505575689 07/17/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5622488

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
PATRICK MURPHY	04/12/2017
MICHELLE CLEARY	07/16/2019
SHAWN GELSINGER	12/06/2017
MELANIE JESSEL	05/01/2019
STEVEN MCKANAS	04/25/2017
ROBERT STRUBLE	05/01/2019
MACIEJ PIETRUSINSKI	04/15/2016
SHENG-CHE YEN	04/12/2017
QINGCHAO KONG	04/12/2016
CONSTANTINOS MAVROIDIS	06/22/2017

RECEIVING PARTY DATA

Name:	NORTHEASTERN UNIVERSITY
Street Address:	C/O THE CENTER FOR RESEARCH INNOVATION
Internal Address:	360 HUNTINGTON AVENUE
City:	BOSTON
State/Country:	MASSACHUSETTS
Postal Code:	02115

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14907064

CORRESPONDENCE DATA

Fax Number: (978)341-0136

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

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ATTORNEY DOCKET NUMBER:	5200.1029-003 INV-14007PC
NAME OF SUBMITTER:	LISA PUOPOLO
SIGNATURE:	/Lisa Puopolo/
DATE SIGNED:	07/17/2019

Total Attachments: 40 source=5200.1029-003 Copy Executed Assignments#page1.tif source=5200.1029-003 Copy Executed Assignments#page2.tif source=5200.1029-003 Copy Executed Assignments#page3.tif source=5200.1029-003 Copy Executed Assignments#page4.tif source=5200.1029-003 Copy Executed Assignments#page5.tif source=5200.1029-003 Copy Executed Assignments#page6.tif source=5200.1029-003 Copy Executed Assignments#page7.tif source=5200.1029-003 Copy Executed Assignments#page8.tif source=5200.1029-003 Copy Executed Assignments#page9.tif source=5200.1029-003 Copy Executed Assignments#page10.tif source=5200.1029-003 Copy Executed Assignments#page11.tif source=5200.1029-003 Copy Executed Assignments#page12.tif source=5200.1029-003 Copy Executed Assignments#page13.tif source=5200.1029-003 Copy Executed Assignments#page14.tif source=5200.1029-003 Copy Executed Assignments#page15.tif source=5200.1029-003 Copy Executed Assignments#page16.tif source=5200.1029-003 Copy Executed Assignments#page17.tif source=5200.1029-003 Copy Executed Assignments#page18.tif source=5200.1029-003 Copy Executed Assignments#page19.tif source=5200.1029-003 Copy Executed Assignments#page20.tif source=5200.1029-003 Copy Executed Assignments#page21.tif source=5200.1029-003 Copy Executed Assignments#page22.tif source=5200.1029-003 Copy Executed Assignments#page23.tif source=5200.1029-003 Copy Executed Assignments#page24.tif source=5200.1029-003 Copy Executed Assignments#page25.tif source=5200.1029-003 Copy Executed Assignments#page26.tif source=5200.1029-003 Copy Executed Assignments#page27.tif source=5200.1029-003 Copy Executed Assignments#page28.tif source=5200.1029-003 Copy Executed Assignments#page29.tif source=5200.1029-003 Copy Executed Assignments#page30.tif source=5200.1029-003 Copy Executed Assignments#page31.tif source=5200.1029-003 Copy Executed Assignments#page32.tif source=5200.1029-003 Copy Executed Assignments#page33.tif source=5200.1029-003 Copy Executed Assignments#page34.tif source=5200.1029-003 Copy Executed Assignments#page35.tif source=5200.1029-003 Copy Executed Assignments#page36.tif source=5200.1029-003 Copy Executed Assignments#page37.tif source=5200.1029-003 Copy Executed Assignments#page38.tif source=5200.1029-003 Copy Executed Assignments#page39.tif source=5200.1029-003 Copy Executed Assignments#page40.tif

Joint

ASSIGNMENT

WHEREAS, we, Patrick Murphy, Michelle Cleary, Shawn Gelsinger, Melanie Jessel, Steven McKanas, Robert Struble, Maciej Pietrusinski, Sheng-Che Yen, Qingchao Kong and Constantinos Mavroidis (Deceased), have invented a certain improvement in Gait Training System And Methods described in an application for Patent,

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which was patented under United States Patent No. [].

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NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue on said invention; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for any and all related provisional and nonprovisional, international and national phase applications, including any and all substitution, reissue, divisional, continuation, and continuation-in-part applications, and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein; we hereby expressly authorize the filing of an International Patent Application under the

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Inventor Jatrick Murshy Date 13/04/20	77
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Print Witness Name Brice Mikala Ilvengou	
Inventor Date	·
Michelle Cleary	
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Inventor	Date
Shawn Gelsinger	
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InventorMelanie Jessel	Date
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InventorSteven McKanas	Date
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Inventor Robert Struble Robert Struble	Date <u>2019 - 05 - 01</u>
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Inventor	Date
Maciej Piet	rusinski
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Print Witness Name Katherine Frien	<u> </u>
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Inventor		Date
	Marianna Bei, Executrix of the Estate of Constantinos Mavroidis (Deceased)	
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Print Witness Name		

Joint

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Inventor		Date	
	Patrick Murphy		
Witness Signature			
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Print Witness Name			
-	Michelle Cleary		
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Inventor		Date 6 Dec 2017
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Inventor	Melanie Jessel	Date
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Inventor	Steven McKanas	Date
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Inventor		Date	
	Maciej Pietrusinski		
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Inventor		Date	
	Sheng-Che Yen		
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Inventor		Date	
	Qingchao Kong		
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Inventor	Marianna Bei, Executrix of the Estate of Constantinos Mavroidis (Deceased)	Date
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	Patrick Murphy		
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	Michelle Cleary		
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Docket No. 5200.1029403 (INV-14007PC)

Inventor	Shawn Gelsinger	Date	
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Witness Signature	Ryon Cottrell		
Inventor_	Steven McKanas	Date	
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Inventor_		Date	
	Patrick Murphy	<u> </u>	
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Inventor		Date	
	Michelle Cleary		
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InventorMelanie Jessel	
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Inventor	
Steven McKanas	
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Robert Struble	
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Inventor Jaco Pictory	Date 4 (5/2016
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Witness Signature	(大)		
	Maureen Hautaniemi		
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Inventor		Date	
	Constantinos Mavroidis		
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Inventor	Date	
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Inventor	Melanie Jessel	Date	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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Inventor	Robert Struble	Date	
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	Maciej Pietrusinski		
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InventorSheng-Che Yen	Date
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InventorConstantinos Mavroic	Date
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Inventor	Date	
	a Bei, Executrix of the Estate of antinos Mavroidis (Deceased)	
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<u>Joint</u>

<u>ASSIGNMENT</u>

WHEREAS, we, Patrick Murphy, Michelle Cleary, Shawn Gelsinger, Melanie Jessel, Steven McKanas, Robert Struble, Maciej Pietrusinski, Sheng-Che Yen, Qingchao Kong and Constantinos Mavroidis (Deceased), have invented a certain improvement in Gait Training System And Methods described in an application for Patent,

the specification of which is about to be filed in the United States Patent Office (use for utility (37 CFR § 1.53(b)) and design filings only);
is about to be filed in the United States Patent Office as a Provisional Application
the specification of which is United States Application No. [], filed [];
the specification of which is a Patent Cooperation Treaty Application, International Application No. PCT/US2014/048664, filed July 29, 2014, which designates the United States of America and is assigned United States Application No. 14/907,064;
which was patented under United States Patent No. [].

WHEREAS, Northeastern University (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts, and having a usual place of business at 360 Huntington Avenue, 340RP, Boston, Massachusetts 02115, desires to confirm its interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue on said invention; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for any and all related provisional and nonprovisional, international and national phase applications, including any and all substitution, reissue, divisional, continuation, and continuation-in-part applications, and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein; we hereby expressly authorize the filing of an International Patent Application under the

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of any future applications including substitution, reissue, divisional or continuation, continuation-in-part applications, and all related provisional and nonprovisional, international and national phase applications, and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request each Patent Office and the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said invention to said ASSIGNEE, its successors, assigns, and legal representatives.

Inventor		Date	
	Patrick Murphy		
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Inventor		Date	
	Michelle Cleary		
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inventor	Shawn Gelsinger	Date	
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Inventor	Steven McKanas	Date	
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Inventor		Date	
	Robert Struble		
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Docket No. 5200.1029-003 (INV-14007PC)

Inventor		Date	
	Maciej Pietrusinski		
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Inventor	Sheng-Che Yen	Date	
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	Qingchao Kong		
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Docket No. 5200.1029-003 (INV-14007PC)

Inventor	Mes	Date	6/22/2017
	Marianna Bei, Executrix of the Estate of Constantinos Mavroidis (Deceased)		
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ASSIGNMENT

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the specification of which is about to be filed in the United States Patent Office (use for utility (37 CFR § 1.53(b)) and design filings only);
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AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of any future applications including substitution, reissue, divisional or continuation, continuation-in-part applications, and all related provisional and nonprovisional, international and national phase applications, and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request each Patent Office and the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said invention to said ASSIGNEE, its successors, assigns, and legal representatives.

Inventor	Date
Patrick Murphy	
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Inventor Michelle Cleary	Date 7/14/19
Michelle Cleary	, ,
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Print Witness Name Michael Biasella	
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Print Witness Name Amanda N Levy	

Inventor		Date	
	Shawn Gelsinger		
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Inventor		Date	
	Melanie Jessel		
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Inventor		Date	
	Steven McKanas		
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consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby adequately god, we have sold, assigned and transferred and by these presents do hereby sell, assign and monifer one said ASSIGNEE, its successors, assigns and legalrepresentatives, the entire right, title and interest in and throughout the United States of America. in the contract and all foreign contracts of the contract of the contract of the contract applications. to graduate with the engine right, data and improve in the first conditional conditions and the best Patent as many large consent in recognition, and invention, and tenture and testing Potential to the held and colored by said ASSICNEE for its own one and behalf and for its successors, assigns and legal. representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by as had this assignment and sale as i been made: we hareby convey all rights arising under or pursuant to any and all international agreements. treaties or laws relating to the protection of industrial property by filling any such applications for Longry Patent. We hereby acknowledge that this accipament, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for any and all related provisional and comprovisional, international and national phase applications, including and decay from the property and control of the second control of the second and all in the Property to active recognition of a second of ASSIC ACTIVE reflection and the right to proceed the grant of all reach Letters Patent to ASSCONE for its own more as assigned of the online right, little and interest therein; we havely expressly authorize the filing of an international Patent Application under the

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Inventor		Date
	Marianna Bei, Executrix of the Estate of Constantinos Mavroidis (Deceased)	
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PATENT RECORDED: 07/17/2019 REEL: 049779 FRAME: 0183