

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5943669

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JONATHAN TREMBLAY	01/28/2020
DIETER FOX	01/28/2020
MICHELLE LEE	01/31/2020
CARLOS FLORENSA	01/28/2020
NATHAN DONALD RATLIFF	01/29/2020
ANIMESH GARG	01/28/2020
FABIO TOZETO RAMOS	01/28/2020
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	NVIDIA CORPORATION
<b>Street Address:</b>	2788 SAN TOMAS EXPRESSWAY
<b>City:</b>	SANTA CLARA
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	95051
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16780465
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(206)757-7779
<i>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.</i>	
<b>Phone:</b>	206-622-3150
<b>Email:</b>	patentdocket@dwt.com, nvidiapatents@dwt.com, janetberdine@dwt.com, janeemery@dwt.com
<b>Correspondent Name:</b>	DAVIS WRIGHT TREMAINE LLP
<b>Address Line 1:</b>	920 FIFTH AVENUE
<b>Address Line 2:</b>	SUITE 3300
<b>Address Line 4:</b>	SEATTLE, WASHINGTON 98104-1610
<b>ATTORNEY DOCKET NUMBER:</b>	0112912-098US0
<b>NAME OF SUBMITTER:</b>	BRUCE L. JOHNSON
<b>SIGNATURE:</b>	/Bruce L Johnson/

<b>DATE SIGNED:</b>	02/03/2020
	This document serves as an Oath/Declaration (37 CFR 1.63).
<b>Total Attachments: 11</b> source=2020-02-03_19-SE-0342US02__0112912-098US0__Assignment_and_Declaration#page1.tif source=2020-02-03_19-SE-0342US02__0112912-098US0__Assignment_and_Declaration#page2.tif source=2020-02-03_19-SE-0342US02__0112912-098US0__Assignment_and_Declaration#page3.tif source=2020-02-03_19-SE-0342US02__0112912-098US0__Assignment_and_Declaration#page4.tif source=2020-02-03_19-SE-0342US02__0112912-098US0__Assignment_and_Declaration#page5.tif source=2020-02-03_19-SE-0342US02__0112912-098US0__Assignment_and_Declaration#page6.tif source=2020-02-03_19-SE-0342US02__0112912-098US0__Assignment_and_Declaration#page7.tif source=2020-02-03_19-SE-0342US02__0112912-098US0__Assignment_and_Declaration#page8.tif source=2020-02-03_19-SE-0342US02__0112912-098US0__Assignment_and_Declaration#page9.tif source=2020-02-03_19-SE-0342US02__0112912-098US0__Assignment_and_Declaration#page10.tif source=2020-02-03_19-SE-0342US02__0112912-098US0__Assignment_and_Declaration#page11.tif	

**PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)**

U.S. Patent Appln. No. 16/780,465

Attorney Docket No. 0112912-098US0

Filing Date February 3, 2020

Client Docket No. 19-SE-0342US02

**PARTIES TO THE ASSIGNMENT**

Assignor(s):

**Jonathan Tremblay**

2788 San Tomas Expressway  
Santa Clara, CA 95051

**Nathan Donald Ratliff**

2788 San Tomas Expressway  
Santa Clara, CA 95051

**Dieter Fox**

2788 San Tomas Expressway  
Santa Clara, CA 95051

**Animesh Garg**

2788 San Tomas Expressway  
Santa Clara, CA 95051

**Michelle Lee**

2788 San Tomas Expressway  
Santa Clara, CA 95051

**Fabio Tozeto Ramos**

2788 San Tomas Expressway  
Santa Clara, CA 95051

**Carlos Florensa**

2788 San Tomas Expressway  
Santa Clara, CA 95051

Assignee:

NVIDIA Corporation  
2788 San Tomas Expressway  
Santa Clara, CA 95051

**AGREEMENT**

WHEREAS, ASSIGNOR(S) (listed above) are inventor(s) of an invention entitled

"GUIDED UNCERTAINTY-AWARE POLICY OPTIMIZATION: COMBINING MODEL-FREE AND MODEL-BASED STRATEGIES FOR SAMPLE-EFFICIENT LEARNING" (Invention) for which a non-provisional application for United States Letters Patent (Application):

☐ was filed on \_\_\_\_\_ and accorded U.S. Application No. \_\_\_\_\_; or

☒ will be filed concurrently with the submission of this executed PATENT ASSIGNMENT

for recordation.

ASSIGNOR(S) hereby authorizes and requests ASSIGNEE'S legal representatives, of

**PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)**

U.S. Patent Appln. No. 16/780,465

Attorney Docket No. 0112912-098US0

Filing Date February 3, 2020

Client Docket No. 19-SE-0342US02

Title of Invention: GUIDED UNCERTAINTY-AWARE POLICY OPTIMIZATION: COMBINING MODEL-FREE AND MODEL-BASED STRATEGIES FOR SAMPLE-EFFICIENT LEARNING

Inventors: **Jonathan Tremblay, Dieter Fox, Michelle Lee, Carlos Florensa, Nathan Donald Ratliff, Animesh Garg, Fabio Tozeto Ramos**

Davis Wright Tremaine LLP, associated with Customer No. 119055, to insert in the header above and here in parentheses (U.S. Patent Application No. 16/780,465, filed February 3, 2020) this application's U.S. application number and filing date, when known.

WHEREAS, ASSIGNEE, a corporation of the State of Delaware, is desirous of acquiring the entire right, title and interest in and to the Invention and in and to any letters patent that may be granted therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, in exchange for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR(S) hereby sell, assign and transfer unto ASSIGNEE its successors and assigns, the entire right, title and interest in and to said Invention and any improvements thereto, said Application and any and all letters patent which may be granted for said Invention in the United States of America and its territorial possessions and in any and all foreign countries, and in any and all provisional, divisions, reissues, re-examinations and continuations thereof, including the right to file foreign applications directly in the name of ASSIGNEE and to claim priority rights deriving from said Application to which said foreign applications are entitled by virtue of international convention, treaty or otherwise, said Invention, Application and all letters patent on said Invention to be held and enjoyed by ASSIGNEE and its successors and assigns for their use and benefit and of their successors and assigns as fully and entirely as the same would have been held and enjoyed by ASSIGNOR(S) had this assignment, transfer and sale not been made. ASSIGNOR(S) hereby authorize and request the Commissioner of Patents and Trademarks, as well as all other applicable patent offices throughout the world, to

**PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)**

U.S. Patent Appln. No. 16/780,465

Attorney Docket No. 0112912-098US0

Filing Date February 3, 2020

Client Docket No. 19-SE-0342US02

Title of Invention: GUIDED UNCERTAINTY-AWARE POLICY OPTIMIZATION: COMBINING MODEL-FREE AND MODEL-BASED STRATEGIES FOR SAMPLE-EFFICIENT LEARNING

Inventors: **Jonathan Tremblay, Dieter Fox, Michelle Lee, Carlos Florensa, Nathan Donald Ratliff, Animesh Garg, Fabio Tozeto Ramos**

issue all letters patent on said Invention to ASSIGNEE. ASSIGNOR(S) agree to execute all instruments and documents required for the making and prosecution of applications for United States and foreign letters patent on said Invention, for litigation regarding said letters patent, or for the purpose of protecting title to said Invention or letters patent therefor.

AND ASSIGNOR(S) DOES HEREBY sell, assign, transfer, and convey to ASSIGNEE, its successors, legal representatives, and assigns all claims for damages and all remedies arising out of any violation of the rights assigned hereby that may have accrued prior to the date of assignment to ASSIGNEE, or may accrue hereafter, including, but not limited to, the right to sue for, collect, and retain damages for past infringements of said letters patent before or after issuance.

AND ASSIGNOR(S) DOES HEREBY covenant and agree that ASSIGNOR(S) will communicate to ASSIGNEE, its successors, legal representatives and assigns, any facts known to ASSIGNOR respecting the Invention or said Application, and testify in any legal proceeding, assist in the preparation of any other patent property relating to the Application and the Invention or any improvements made thereto, sign/execute all lawful papers, provide all requested documents, execute and make all rightful oaths and/or declarations in connection with the Application and the Invention including any improvements made thereto, any patent applications filed therefrom, and any continuing application filed from any of the aforementioned applications, and generally do everything possible to aid ASSIGNEE, its successors, legal representatives and assigns, to obtain

**PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)**

U.S. Patent Appln. No. 16/780,465

Attorney Docket No. 0112912-098US0

Filing Date February 3, 2020

Client Docket No. 19-SE-0342US02

Title of Invention: GUIDED UNCERTAINTY-AWARE POLICY OPTIMIZATION: COMBINING MODEL-FREE AND MODEL-BASED STRATEGIES FOR SAMPLE-EFFICIENT LEARNING

Inventors: **Jonathan Tremblay, Dieter Fox, Michelle Lee, Carlos Florensa, Nathan Donald Ratliff, Animesh Garg, Fabio Tozeto Ramos**

and enforce proper patent protection for the Invention in all countries. These provisions are binding upon ASSIGNOR's heirs, legal representatives, administrators, and assigns.

**PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)**

U.S. Patent Appln. No. 16/780,465

Attorney Docket No. 0112912-098US0

Filing Date February 3, 2020

Client Docket No. 19-SE-0342US02

Title of Invention: GUIDED UNCERTAINTY-AWARE POLICY OPTIMIZATION: COMBINING MODEL-FREE AND MODEL-BASED STRATEGIES FOR SAMPLE-EFFICIENT LEARNING

Inventors: **Jonathan Tremblay, Dieter Fox, Michelle Lee, Carlos Florensa, Nathan Donald Ratliff, Animesh Garg, Fabio Tozeto Ramos**

**DECLARATION**

As a below named inventor, I hereby declare that:

This declaration is directed to:

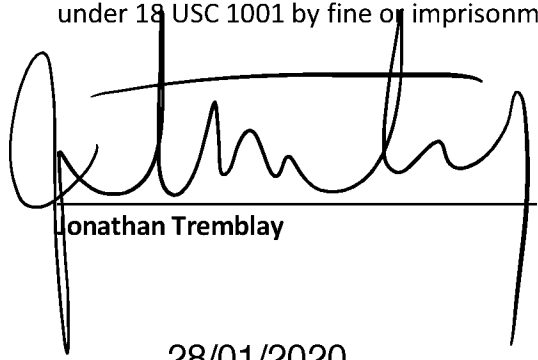
- ☒ the attached application; or
- ☐ United States Patent Application number \_\_\_\_\_ filed on \_\_\_\_\_; or
- ☐ PCT International Application number \_\_\_\_\_ filed on \_\_\_\_\_.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed Invention in the application.

I have reviewed and understand the contents of the above-identified application, and acknowledge the duty to disclose to the US Patent & Trademark Office all information known to me to be material to the patentability as defined in 37 CFR 1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

  
Jonathan Tremblay  
28/01/2020  
Date

**PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)**

U.S. Patent Appln. No. 16/780,465

Attorney Docket No. 0112912-098US0

Filing Date February 3, 2020

Client Docket No. 19-SE-0342US02

Title of Invention: GUIDED UNCERTAINTY-AWARE POLICY OPTIMIZATION: COMBINING MODEL-FREE AND MODEL-BASED STRATEGIES FOR SAMPLE-EFFICIENT LEARNING

Inventors: **Jonathan Tremblay, Dieter Fox, Michelle Lee, Carlos Florensa, Nathan Donald Ratliff, Animesh Garg, Fabio Tozeto Ramos**

**DECLARATION**

As a below named inventor, I hereby declare that:

This declaration is directed to:

- ☒ the attached application; or  
☐ United States Patent Application number \_\_\_\_\_ filed on \_\_\_\_\_; or  
☐ PCT International Application number \_\_\_\_\_ filed on \_\_\_\_\_.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed Invention in the application.

I have reviewed and understand the contents of the above-identified application, and acknowledge the duty to disclose to the US Patent & Trademark Office all information known to me to be material to the patentability as defined in 37 CFR 1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.



\_\_\_\_\_  
**Dieter Fox**

1/28/2020

\_\_\_\_\_  
Date



**PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)**

U.S. Patent Appln. No. 16/780,465

Attorney Docket No. 0112912-098US0

Filing Date February 3, 2020

Client Docket No. 19-SE-0342US02

Title of Invention: GUIDED UNCERTAINTY-AWARE POLICY OPTIMIZATION: COMBINING MODEL-FREE AND MODEL-BASED STRATEGIES FOR SAMPLE-EFFICIENT LEARNING

Inventors: **Jonathan Tremblay, Dieter Fox, Michelle Lee, Carlos Florensa, Nathan Donald Ratliff, Animesh Garg, Fabio Tozeto Ramos**

**DECLARATION**

As a below named inventor, I hereby declare that:

This declaration is directed to:

- ☒ the attached application; or  
☐ United States Patent Application number \_\_\_\_\_ filed on \_\_\_\_\_; or  
☐ PCT International Application number \_\_\_\_\_ filed on \_\_\_\_\_.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed Invention in the application.

I have reviewed and understand the contents of the above-identified application, and acknowledge the duty to disclose to the US Patent & Trademark Office all information known to me to be material to the patentability as defined in 37 CFR 1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

Michelle Lee  
**Michelle Lee**

01/31/2020  
Date

**PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)**

U.S. Patent Appln. No. 16/780,465

Attorney Docket No. 0112912-098US0

Filing Date February 3, 2020

Client Docket No. 19-SE-0342US02

Title of Invention: GUIDED UNCERTAINTY-AWARE POLICY OPTIMIZATION: COMBINING MODEL-FREE AND MODEL-BASED STRATEGIES FOR SAMPLE-EFFICIENT LEARNING

Inventors: **Jonathan Tremblay, Dieter Fox, Michelle Lee, Carlos Florensa, Nathan Donald Ratliff, Animesh Garg, Fabio Tozeto Ramos**

**DECLARATION**

As a below named inventor, I hereby declare that:

This declaration is directed to:

- ☒ the attached application; or
- ☐ United States Patent Application number \_\_\_\_\_ filed on \_\_\_\_\_; or
- ☐ PCT International Application number \_\_\_\_\_ filed on \_\_\_\_\_.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed Invention in the application.

I have reviewed and understand the contents of the above-identified application, and acknowledge the duty to disclose to the US Patent & Trademark Office all information known to me to be material to the patentability as defined in 37 CFR 1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.



\_\_\_\_\_  
Carlos Florensa

01/28/2020

\_\_\_\_\_  
Date

**PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)**

U.S. Patent Appn. No. 16/780,465

Attorney Docket No. 0112912-098US0

Filing Date February 3, 2020

Client Docket No. 19-SE-0342US02

Title of Invention: GUIDED UNCERTAINTY-AWARE POLICY OPTIMIZATION: COMBINING MODEL-FREE AND MODEL-BASED STRATEGIES FOR SAMPLE-EFFICIENT LEARNING

Inventors: Jonathan Tremblay, Dieter Fox, Michelle Lee, Carlos Florensa, Nathan Donald Ratliff, Animesh Garg, Fabio Tozeto Ramos

**DECLARATION**

As a below named inventor, I hereby declare that:

This declaration is directed to:

- ☒ the attached application; or  
☐ United States Patent Application number \_\_\_\_\_ filed on \_\_\_\_\_; or  
☐ PCT International Application number \_\_\_\_\_ filed on \_\_\_\_\_.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the above-identified application, and acknowledge the duty to disclose to the US Patent & Trademark Office all information known to me to be material to the patentability as defined in 37 CFR 1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

  
Nathan Donald Ratliff

1 - 29 - 2020  
Date

**PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)**

U.S. Patent Appln. No. 16/780,465

Attorney Docket No. 0112912-098US0

Filing Date February 3, 2020

Client Docket No. 19-SE-0342US02

Title of Invention: GUIDED UNCERTAINTY-AWARE POLICY OPTIMIZATION: COMBINING MODEL-FREE AND MODEL-BASED STRATEGIES FOR SAMPLE-EFFICIENT LEARNING

Inventors: **Jonathan Tremblay, Dieter Fox, Michelle Lee, Carlos Florensa, Nathan Donald Ratliff, Animesh Garg, Fabio Tozeto Ramos**

**DECLARATION**

As a below named inventor, I hereby declare that:

This declaration is directed to:

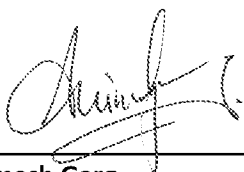
- ☒ the attached application; or
- ☐ United States Patent Application number \_\_\_\_\_ filed on \_\_\_\_\_; or
- ☐ PCT International Application number \_\_\_\_\_ filed on \_\_\_\_\_.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed Invention in the application.

I have reviewed and understand the contents of the above-identified application, and acknowledge the duty to disclose to the US Patent & Trademark Office all information known to me to be material to the patentability as defined in 37 CFR 1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.



**Animesh Garg**

Jan 28, 2020

Date

**PATENT ASSIGNMENT AND DECLARATION (37 CFR 1.63)**

U.S. Patent Appln. No. 16/780,465

Attorney Docket No. 0112912-098US0

Filing Date February 3, 2020

Client Docket No. 19-SE-0342US02

Title of Invention: GUIDED UNCERTAINTY-AWARE POLICY OPTIMIZATION: COMBINING MODEL-FREE AND MODEL-BASED STRATEGIES FOR SAMPLE-EFFICIENT LEARNING

Inventors: **Jonathan Tremblay, Dieter Fox, Michelle Lee, Carlos Florensa, Nathan Donald Ratliff, Animesh Garg, Fabio Tozeto Ramos**

**DECLARATION**

As a below named inventor, I hereby declare that:

This declaration is directed to:

- ☒ the attached application; or  
☐ United States Patent Application number \_\_\_\_\_ filed on \_\_\_\_\_; or  
☐ PCT International Application number \_\_\_\_\_ filed on \_\_\_\_\_.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed Invention in the application.

I have reviewed and understand the contents of the above-identified application, and acknowledge the duty to disclose to the US Patent & Trademark Office all information known to me to be material to the patentability as defined in 37 CFR 1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

  
\_\_\_\_\_  
**Fabio Tozeto Ramos**

01/28/2020  
\_\_\_\_\_  
Date