

I, Zhenfei Zhang, of 399 Boylston St. Boston, MA, U.S. , do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as NTRU, is my own original work, or if submitted jointly with others, is the original work of the joint submitters.

I further declare that (check one):

- I do not hold and do not intend to hold any patent or patent application with a claim which may cover the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as NTRU.

I do hereby acknowledge and agree that my submitted cryptosystem will be provided to the public for review and will be evaluated by NIST, and that it might not be selected for standardization by NIST. I further acknowledge that I will not receive financial or other compensation from the U.S. Government for my submission. I certify that, to the best of my knowledge, I have fully disclosed all patents and patent applications which may cover my cryptosystem, reference implementation or optimized implementations. I also acknowledge and agree that the U.S. Government may, during the public review and the evaluation process, and, if my submitted cryptosystem is selected for standardization, during the lifetime of the standard, modify my submitted cryptosystem's specifications (e.g., to protect against a newly discovered vulnerability).

I acknowledge that NIST will announce any selected cryptosystem(s) and proceed to publish the draft standards for public comment

I do hereby agree to provide the statements required by Sections 2.D.2 and 2.D.3, below, for any patent or patent application identified to cover the practice of my cryptosystem, reference implementation or optimized implementations and the right to use such implementations for the purposes of the public review and evaluation process.

I acknowledge that, during the post-quantum algorithm evaluation process, NIST may remove my cryptosystem from consideration for standardization. If my cryptosystem (or the derived cryptosystem) is removed from consideration for standardization or withdrawn from consideration by all submitter(s) and owner(s), I understand that rights granted and assurances made under Sections 2.D.1, 2.D.2 and 2.D.3, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate.

Signed:



Title: Cryptography Engineer

Date: Aug 19, 2019

Place: 399 Bolyston st. Boston, MA, U.S.

### 2.D.1 Statement by Each Submitter

*I, John M. Schanck, of University of Waterloo, 200 University Ave, Waterloo, ON, N2L 3G1, Canada, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as NTRU, is my own original work, or if submitted jointly with others, is the original work of the joint submitters.*

*I further declare that (check one):*

- I do not hold and do not intend to hold any patent or patent application with a claim which may cover the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as NTRU.*

*I do hereby acknowledge and agree that my submitted cryptosystem will be provided to the public for review and will be evaluated by NIST, and that it might not be selected for standardization by NIST. I further acknowledge that I will not receive financial or other compensation from the U.S. Government for my submission. I certify that, to the best of my knowledge, I have fully disclosed all patents and patent applications which may cover my cryptosystem, reference implementation or optimized implementations. I also acknowledge and agree that the U.S. Government may, during the public review and the evaluation process, and, if my submitted cryptosystem is selected for standardization, during the lifetime of the standard, modify my submitted cryptosystem's specifications (e.g., to protect against a newly discovered vulnerability).*

*I acknowledge that NIST will announce any selected cryptosystem(s) and proceed to publish the draft standards for public comment*

*I do hereby agree to provide the statements required by Sections 2.D.2 and 2.D.3, below, for any patent or patent application identified to cover the practice of my cryptosystem, reference implementation or optimized implementations and the right to use such implementations for the purposes of the public review and evaluation process.*

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*Signed: John M. Schanck*

*Title:*

*Date: August 24, 2019*

*Place: Santa Barbara, California*



### 2.D.3 Statement by Reference/Optimized Implementations' Owner(s)

The following must also be included:

*I, John M. Schanck of University of Waterloo, 200 University Ave, Waterloo, ON, N2H 3G1, Canada am the owner or authorized representative of the owner of the submitted reference implementation and optimized implementations and hereby grant the U.S. Government and any interested party the right to reproduce, prepare derivative works based upon, distribute copies of, and display such implementations for the purposes of the post-quantum algorithm public review and evaluation process, and implementation if the corresponding cryptosystem is selected for standardization and as a standard, notwithstanding that the implementations may be copyrighted or copyrightable.*

Signed: John M. Schanck

Title:

Date: August 24, 2019

Place: Santa Barbara California

A handwritten signature in black ink, appearing to read 'John M. Schanck', written over a light blue horizontal line.

## 2.D.1 Statement by Each Submitter

*I, Joost Rijneveld, of Radboud University, Toernooiveld 212 6525EC, Nijmegen, The Netherlands, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as NTRU, is my own original work, or if submitted jointly with others, is the original work of the joint submitters.*

*I further declare that:*

- I do not hold and do not intend to hold any patent or patent application with a claim which may cover the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as NTRU*

*I do hereby acknowledge and agree that my submitted cryptosystem will be provided to the public for review and will be evaluated by NIST, and that it might not be selected for standardization by NIST. I further acknowledge that I will not receive financial or other compensation from the U.S. Government for my submission. I certify that, to the best of my knowledge, I have fully disclosed all patents and patent applications which may cover my cryptosystem, reference implementation or optimized implementations. I also acknowledge and agree that the U.S. Government may, during the public review and the evaluation process, and, if my submitted cryptosystem is selected for standardization, during the lifetime of the standard, modify my submitted cryptosystem's specifications (e.g., to protect against a newly discovered vulnerability).*

*I acknowledge that NIST will announce any selected cryptosystem(s) and proceed to publish the draft standards for public comment*

*I do hereby agree to provide the statements required by Sections 2.D.2 and 2.D.3 in the Call For Proposals for any patent or patent application identified to cover the practice of my cryptosystem, reference implementation or optimized implementations and the right to use such implementations for the purposes of the public review and evaluation process.*

*I acknowledge that, during the post-quantum algorithm evaluation process, NIST may remove my cryptosystem from consideration for standardization. If my cryptosystem (or the derived cryptosystem) is removed from consideration for standardization or withdrawn from consideration by all submitter(s) and owner(s), I understand that rights granted and assurances made under Sections 2.D.1, 2.D.2 and 2.D.3 of the Call For Proposals, including use rights of the reference and optimized implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate.*

*Signed: Joost Rijneveld  
Title: PhD Candidate  
Date: August 13, 2019  
Place: Cupertino, United States*



### **2.D.3 Statement by Reference/Optimized Implementations' Owner(s)**

*I, Joost Rijneveld, of Radboud University, Toernooiveld 212 6525EC, Nijmegen, The Netherlands, am the owner or authorized representative of the owner of the submitted reference implementation and optimized implementations and hereby grant the U.S. Government and any interested party the right to reproduce, prepare derivative works based upon, distribute copies of, and display such implementations for the purposes of the post-quantum algorithm public review and evaluation process, and implementation if the corresponding cryptosystem is selected for standardization and as a standard, notwithstanding that the implementations may be copyrighted or copyrightable.*

*Signed: Joost Rijneveld*

*Title: PhD Candidate*

*Date: August 13, 2019*

*Place: Cupertino, United States*



## 2.D.1 Statement by Each Submitter

I, Oussama Danba, of Radboud University, Toernooiveld 212, 6525 EC Nijmegen, The Netherlands, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as NTRU, is my own original work, or if submitted jointly with others, is the original work of the joint submitters.

I further declare that (check one):

- I do not hold and do not intend to hold any patent or patent application with a claim which may cover the cryptosystem, reference implementation, or optimized implementations that I have submitted, NTRU; **OR** (check one or both of the following):
- to the best of my knowledge, the practice of the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as \_\_\_\_\_ (print name of cryptosystem)\_\_\_\_\_, may be covered by the following U.S. and/or foreign patents: \_\_\_\_\_ (describe and enumerate or state "none" if applicable)\_\_\_\_\_ ;
  - I do hereby declare that, to the best of my knowledge, the following pending U.S. and/or foreign patent applications may cover the practice of my submitted cryptosystem, reference implementation or optimized implementations: \_\_\_\_\_ (describe and enumerate or state "none" if applicable) \_\_\_\_\_.

I do hereby acknowledge and agree that my submitted cryptosystem will be provided to the public for review and will be evaluated by NIST, and that it might not be selected for standardization by NIST. I further acknowledge that I will not receive financial or other compensation from the U.S. Government for my submission. I certify that, to the best of my knowledge, I have fully disclosed all patents and patent applications which may cover my cryptosystem, reference implementation or optimized implementations. I also acknowledge and agree that the U.S. Government may, during the public review and the evaluation process, and, if my submitted cryptosystem is selected for standardization, during the lifetime of the standard, modify my submitted cryptosystem's specifications (e.g., to protect against a newly discovered vulnerability).

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implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate.

Signed: Oussama

Title:

Date: 01-08-2019

Place: Nijmegen, Netherlands

### 2.D.3 Statement by Reference/Optimized Implementations' Owner(s)

The following must also be included:

*I, Oussama Danba, Radboud University, Toernooiveld 212, 6525 EC Nijmegen, The Netherlands, am the owner or authorized representative of the owner (print full name, if different than the signer) of the submitted reference implementation and optimized implementations and hereby grant the U.S. Government and any interested party the right to reproduce, prepare derivative works based upon, distribute copies of, and display such implementations for the purposes of the post-quantum algorithm public review and evaluation process, and implementation if the corresponding cryptosystem is selected for standardization and as a standard, notwithstanding that the implementations may be copyrighted or copyrightable.*

Signed: Oussama

Title:

Date: 01-08-2019

Place: Nijmegen, Netherlands



## 2.D.1 Statement by Each Submitter

I, Peter Schwabe, of Radboud University, Toernooiveld 212, 6525 EC Nijmegen, The Netherlands, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as NTRU, is my own original work, or if submitted jointly with others, is the original work of the joint submitters.

I further declare that (check one):

- I do not hold and do not intend to hold any patent or patent application with a claim which may cover the cryptosystem, reference implementation, or optimized implementations that I have submitted, NTRU; **OR** (check one or both of the following):
- to the best of my knowledge, the practice of the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as \_\_\_\_\_ (print name of cryptosystem)\_\_\_\_\_, may be covered by the following U.S. and/or foreign patents: \_\_\_\_\_ (describe and enumerate or state "none" if applicable)\_\_\_\_\_ ;
  - I do hereby declare that, to the best of my knowledge, the following pending U.S. and/or foreign patent applications may cover the practice of my submitted cryptosystem, reference implementation or optimized implementations: \_\_\_\_\_ (describe and enumerate or state "none" if applicable) \_\_\_\_\_.

I do hereby acknowledge and agree that my submitted cryptosystem will be provided to the public for review and will be evaluated by NIST, and that it might not be selected for standardization by NIST. I further acknowledge that I will not receive financial or other compensation from the U.S. Government for my submission. I certify that, to the best of my knowledge, I have fully disclosed all patents and patent applications which may cover my cryptosystem, reference implementation or optimized implementations. I also acknowledge and agree that the U.S. Government may, during the public review and the evaluation process, and, if my submitted cryptosystem is selected for standardization, during the lifetime of the standard, modify my submitted cryptosystem's specifications (e.g., to protect against a newly discovered vulnerability).


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I do hereby agree to provide the statements required by Sections 2.D.2 and 2.D.3, below, for any patent or patent application identified to cover the practice of my cryptosystem, reference implementation or optimized implementations and the right to use such implementations for the purposes of the public review and evaluation process.

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implementations, may be withdrawn by the submitter(s) and owner(s), as appropriate.

Signed:



Title: Associate Professor

Date: 1-08-2019

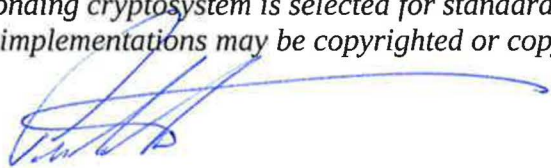
Place: Nijmegen

### 2.D.3 Statement by Reference/Optimized Implementations' Owner(s)

The following must also be included:

*I, Peter Schwabe, Radboud University, Toernooiveld 212, 6525 EC Nijmegen, The Netherlands , am the owner or authorized representative of the owner (print full name, if different than the signer) of the submitted reference implementation and optimized implementations and hereby grant the U.S. Government and any interested party the right to reproduce, prepare derivative works based upon, distribute copies of, and display such implementations for the purposes of the post-quantum algorithm public review and evaluation process, and implementation if the corresponding cryptosystem is selected for standardization and as a standard, notwithstanding that the implementations may be copyrighted or copyrightable.*

Signed:



Title:

*Associate Professor*

Date:

*1-08-2019*

Place:

*Nijmegen*

**2.D.1 Statement by Each Submitter**

I, ANDREAS HÜSLING, of VENBERGSEMOLEN 89  
56120 XENNHOVEN, NL, do hereby declare that the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as MIRU (print name of cryptosystem), is my own original work, or if submitted jointly with others, is the original work of the joint submitters.

I further declare that (check one):

I do not hold and do not intend to hold any patent or patent application with a claim which may cover the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as MIRU (print name of cryptosystem); **OR** (check one or both of the following):

to the best of my knowledge, the practice of the cryptosystem, reference implementation, or optimized implementations that I have submitted, known as \_\_\_\_\_ (print name of cryptosystem), may be covered by the following U.S. and/or foreign patents: \_\_\_\_\_ (describe and enumerate or state "none" if applicable);

I do hereby declare that, to the best of my knowledge, the following pending U.S. and/or foreign patent applications may cover the practice of my submitted cryptosystem, reference implementation or optimized implementations: \_\_\_\_\_ (describe and enumerate or state "none" if applicable).

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Signed: AH  
Title: Assistant Professor  
Date: 8/24/2015  
Place: Santa Barbara, CA