### PATENT ASSIGNMENT

## Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
Limin Song	09/09/2013
Krishnan Kumaran	09/09/2013
Bhaskar Sengupta	09/12/2013
Jingbo Wang	09/13/2013

#### **RECEIVING PARTY DATA**

Name:	ExxonMobil Research and Engineering Company
Street Address:	1545 Route 22 East
Internal Address:	P.O. Box 900
City:	Annandale
State/Country:	NEW JERSEY
Postal Code:	08801-0900

#### PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14037953

#### **CORRESPONDENCE DATA**

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Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

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Correspondent Name: ExxonMobil Research and Engineering Co.

Address Line 1: 1545 Route 22 East Address Line 2: P.O. Box 900

Address Line 4: Annandale, NEW JERSEY 08801-0900

ATTORNEY DOCKET NUMBER:	2012EM306-US2
NAME OF SUBMITTER:	Glenn T. Barrett
	PATENT

502512030 REEL: 031295 FRAME: 0851

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Signature:	/Glenn T. Barrett/
Date:	09/27/2013
Total Attachments: 3 source=2012EM306-US2_Executed_Assign source=2012EM306-US2_Executed_Assign source=2012EM306-US2_Executed_Assign	ment#page2.tif

PATENT REEL: 031295 FRAME: 0852

Docket No.	2012EM306-US2
U.S. Serial No.	14/037,953 filed September 26, 2013

# ASSIGNMENT INVENTOR or INVENTORS:

### LIMIN SONG KRISHNAN KUMARAN BHASKAR SENGUPTA JINGBO WANG

For good and valuable consideration, the undersigned person(s) named above, herein referred to as UNDERSIGNED, hereby agree(s) as follows:

I) UNDERSIGNED hereby assign(s) to <a href="ExxonMobil Research and Engineering Company">Exxon Research and Engineering Company</a>), a corporation of Delaware, its successors, legal representatives and assigns, herein referred to collectively as ASSIGNEE, the entire right, title and interest, for the United States and all foreign countries, in and to UNDERSIGNED's invention or improvement and to all patent applications and patents covering same which is described in a patent application entitled.

# SENSOR NETWORK DESIGN AND INVERSE MODELING FOR REACTOR CONDITION MONITORING

said application having been exec	cuted on the 9,12,13	_ day(s) ofSe	eptember 2013	, and all
rights of priority created by said	application under provisions of interr	national conventi	ons or treaties.	
ing to obtaining patents and the p or substitutes therefor or registra	e(s) upon the request of ASSIGNEE prosecution thereof for said invention tions thereof, and any specific separatemark Office and any foreign patent	or improvement ate assignments o	t, and any continuations of of any of the above require	f such applications ed for recording in
patent issued thereon, or any reis UNDERSIGNED will cooperate	ec(s) that in the event of any applic suc or application for the reissue ther with ASSIGNEE to the best of the ng and producing evidence in suppor	reof, becoming in ability of UND	ivolved in priority of inve-	ntion proceedings,
and foreign patents covering said	e(s) to perform upon ASSIGNEE's I invention or improvement and to vo I have been held and enjoyed by UNI	est all rights there	ein hereby conveyed to AS	SSIGNEE, as fully
	cby authorize(s) ASSIGNEE to inseabove-referenced patent application.	ert in this instrun	nent the date(s) on which	UNDERSIGNED
IN WITNESS WHEREOF, this	assignment has been executed by	UNDERSIGNE	O on the date opposite U	INDERSIGNED's
NAME.  Date 9/9/2013	Inventor Song SOI	<u>N</u> (LS)	Witness DU	
Date 9/9/2013	InventorKRISHNAN KUMARAN	(LS)	Witness Williams	KAD
Date	BHASKAR SENGUPTA	(LS)	Witness	
Date	Inventor JINGBO WANG	(I.S)	Witness	
Date	Inventor	(LS)	Witness	***************************************
Date	laventor	(LS)	Witness	

Inventor

PATENT REEL: 031295 FRAME: 0853

Witness\_\_\_\_\_

Docket No. <u>2012EM306-US2</u> U.S. Serial No. 14/037,953 filed September 26, 2013

## ASSIGNMENT INVENTOR or INVENTORS:

LIMIN SONG KRISHNAN KUMARAN BHASKAR SENGUPTA JINGBO WANG

For good and valuable consideration, the undersigned person(s) named above, herein referred to as UNDERSIGNED, hereby agree(s) as follows:

1) UNDERSIGNED hereby assign(s) to <a href="ExxonMobil Research and Engineering Company">Exxon Research and Engineering Company</a>), a corporation of Delaware, its successors, legal representatives and assigns, herein referred to collectively as ASSIGNEE, the entire right, title and interest, for the United States and all foreign countries, in and to UNDERSIGNED's invention or improvement and to all patent applications and patents covering same which is described in a patent application entitled.

# SENSOR NETWORK DESIGN AND INVERSE MODELING FOR REACTOR CONDITION MONITORING

said application having been executed on the	9,12,13	day(s) of	September	2013 <sub>, and all</sub>
rights of priority created by said application u.	nder provisions of i	nternational con	ventions or treaties.	<u> </u>

- 2) UNDERSIGNED agree(s) upon the request of ASSIGNEE to execute any and all applications for and documents relating to obtaining patents and the prosecution thereof for said invention or improvement, and any continuations of such applications or substitutes therefor or registrations thereof, and any specific separate assignments of any of the above required for recording in the United States Patent and Trademark Office and any foreign patent office that ASSIGNEE may deem necessary or expedient.
- 3) UNDERSIGNED agree(s) that in the event of any application based on said assigned invention or improvement, or patent issued thereon, or any reissue or application for the reissue thereof, becoming involved in priority of invention proceedings, UNDERSIGNED will cooperate with ASSIGNEE to the best of the ability of UNDERSIGNED in the matter of preparing and executing all documents and giving and producing evidence in support thereof.
- 4) UNDERSIGNED agree(s) to perform upon ASSIGNEE's request any and all affirmative acts to obtain United States and foreign patents covering said invention or improvement and to vest all rights therein hereby conveyed to ASSIGNEE, as fully and as entirely as the same would have been held and enjoyed by UNDERSIGNED if this assignment and sale had not been made.
- 5) UNDERSIGNED hereby authorize(s) ASSIGNEE to insert in this instrument the date(s) on which UNDERSIGNED executed the Declaration for the above-referenced patent application.

IN WITNESS WHEREOF, this assignment has been executed by UNDERSIGNED on the date opposite UNDERSIGNED'S NAME.

Date	InventorLIMIN SONG	(LS)	Witness
Date	Inventor KRISHNAN KUMARAN	(LS)	Witness
Date <u>9/12/2013</u>	invenior Chara sergiota BHASKAR SENGLIPTA	- =:(LS)	Witness June Hanfon
Date	Inventor JINGBO WANG	(LS)	Witness
Date		(LS)	Witness
Date	Inventor	(LS)	Witness
Date	Inventor	(LS)	Witness

PATENT REEL: 031295 FRAME: 0854

Docket No.	2012EM306-US2
U.S. Serial No.	14/037,953 filed September 26, 2013

## ASSIGNMENT INVENTOR or INVENTORS:

### LIMIN SONG KRISHNAN KUMARAN BHASKAR SENGUPTA JINGBO WANG

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- 4) UNDERSIGNED agree(s) to perform upon ASSIGNEE's request any and all affirmative acts to obtain United States and foreign patents covering said invention or improvement and to vest all rights therein hereby conveyed to ASSIGNEE, as fully and as entirely as the same would have been held and enjoyed by UNDERSIGNED if this assignment and sale had not been made.
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IN WITNESS WHEREOF, this assignment has been executed by UNDERSIGNED on the date opposite UNDERSIGNED'S NAME.

Date	Inventor	(LS)	Witness
	LIMIN SONG		
Date	InventorKRISHNAN KUMARAN	(LS)	Witness
Date	InventorBHASKAR SENGUPTA	(1.S)	Witness
Date 09/13/2013		(LS)	Witness why and tu
Date	Inventor	(LS)	Witness
Date	Inventor	(LS)	Witness
Date	Inventor	(LS)	Witness

PATENT REEL: 031295 FRAME: 0855

RECORDED: 09/27/2013