## PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

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MIKHAIL D. LUKIN	09/10/2019
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LEO XIANGYU ZHOU	09/10/2019

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### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	17270741

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ATTORNEY DOCKET NUMBER:	7504 US
NAME OF SUBMITTER:	KAREN A SINCLAIR
SIGNATURE:	/kas/
DATE SIGNED:	12/02/2022
	This document serves as an Oath/Declaration (37 CFR 1.63).

PATENT REEL: 061952 FRAME: 0044

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## **Total Attachments: 4**

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PATENT REEL: 061952 FRAME: 0045

### ASSIGNMENT / DECLARATION

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, the undersigned:

# Soonwon Choi, Mikhail D. Lukin, Hannes Pichler, Shengtao Wang and Leo Xiangyu Zhou

(each hereafter "Assignor") hereby assign, sell, and transfer to:

## President and Fellows of Harvard College 17 Quincy Street Cambridge, MA 02138

(hereafter "Assignee") its successors and assigns, Assignor's entire right, title, and interest throughout the world in and to any and all inventions and designs for:

# QUANTUM COMPUTING FOR COMBINATORIAL OPTIMIZATION PROBLEMS USING PROGRAMMABLE ATOM ARRAYS

described in International Patent Application No. PCT/US19/49115, filed August 30, 2019; and in and to the aforesaid application, in any form or embodiment thereof, and in and to any application on any of the inventions and designs filed in this and any foreign country, based thereon, including the right to file said applications, apply for patent rights, and claim priority under the provisions of any international convention or treaty; also the entire right, title, and interest throughout the world in and to any and all patents or reissues or extensions thereof to be obtained in this or any foreign country upon any of the inventions and designs and any divisional, continuation, or substitute applications which may be filed upon said invention and design or inventions and designs in this or any foreign country; and the right to sue in its own name and recover damages for past infringement of any United States Letters Patent and foreign patent, including a reasonable royalty relating to provisional rights under 35 U.S.C. § 154(d) that have attached to any published United States patent application, on the inventions and designs; and authorize and request the issuing authority to issue any and all patents on said application or applications to said Assignee or its successors and assigns.

For purposes of complying with foreign requirements, the above paragraph is intended to expressly grant all the recited rights and grants in China, Korea, and Japan.

Assignor hereby warrants that he/she has full right to convey his/her entire right, title and interest, both legal and equitable, in and to said inventions and designs, free from

all prior assignments, agreements, licenses, mortgages, security interests, or other encumbrances whatsoever; and

Assigner further agrees, without further payment or compensation by said Assignee, or its successors and assigns, to communicate to said Assignee, its representatives or agents, or its successors and assigns, any facts relating to said invention and design or inventions and designs including evidence for interference purposes or for other legal proceedings, whenever requested; testify in any interference or other legal proceedings whenever requested; execute and deliver, on request, all lawful papers required to make any of the foregoing provisions effective; and generally do everything possible to aid said Assignee, its representatives or agents, or its successors or assigns to secure, obtain, and enforce proper patent protection for said invention and design or inventions and designs in this and any foreign country.

Assignor authorizes Assignee or Assignee's representative to supply and/or to correct any errors in the patent/application information provided above including, but not limited to, said application serial number and filing date, prior to or after recordation.

Assignor appoints Assignee, through its designee, as its attorney-in-fact to execute, in Assignor's name and on Assignor's behalf, any and all documents required to effectuate this Assignment, specifically including, but not limited to, those documents specified above and any necessary corrective assignments.

The above-identified application was made or authorized to be made by me. I believe I am the original inventor or an original joint inventor of a claimed invention and design in the application.

I have reviewed and understand the contents of the above-identified application, including the claims. I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 C.F.R. § 1.56.

All statements made herein of my own knowledge are true, and all statements made herein on information and belief are believed to be true. I hereby acknowledge that any willful false statement and the like made in this declaration is punishable by fine or imprisonment of not more than five (5) years, or both, under 18 U.S.C. § 1001, and may jeopardize the validity of the application or any patent issuing thereon.

Patent Assignment HU Case: 7504 Appl. No(s): PCT/US19/49115

September 8th, 2019	Soonwan Chailis
Date	Soonwon Choi
September 8th, 2019	and
Date	Witness
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	Witness's Printed Name
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Patent Assignment HU Case: 7504 Appl. No(s): PCT/US19/49115

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