## 502993042 09/26/2014

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3039641

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

## **CONVEYING PARTY DATA**

Name	Execution Date
NICHOLAS KARONIS	08/07/2014
GEORGE COUTRAKON	08/12/2014
KIRK DUFFIN	08/13/2014
BELA ERDELYI	08/07/2014
KEVIN NAGLICH	08/07/2014
VICTOR RYKALIN	08/27/2014
VISHNU ZUTSHI	08/07/2014
SCOTT PENFOLD	07/21/2014
PAUL RUBINOV	09/04/2014

## **RECEIVING PARTY DATA**

Name:	BOARD OF TRUSTEES OF NORTHERN ILLINOIS UNIVERSITY
Street Address:	Division of University Legal Services
Internal Address:	Altgeld Hall 330
City:	DeKalb
State/Country:	ILLINOIS
Postal Code:	60115
Name:	UNIVERSITY OF WOLLONGONG
Street Address:	321 ADAMS
City:	NEW SOUTH WALES
State/Country:	AUSTRALIA
Postal Code:	2522
Name:	FERMI RESEARCH ALLIANCE, LLC
Street Address:	FERMILAB, P.O. BOX 500
City:	BATAVIA
State/Country:	ILLINOIS
Postal Code:	60510

## **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	14319684

PATENT REEL: 033824 FRAME: 0573

502993042

### CORRESPONDENCE DATA

**Fax Number:** (312)759-5646

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.

**Phone:** 312-357-1313

Email: msweetin@btlaw.com
Correspondent Name: ALICE O. MARTIN

Address Line 1: BARNES & THORNBURG LLP

Address Line 2: P.O. BOX 2786

Address Line 4: CHICAGO, ILLINOIS 60690-2786

ATTORNEY DOCKET NUMBER:	55442-706088
NAME OF SUBMITTER:	ALICE O. MARTIN, REG. NO. 35601
SIGNATURE:	/Alice O. Martin/
DATE SIGNED:	09/26/2014

### **Total Attachments: 12**

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# U.S. NATIONAL / INTERNATIONAL PCT APPLICATION ASSIGNMENT TO BUSINESS CONCERN

Attorney Docket No.: 55442-706088 Client Reference: 10-008

### ASSIGNMENT

For good and valuable consideration, the sufficiency and receipt of which is hereby acknowledged,
Name(s) of Inventor(s); Conveying Party(ies)
Nicholas Karonis
George Coutrakon
Kirk Duffin
Bela Erdelyi
Kevin Naglich
Victor Rykalin
Vishnu Zutshi
maker(s) of an invention which is the subject of: (Check applicable boxes and enter serial number and date if available) a \sum United States National Application identified by Application No. 14/319,684 and filing date June 30, 2014; and entitled:
Title of Application
HIGH PERFORMANCE COMPUTING FOR THREE DIMENSIONAL PROTON COMPUTED TOMOGRAPHY (HPC-PCT)
hereinafter (the "Application(s)")
the undersigned hereby sell(s), assign(s), and set(s) over to:
Name of Assignee(s); Receiving Party(ies);
BOARD OF TRUSTEES OF NORTHERN ILLINOIS UNIVERSITY
Division of University Legal Services
Altgeld Hall 330
DeKalb, Illinois 60115
Insert State of Incorporation (if applicable) or "Not Applicable"
a corporation of <u>Illinois</u>

(hereinafter designated as the Assignee) their entire right, title and interest in, to and under the Application(s) throughout the world, including all priority rights for the United States and other countries arising therefrom, all inventions therein disclosed, and any and all Letters Patent of the United States and of all other countries, which may be granted for such inventions, or any of them, all such inventions and all rights in such Application(s) and Letters Patent to be held and enjoyed by Assignee for its own use and enjoyment to the full end of the term or terms for which such Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by them had this assignment and sale not been made.

The undersigned agree(s) to execute all papers necessary in connection with the Application(s) in the United States and counterpart applications in foreign countries and any continuing, divisional, or reissue applications thereof, and any reexamination of any of such Applications, and also to execute separate assignments in connection with such Applications as the Assignee may deem necessary or expedient.

The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared or litigation concerning the Application(s), U.S. national counterparts thereof, or continuation(s), division(s), reissue(s), reexamination(s) thereof, and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or litigation.

The undersigned agree(s) to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

The undersigned agree(s) to do all other acts which, in the opinion of Assignee, may be necessary or desirable to secure the grant of Letters Patent to Assignee or its nominees, in the United States and in all other countries where Assignee may desire to have such inventions, or any of them, patented, with specifications and claims in such form as shall be approved by Assignee and to vest and confirm in Assignee or its nominees the full and complete legal and equitable title to all such Letters Patent.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patent of the United States resulting or following from said Application(s) or any division or divisions or continuing or reissue applications thereof, and any reexamination of any of such applications, to the said Assignee, as Assignee of the entire interest, and hereby covenants that the undersigned has full right to convey the interest herein assigned, and that the undersigned has not executed, and will not execute, any agreement in conflict herewith. Effective date of the Assignment is June 30, 2014.

	Marine Same and the
PN WITNESS WHEREOF, I have executed the second of the seco	his assignment this <u>L</u> day of <u>Lldysk22</u> 2977.
Nicholas Karonis	
Printed Name	
ACKNO	DWLEDGMENT
STATE OF //////S ) SS:	
Acknowledged before me, a Notary Public, within and Scal thisday of	d for said County and State. Witness my hand and Notarial
Karan Baldang Karma Bredberg	KARINNE BREDBERG OFFICIAL SEAL Notary Public, State of Illinois My Commission Expires May 09, 2016
Printed Name  My Commission Expires: 5/9/14	Resident of \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\

Attorney Docket No. 55442-706088 Client Reference: 10-008 IN WITNESS WHEREOF, I have executed this assignment this 12 day of Huquet , 2014 George Contrakon Printed Name ACKNOWLEDGMENT STATE OF California, SS: COUNTY OF San Bernardino Acknowledged before me, a Notary Public, within and for said County and State. Witness my hand and Notarial Seal this 12 day of August 2014. Notary Public My Commission Expires: <u>64-24-2018</u> Resident of Sen Bernard in Mounty IN WITNESS WHEREOF, I have executed this assignment this \_\_\_\_\_ day of \_\_\_\_\_\_, 20\_\_\_\_ Inventor's Signature Kirk Duffin Printed Name ACKNOWLEDGMENT STATE OF SS: COUNTY OF Acknowledged before me, a Notary Public, within and for said County and State. Witness my hand and Notarial Seal this \_\_\_\_\_day of \_\_\_\_\_\_

3

Resident of \_\_\_\_\_ County

Notary Public

Printed Name

My Commission Expires:

IN WITNESS WHE	REOF, I ha	ive executed this	assignment this _	day of	. 20
Inventor's Signature	S	and the second s			
George Coutrakon Printed Name					
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STATE OF	}	00.			
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Notary Public					
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IN WITNESS WHI	EREOF, I h	ave executed this	assignment this	13_day of	
Kirk Duffin Printed Name		olingggan and and all and an analysis of the second			
		ACKNOW	LEDGMENT		
STATE OF MINUIS	(b)	SS:			
Acknowledged before me, a Seal this d	Notary Pub ay of	ic, within and fo	r said County an	1 State. Witness my han 2014	d and Notarial
Notary Public  Mary Public  Printed Name	lberg dberg	\$ : 2		KARINNE BREDBERG OFFICIAL SEAL Novery Public, State of Bio May Carrierisates Explo May 08, 2016	### ##################################
My Commission Expires:	<i>6/9/1</i>	Z Res	sident of	<u> 24614</u>	County

IN WITNESS WHEREOF, I have execute	d this assignment this $\frac{7^{+6}}{2}$ day of $\frac{4626654}{2014}$
Bela Ercklor	
Inventor's Signature	onde
<u>Rela Endelyi</u> Printed Name	ovene.
ACK	VOWLEDGMENT
STATE OF ///////S } SS:	
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Acknowledged before me, a Notary Public, within seal this	and for said County and State. Witness my hand and Notarial
Harry Public LALANCE	KARINNE BREDBERG OFFICIAL SEAL Notary Public, State of Illinois
Karme Bredburg	My Commission Expires May 09, 2016
My Commission Expires: 5/9/14	Resident of Ala County
IN WITNESS WHEREOF, I have execute	d this assignment this day of 20
Inventor's Signature	
Keyin Naglisli Printed Name	iiu.
ACK	NOWLEDGMENT
STATE OF }	
COUNTY OF } \$\$\\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
Acknowledged before me, a Notary Public, within Seal this day of	and for said County and State. Witness my hand and Notarial
Notary Public	
Printed Name	*****
My Commission Expires	Resident ofCounty

IN WITNESS WHEREO	F, I have executed t	his assignment this	day of	<u>, 20</u>
Inventor's Signature	anne en			
Rela Erdelyi Printed Name		:		
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Acknowledged before me, a Notar Seal thisday of	y Public, within and	for said County and St	ate. Witness my hand	and Notarial
Notary Public	-	·		
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My Commission Expires:	······;	Resident of		County
IN WITNESS WHEREO		his assignment this/	day of Algus	**
Kevin Naglich Printed Name	,		\$ <sup>7</sup>	
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STATE OF ///////S	<b>3</b> = 2			
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Acknowledged before me, a Notar Seal thisday of	y Public, within and	f for said County and S	iate. Witness my hand QZL	and Notarial
Notary Public  Karana Bradber Printed Name	<u>4</u>	Nota	ARINNE BREDBERG OFFICIAL SEAL viy Public, State of Illinoi Commission Expires May 09, 2016	3
Mu Cammissian Fentre: 5/	2/16	Resident of \$2/5	Sutuinituutuutuutuutuu	

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IN WITNESS WHEREOF, I ha	ve executed this assignment this $\underline{\geq 7}$ day (	of <u>/1/4/-</u> , <u>2</u>	<u>114</u>
Vietor (	<u> </u>	Ü	
Inventor's Signature	~		
Victor Rykalin VI-CIOR Printed Name	<u> Bar</u> ytju		
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STATE OF JULIAN 1			
COUNTY OF DAY	\$2		
Acknowledged before me, a Notary Publi Seal this 27 day of 4	c, within and for said County and State. With	ess my hand and Notaris	l
Notary Public		Al	OFFICIAL SEAL AY K SCROGGINS
Avva C Sovogalos Printed Name		\$17.00 \$17.00	PUBLIC - STATE OF ALLINOIS MISSION EXPIRES 11/08/15
	25 Resident of Lane		
My Communion Expires:	Resident of	County	
IN WITNESS WHEREOF, I has	r executed this assignment this day of	, <u>20</u>	
Inventor's Signature			
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Acknowledged before me, a Notary Public Seal thisday of	, within and for said County and State. Within	ess my hand and Notarial	
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Vy Commission Expires:	Resident of	County	

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IN WITNESS WHEREOF,	I have executed	this assignment this	day of	
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Inventor's Signature				
Victor Rykalin		nije.		
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Acknowledged before me, a Notary I Seal thisday of	Public, within a	nd for said County and S	Itate. Witness my hand a	md Notarial
Notary Public		<del>, , , , , , , , , , , , , , , , , , , </del>		
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My Commission Expires:		Resident of	С	ounty
IN WITNESS WHEREOF,  Unventor's Signature  Vision Zutshi  Printed Name		this assignment this/	day of Allaged Si	<u> </u>
8 8 8	W W	CA AA KUCHBAZHAKEULA A		
STATE OF ///no/s country of DeKalb	} \$\$:			
Acknowledged before me, a Notary Seal this day of Auto District Description of Printed Name  My Commission Expires: 5/9	Public, within a Hugush		State: Witness my hand:  2014  KARINNE BREDBERG OFFICIAL SEAL otary Public, State of Hinois May 09, 2016  May 09, 2016	Verpreignenenend.

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# U.S. NATIONAL / INTERNATIONAL PCT APPLICATION ASSIGNMENT TO BUSINESS CONCERN

Attorney Docket No.: 55442-706088

Client Reference: 10-008

#### ASSIGNMENT

For good and valuable consideration, the sufficiency and receipt of which is hereby acknowledged,
Name(s) of Inventor(s); Conveying Party(ies)
Scott Penfold
maker(s) of an invention which is the subject of: (Check applicable boxes and enter serial number and date if available) a  United States National Application identified by Application No. 14/319,684 and filing date June 30, 2014; and entitled:
Title of Application
HIGH PERFORMANCE COMPUTING FOR THREE DIMENSIONAL PROTON COMPUTED TOMOGRAPHY (HPC-PCT)
hereinafter (the "Application(s)")
the undersigned hereby sell(s), assign(s), and set(s) over to:  Name of Assignee(s); Receiving Party(ies);
UNIVERSITY OF WOLLONGONG
NSW, 2522
AUSTRALIA
organized under the laws of
(hereinafter designated as the Assignee) their entire right, title and interest in, to and under the Application(s) throughout the world, including all priority rights for the United States and other countries arising therefrom, all inventions therein disclosed, and any and all Letters Patent of the United States and of all other countries, which may be granted for such inventions, or any of them, all such inventions and all rights in such Application(s) and Letters Patent to be held and enjoyed by Assignee for its own use and enjoyment to the full end of the term or terms for which such Letters Patent may be granted, as fully and enfirely as the same would have been held and enjoyed by them had this assignment and sale not been made.
The protocological accepted to execute all paners required in connection with the Application (2) in the

The undersigned agree(s) to execute all papers necessary in connection with the Application(s) in the United States and counterpart applications in foreign countries and any continuing, divisional, or reissue applications thereof, and any reexamination of any of such Applications, and also to execute separate assignments in connection with such Applications as the Assignee may deem necessary or expedient.

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The undersigned agree(s) to do all other acts which, in the opinion of Assignee, may be necessary or desirable to secure the grant of Letters Patent to Assignee or its nominees, in the United States and in all other countries where Assignee may desire to have such inventions, or any of them, patented, with specifications and claims in such form as shall be approved by Assignee and to vest and confirm in Assignee or its nominees the full and complete legal and equitable title to all such Letters Patent.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patent of the United States resulting or following from said Application(s) or any division or divisions or continuing or reissue applications thereof, and any reexamination of any of such applications, to the said Assignee, as Assignee of the entire interest, and hereby covenants that the undersigned has full right to convey the interest herein assigned, and that the undersigned has not executed, and will not execute, any agreement in conflict herewith. Effective date of the Assignment is Jime 30, 2014.

IN WITNESS WHEREOF, I have executed this assignment this 21 to day of 12 to 20 to 20

Inventor's Signature  Scott Penfold Printed Name	••••••••••••••••••••••••••••••••••••••	
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Witness	Printed Name _	1902 REVEN
Witness List Noshad	Printed Name	Leyla Moghaddasi

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# U.S. NATIONAL / INTERNATIONAL PCT APPLICATION ASSIGNMENT TO BUSINESS CONCERN

Attorney Docket No.: 55442-706088 Client Reference: 10-008

### ASSIGNMENT

For good and valuable consideration, the sufficiency and receipt of which is hereby acknowledged,
Name(s) of Inventor(s); Conveying Party(les)
Paul Rubinov
maker(s) of an invention which is the subject of; (Check applicable boxes and enter serial number and date if available) a  United States National Application identified by Application No. 14/319.684 and filing date June 30, 2014; and entitled:
Title of Application
HIGH PERFORMANCE COMPUTING FOR THREE DIMENSIONAL PROTON COMPUTED TOMOGRAPHY (HPC-PCT)
hereinafter (the "Application(s)")
the undersigned hereby sell(s), assign(s), and sel(s) over to:
Name of Assignee(s); Receiving Party(ies);
FERMI RESEARCH ALLIANCE, LLC
Fermilab, P. O. Box 500
Batavia, Illinois
Insert State of Incorporation (if applicable) or "Not Applicable"
a corporation of Illinois
(hereinafter designated as the Assignee) their entire right, title and interest in, to and under the Application(s) throughout the world, including all priority rights for the United States and other countries arising therefrom, all inventions therein disclosed, and any and all Letters Patent of the United States and of all other countries, which may be granted for such inventions, or any of them, all such inventions and all rights in such Application(s) and Letters Patent to be held and enjoyed by Assignee for its own use and enjoyment to the full end of the term or terms for which such Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by them had this assignment and sale not been made.

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mventor's Signature	
Paul Rubinov Printed Name	
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STATE OF /KANOUS } s	\$;
Kaur M. Bomana	ithin and for said County and State. Witness my hand and Notarial
Notary Public  Kalen M. Loimann  Printed Name	
My Commission Expires: 3/19/2016	Resident of <u>Kank</u> County
KARRIN SI, BORNSANN OFFICIAL SEAL Notery Public - State of lithrois My Commission Explains Hersh 19, 2018	

RECORDED: 09/26/2014