507888709 05/04/2023

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7935833

| NATURE OF CONVEYANCE | | NEW ASSIGNMENT | |
|--|---------------------------------|---|-------------------------|
| | : | ASSIGNMENT | |
| CONVEYING PARTY DATA | L . | | |
| | | Name | Execution Date |
| TYLER B. HUDSON | | | 08/22/2018 |
| FUH-GWO YUAN | | | 03/28/2022 |
| RECEIVING PARTY DATA | | | |
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| State/Country: UN | UNITED STATES | | |
| Postal Code: 27 | 606 | | |
| Application Number: 1571 | | 0211 | |
| | | | |
| CORRESPONDENCE DATA | | | |
| Fax Number: | , , |)864-9190 <i>e-mail address first; if that is unsuc</i> a | acceful it will be cont |
| | | hat is unsuccessful, it will be sent vi | |
| Phone: | () |) 864-5821 | |
| Email: | • | e.d.mardis@nasa.gov | |
| | | A LANGLEY RESEARCH CENTER CE OF THE GENERAL COUNSEL - LANGLEY | |
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| Address Line 1: Address Line 4: | | IPTON, VIRGINIA 23681-2199 | |
| Address Line 1: Address Line 4: ATTORNEY DOCKET NUMB | | LAR-18973-1 | |
| Address Line 1: Address Line 4: ATTORNEY DOCKET NUME NAME OF SUBMITTER: | | LAR-18973-1 YVETTE D. MARDIS | |
| Address Line 1: Address Line 4: ATTORNEY DOCKET NUMB NAME OF SUBMITTER: SIGNATURE: | | LAR-18973-1 YVETTE D. MARDIS /Yvette D. Mardis/ | |
| Address Line 1: Address Line 4: ATTORNEY DOCKET NUME NAME OF SUBMITTER: SIGNATURE: DATE SIGNED: | | LAR-18973-1 YVETTE D. MARDIS | |
| Address Line 1: Address Line 4: ATTORNEY DOCKET NUME NAME OF SUBMITTER: SIGNATURE: DATE SIGNED: Total Attachments: 3 | BER: | LAR-18973-1 YVETTE D. MARDIS /Yvette D. Mardis/ 05/04/2023 | |
| Address Line 1: Address Line 4: ATTORNEY DOCKET NUMB NAME OF SUBMITTER: SIGNATURE: DATE SIGNED: | BER: | LAR-18973-1 YVETTE D. MARDIS /Yvette D. Mardis/ 05/04/2023 | |



National Aeronautics and Space Administration

Patent Application

ASSIGNMENT TO THE U.S. GOVERNMENT

(Small Business or Nonprofit Organization)

Title of Invention: Automated Wave Guide System for In-Process Monitoring of Carbon Fiber Reinforced Polymer (CFRP) Composite Laminates

NASA Case No.: LAR-18973-1

Serial No. and Filing Date: 15/710,211 / September 20, 2017

Contractor: North Carolina State University

Contract Number: NNL09AA00A

WHEREAS, the above identified Contractor has elected not to retain title, or hereby elects not to retain title, under the provisions of 35 U.S.C. 202 to the above identified Invention made in the performance of work under the above identified Contract between the Contractor and the Government of the United States of America (the Government).

WHEREAS, the Government as represented by the Administrator of the National Aeronautics and Space Administration (NASA), is desirous of acquiring title to the above identified Invention and other rights and benefits herein granted.

NOW THEREFORE, the undersigned inventor(s) have assigned or hereby assign to the Contractor his/her entire right, title, and interest throughout the world in and to the Invention as disclosed in the above identified U.S. patent application and patent applications continuing therefrom and such Letters Patent as may issue therefrom. Subsequently, the Contractor hereby assigns to the Government, as represented by the Administrator of NASA, its entire right, title, and interest throughout the world in and to the Invention as disclosed in the above identified U.S. patent application and patent applications continuing therefrom and such Letters Patent as may issue therefrom and such Letters Patent as may issue therefrom, subject to the reservation to the Contractor of any license to which the Contractor may be entitled under the Contract.

The undersigned inventor(s) and the Contractor agree to provide to the Government any known relevant information, including prior art, that is material to the patentability of the Invention. Upon request, the undersigned inventor(s) and the Contractor agree to make, execute, and/or deliver to the Government any oaths, declarations, and assignments, and, at the expense of the Government, any and all data, drawings, notes, reports, information, papers, documents, affidavits, statements or other items necessary in the preparation and prosecution of the above identified patent application and of any applications continuing therefrom or applications for reissue or reexamination of said Letters Patent, or of any foreign patent or patent application, or any application continuing therefrom, and to assist the Government in every way in protecting the Invention as may be requested, provided that any expense arising through such assistance to protect the Invention will be paid by the Government.

The undersigned inventor(s) and Contractor hereby covenant that they have the right to grant the foregoing assignment.

PATENT REEL: 063532 FRAME: 0578 patent application, or any application continuing therefrom, and to assist the Government in every way in protecting the Invention as may be requested, provided that any expense arising through such assistance to protect the Invention will be paid by the Government.

The undersigned inventor(s) and Contractor hereby covenant that they have the right to grant the foregoing assignment.

For the Contractor Inventor(s):

Name: Tyler B. Hudson

I have not previously assigned any of my rights in the Invention, and I hereby agree as stated above.

Signature: ______ Date: ______ - or -

Attached hereto is an assignment of my entire rights in the Invention to the Contractor, signed on or before the date this Assignment to the U.S. Government is executed by the Contractor below. As stated above, I agree to assist the Government with patenting and protecting the Invention.

Signature: _____

Date:

Name: Fuh-Gwo Yuan

I have not previously assigned any of my rights in the Invention, and I hereby agree as stated above.

Signature: _____ Date: _____

- or -

Attached hereto is an assignment of my entire rights in the Invention to the Contractor, signed on or before the date this Assignment to the U.S. Government is executed by the Contractor below. As stated above, I agree to assist the Government

Signature: _____ Date: ____

For the Contractor:

On behalf of the Contractor, I hereby agree as stated above. (Signed and dated <u>on or after</u> the latest date executed by the above-identified inventor(s).)

| Name: | **** |
|------------|------|
| Title: | |
| Signature: | |
| Date: | |

with patenting and protecting the Invention.

For the Inventor(s):

Inventor 1 Name: [Tyler B. Hudson]

 \Box I have not previously assigned any of my rights in the Invention, and I hereby agree as stated above.

| Signature: _ | Date: |
|--------------|-------|
| - or - | |

 \Box Attached hereto is an assignment of my entire rights in the Invention to the Contractor, signed on or before the date this Assignment to the U.S. Government is executed by the Contractor below. As stated above, I agree to assist the Government with patenting and protecting the Invention.

Signature: Date: _____

Inventor 2 Name: [Fuh-Gwo Yuan]

 \mathbf{X} I have not previously assigned any of my rights in the Invention, and I hereby agree as stated above.

Signature: Fuh-Gwo Guan Date: 3/28/2022 - or -

Attached hereto is an assignment of my entire rights in the Invention to the Contractor, signed on or before the date this Assignment to the U.S. Government is executed by the Contractor below. As stated above, I agree to assist the Government with patenting and protecting the Invention.

Signature: _____ Date: _____

For the Contractor:

On behalf of the Contractor, I hereby agree as stated above. (Signed and dated on or after the latest date executed by the above-identified inventor(s).)

Name: <u>Kultaran Chohan, PhD LLM</u>

Title: Executive Director

Signature:

Date: April 1, 2022

Version: 20141020

RECORDED: 05/04/2023