#### 505351792 02/28/2019

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5398577

| SUBMISSION TYPE:      | NEW ASSIGNMENT                             |
|-----------------------|--|
| NATURE OF CONVEYANCE: | EXECUTIVE ORDER 9424, CONFIRMATORY LICENSE |

#### **CONVEYING PARTY DATA**

| Name                           | Execution Date |
|--------------------------------|----------------|
| UNIVERSITY OF TENNESSEE SYSTEM | 02/28/2019     |

### **RECEIVING PARTY DATA**

| Name:             | NATIONAL SCIENCE FOUNDATION |
|-------------------|-----------------------------|
| Street Address:   | 2415 EISENHOWER AVENUE      |
| Internal Address: | ROOM W 18000                |
| City:             | ALEXANDRIA                  |
| State/Country:    | VIRGINIA                    |
| Postal Code:      | 22314                       |

## **PROPERTY NUMBERS Total: 1**

| Property Type       | Number   |
|---------------------|----------|
| Application Number: | 16120022 |

### CORRESPONDENCE DATA

Fax Number: (703)292-9041

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Email: nsfpatents@nsf.gov

NATIONAL SCIENCE FOUNDATION **Correspondent Name:** 

Address Line 1: 2415 EISENHOWER AVENUE

Address Line 2: **ROOM W 18000** 

Address Line 4: ALEXANDRIA, VIRGINIA 22314

NAME OF SUBMITTER: DANA THIBODEAU SIGNATURE: /DMT/ **DATE SIGNED:** 02/28/2019

**Total Attachments: 1** source=5250#page1.tif

> **PATENT REEL: 048473 FRAME: 0755** 505351792

# License to the United States Government

| Sign and submit the executed document to the appropriate funding agency (e.g. upload in iEdison).   |
|---|
| Invention Title: A Multi-Dimensional Holomorphic Embedding Method to Solve AC Power Flows   |
| Inventor(s): Kai Sun, Bin Wang, Chengxi Liu, Xin Xu   |
| U.S. Filing/Issue Date: 08/31/2018  |
| Patent or Application Serial No.: 16/120, 022   |
| Grant/Contract Number(s): EEC1041877  |
| Foreign Applications filed/intended in (countries):   |
| The invention identified above is a Subject Invention under <b>35 U.S.C. 200, et seq.</b> , and the Standard Patent Rights clause at <b>37 CFR 401.14, FAR 52.227-11</b> or <b>FAR 52.227-12</b> (if applicable) which are included among the terms of the above identified grant or contract award from the United States Government. This document is confirmatory of:  |
| <ol> <li>The nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the invention described in any patent application and in any and all divisions, continuations, and continuations in part, and in any and all patents and re-issues granted thereon throughout the world; and</li> <li>All other rights acquired by the Government by reason of the above identified grant/contract award and the laws and regulations that are applicable to the award.</li> </ol> |
| The Government is hereby granted an irrevocable power to inspect and make copies of the above-identified patent application.  |
| Signed this   |
| For University of Tennessee Research Foundation  (Grantee/Contractor Organization)  |
| At 600 Henley Street Suite 211 Knoxville, TN 37996  |

UTRF 18116 0578306-17-0024

(Business Address)

**RECORDED: 02/28/2019** 

PATENT REEL: 048473 FRAME: 0756