

## PATENT ASSIGNMENT COVER SHEET

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 Stylesheet Version v1.2

EPAS ID: PAT4398176

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
HAO F. ZHANG	04/20/2017
CHENG SUN	04/27/2017
BEN E. URBAN	04/03/2017
BIQIN DONG	04/26/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	NORTHWESTERN UNIVERSITY
<b>Street Address:</b>	633 CLARK STREET
<b>City:</b>	EVANSTON
<b>State/Country:</b>	ILLINOIS
<b>Postal Code:</b>	60208
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15514084
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(312)580-9696
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<b>Email:</b>	cgeorge@hfzlaw.com
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<b>ATTORNEY DOCKET NUMBER:</b>	20178/2013-221-03
<b>NAME OF SUBMITTER:</b>	CHRISTOPHER N. GEORGE
<b>SIGNATURE:</b>	/Christopher N. George/
<b>DATE SIGNED:</b>	05/04/2017
<b>Total Attachments: 6</b>	
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**PATENT**

**REEL: 042238 FRAME: 0685**

ASSIGNMENT

U.S. Serial No: 15/514,084                      Submitted: March 24, 2017  
PCT/US2015/052388                      International Filing Date: September 25, 2015  
Inventors: Hao F. Zhang; Cheng Sun; Ben E. Urban; Biqin Dong  
Title of Patent Applications: DEVICES, METHODS, AND SYSTEMS RELATING TO SUPER  
RESOLUTION IMAGING


For good and valuable consideration, the receipt and sufficiency of which are hereby agreed, each of the undersigned hereby assigns to Northwestern University, an Illinois not-for-profit corporation, having a place of business at 633 Clark Street, Evanston, Illinois 60208 and its successors and assigns ("Assignee") the entire right, title and interest in and to the inventions of such undersigned disclosed in the application listed above, and in any and all other applications anywhere in the world which the undersigned may file and/or be named as an inventor of, solely or jointly, on said inventions, in any and all patents which may be obtained on any of said applications and in any and all reissues, reexaminations, supplemental examinations, inter partes reviews, oppositions, post-grant reviews, supplementary protection certificates and/or extensions thereof, including without limitation, the right to bring suit and to claim and retain all damages and/or seek other remedies for the past, present and future infringement of any of the foregoing, the right of priority, including without limitation to claim priority benefit of or to said patent applications, and request the Commissioner for Patents in the United States and similar authorities outside the United States to issue said patents to and in the name of the Assignee.

Each of the undersigned states that the application listed above is or was made or authorized to be made by him or her. Each of the undersigned believes himself or herself to be the original inventor or a joint inventor with another undersigned of a claimed invention in the application listed above. Each of the undersigned acknowledges that any willful false statement made by him or her in this paragraph is punishable under 18 U.S.C. §1001 by fine or imprisonment of not more than five years, or both.

Except in favor of Assignee, each of the undersigned warrants that: (i) he or she is the owner of all its rights, titles and interests herein assigned and has the right to make this unconditional and irrevocable assignment to Assignee without obtaining any approval or permission of a third party; and (ii) there are no outstanding encumbrances, liens, prior assignments, licenses, or other obligations or restrictions on the rights, titles and interests herein assigned.

Upon the request of Assignee and at no expense to the undersigned, each of the undersigned hereby agrees to execute any and all applications on said inventions, including without limitation for the reissue, reexamination, supplementary protection certificate or extension thereof and any oath, declaration or affidavit relating thereto that said Assignee may deem necessary or expedient, and to cooperate to the best of the ability of the undersigned with and perform any and all affirmative acts requested by Assignee to prepare, file, prosecute, maintain, defend, enforce and vest in Assignee the rights, titles and interests assigned herein, including without limitation, preparing and executing statements and giving and producing evidence in support thereof, whereby said rights, titles and interests will be held and enjoyed by said Assignee to the full end of the term for which said patents may be granted as fully and entirely as the same would have been held and enjoyed by the undersigned if this assignment had not been made.

Undersigned (ASSIGNORS):

  
Inventor Name: Hao F. Zhang

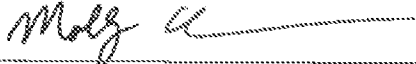
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04/26/2017

State of Illinois

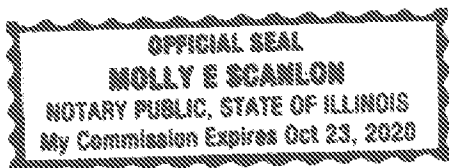
County of Cook ss.

On this 26 day of April, 2017, before me, a Notary Public in and for the County and State aforesaid, appeared, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he or she executed said instrument as his or her free and voluntary act and for the uses and purposes therein expressed.

  
NOTARY PUBLIC

[NOTARY SEAL]

My Commission Expires: 10/23/2020



(continued on next page)

U.S. Serial No: 15/514,084 Submitted: March 24, 2017  
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Title of Patent Applications: DEVICES, METHODS, AND SYSTEMS RELATING TO SUPER  
RESOLUTION IMAGING

Undersigned (ASSIGNORS) continued:



Inventor Name: Cheng Sun

4/27/2017

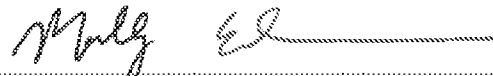
DATE

State of Illinois

County of Cook

ss.

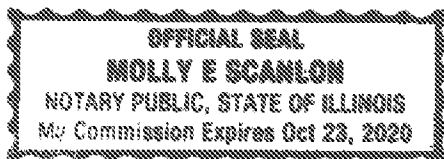
On this 27 day of April, 2017, before me, a Notary Public in and for the County and State aforesaid, appeared, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he or she executed said instrument as his or her free and voluntary act and for the uses and purposes therein expressed.



NOTARY PUBLIC

[NOTARY SEAL]

My Commission Expires: 10/23/2020



U.S. Serial No: 15/514,084  
PCT/US2015/052388

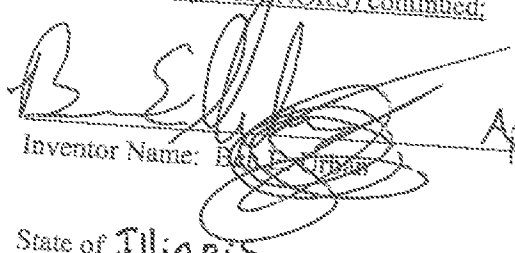
Submitted: March 24, 2017

International Filing Date: September 25, 2015

Inventors: Hao F. Zhang; Cheng Sun; Ben E. Urban; Biqin Dong

Title of Patent Applications: DEVICES, METHODS, AND SYSTEMS RELATING TO SUPER  
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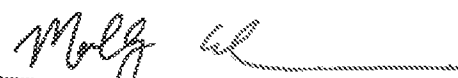
Undersigned (ASSIGNORS) continued:

  
Inventor Name: Ben E. Urban

April 3, 2017  
DATE

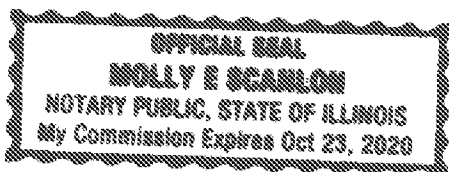
State of Illinois  
County of Cook ss.

On this 3 day of April, 2017, before me, a Notary Public in and for the County  
and State aforesaid, appeared, to me personally known to be the same person whose name is subscribed to  
the foregoing instrument, and acknowledged that he or she executed said instrument as his or her free and  
voluntary act and for the uses and purposes therein expressed.

  
NOTARY PUBLIC

[NOTARY SEAL]

My Commission Expires: 10/23/2020



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Submitted: March 24, 2017  
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Undersigned (ASSIGNORS) continued:

Biqin Dong 4/26/2017  
Inventor Name: Biqin Dong DATE

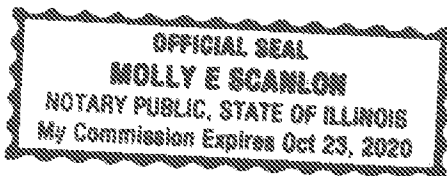
State of Illinois  
County of Cook ss.

On this 26 day of April, 2017, before me, a Notary Public in and for the County  
and State aforesaid, appeared, to me personally known to be the same person whose name is subscribed to  
the foregoing instrument, and acknowledged that he or she executed said instrument as his or her free and  
voluntary act and for the uses and purposes therein expressed.

Molly E Scanlon  
NOTARY PUBLIC

[NOTARY SEAL]

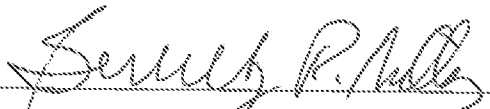
My Commission Expires: 10/23/20



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ASSIGNEE ACCEPTANCE: Northwestern University

On behalf of Northwestern University, Assignee, the authorized signatory below, hereby confirms Assignee's acceptance of all rights, privileges, titles and interests conveyed by this Assignment.

Authorized Signature:  Date: 4/28/17

Printed Name      Beverly R. Milligan, Invention Specialist or  
Nicole A. Janovick, Ph.D., J.D., Invention Manager

Department: Innovation and New Ventures Office (INVO)