorski, Travis Menard, Doug P Hanson
Chemistry

SEPTEMBER 2017

Implantable microcomputer with embedded sensors for the management of diseases or medical monitoring of patients

Chunjiang Qian, Joseph John Paul, Paul Morton
Electrical & Computer Engineering

A lighting fixture that dramatically changes the surface appearance between lit and unlit states

Taeg K. Nishimoto
Architecture

A bioink to enable the 3D printing of biomaterials

Joseph Pearson, Teja Guda, Jasmine Paulette King
Biomedical Engineering

OCTOBER 2017

An experiential educational program in which undergraduate students perform internships, community service, and urban engagement

Sean Kelly, Kathryn Jill Fleuriet
Honors College

An antigen useful for diagnosis and immunization against Valley fever infection

Chiung-Yu Hung, Gary R. Ostroff, Natalia Castro-Lopez
Biology

NOVEMBER 2017

A system for detecting emotion engagement streamed over the internet

Peyman Najafirad, Arun Das
COE Electrical & Computer Engineering

A device that is used to increase the performance of football blocking techniques

Michael David Erwin, Ari Andrew Richtberg, Zachary Daniel McKee, Stephanie Morgan Meier
COE Mechanical Engineering

DECEMBER 2017

A device that provides treatment to shoulder injuries through various mechanical and electrical methods

Robert Lyle Hood, Corinne Nawn, Zach Stelle Fallon, Mark Kevin Sparkman
COE Biomedical/Mechanical Engineering

Software that detects fraud anomalies in broad areas such as security, malware classification, credit cards, insurance, and health care

Daijin Ko, Nicole L Beebe
COB Information Systems & Cyber Security/ Management Science and Statistics

A method to improve AES encryption implementations

Eugene Britto John, Alekhya Muthineni
COE Electrical & Computer

A web-based tool which assists users in determining the appropriate statistical test for a given set of parameters

H. Paul LeBlanc
COLFA Communication

Software to import schedule files as baselines into an existing schedule

Yilmaz Hatipkarasulu
CACP Construction Science

Hardware that provides a high level of security by combining security features

Tongping Liu, Hongyu Liu, Sam Albert Silvestro, Tianyi Liu
COS Computer Science

UTSA

Office of Commercialization
and Innovation