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14. ABSTRACT
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a. REPORT UU	b. ABSTRACT UU	c. THIS PAGE UU	19b. TELEPHONE NUMBER 718-260-5170

**RPPR Final Report**  
as of 11-Mar-2019

Agency Code:

Proposal Number: 68912CSREP

**Agreement Number: W911NF-16-1-0469**

**INVESTIGATOR(S):**

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**Report Date:** 15-Nov-2018

Date Received: 06-Feb-2019

**Final Report** for Period Beginning 16-Aug-2016 and Ending 15-Aug-2018

**Title:** Upgrade Information Security Laboratory for Research and Education at City Tech

**Begin Performance Period:** 16-Aug-2016

**End Performance Period:** 15-Aug-2018

**Report Term:** 0-Other

Submitted By: Xiangdong Li

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**Distribution Statement:** 1-Approved for public release; distribution is unlimited.

**STEM Degrees:** 50

**STEM Participants:** 100

**Major Goals:** The project is to update the security lab at New York City College of Technology, CUNY. Currently we have over 26 security class sections per academic year. The purchased equipment will meet the requirement for the institutions and research activities in security.

**Accomplishments:** 1. Major activities:

The project's proposal was written before Sept. 2015, and it was funded in Aug. 2016. We asked two 6-month no-cost extensions, because the PI took the one-year sabbatical leave between 2016-2017 (out of the States). The PI started to purchase the equipment in May 2017 but the vendors did not support some equipment listed in the proposal. The PI worked with representatives and technicians from Dell and resellers of Cisco devices to include the new model of Dell computers and Cisco devices.

In addition, the CUNY Research Foundation requested us to find three Cisco resellers to bid the prices and we got lower price than those listed in the proposal. Below are the equipment purchased.

CISCO security devices (including drivers)

ASA5516	QTY-6	\$23,860
ASA5525	QTY-6	\$27,745
Catalyst 2960 Router	QTY-12	\$6,537
ISR	QTY-10	\$16,417
Compact Switch	QTY-12	\$447

DELL workstations and servers

PowerEdge R740XD	QTY-1	\$31,251
POWEREDGE: BLADE SERVER	QTY-1	\$16,435
960GB SOLID STATE DRIVE	QTY-2	\$1,471
OptiPlex 3060	QTY-9	\$8,368
Precision 5530	QTY-2	\$4,473

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Precision AIO                    QTY-2        \$4,226

### Others

Apple Air	QTY-1	\$999
Canon iP110 Inkjet Printer	QTY-1	\$179
Epson Document scanner	QTY-1	\$149
APC NetShelter SV – Rack	QTY-1	\$1,017
TP-LINK Wireless Router	QTY-1	\$152
Summer Salary and F/B		\$7,055
Administrative Costs		\$3,881

### 2. Specific objectives

The goal of the project is to update the security lab at New York City College of Technology, CUNY. Currently we offer more than 26 security class sections per academic year. The purchased equipment will meet the requirement for the institutions and research activities in security.

### 3. Significant results

The PI has worked with one department computer technician to inspect the functions of each type of the equipment before it was purchased and we have installed most of the devices so far. We also configured the server, which does not only support the security classes and also provides the virtual machines to all classes in the department. The Dell computers are implemented in the department research lab.

The high-level security courses (CST3610 Network Security Fundamentals and CST4710 Advanced Security Technology) will use the updated Cisco equipment. The student from PI's research project class (CST4905) will be assigned to do research project in security in the Lab. The new equipment also can support the students who are in the college or federal research programs.

We have tried to apply for the NSF Research Experiences for Undergraduates (REU) grant program which the students are doing research in security.

One challenge is that time spent on the installation and configuration of the server and Cisco devices is much more than what we thought. The process to get the assistance from the vendors is very slow.

Another challenge is that the PI is the only full time faculty to teach the high-level security courses in the department and we have a large number of adjunct instructors. We may seek other support to train the adjunct instructors for these new devices.

**Training Opportunities:** The installed and configured equipment are used in the high-level security courses (CST3610 Network Security Fundamentals and CST4710 Advanced Security Technology) and the students Lab.

**Results Dissemination:** Nothing to Report

**Honors and Awards:** Nothing to Report

**Protocol Activity Status:**

**Technology Transfer:** Nothing to Report

### PARTICIPANTS:

**Participant Type:** PD/PI

**Participant:** Xiang Li

**Person Months Worked:** 12.00

Project Contribution:

International Collaboration:

International Travel:

National Academy Member: N

**Funding Support:**

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as of 11-Mar-2019

Other Collaborators:

**Participant Type:** Co PD/PI

**Participant:** Hong Li

**Person Months Worked:** 3.00

Project Contribution:

International Collaboration:

International Travel:

National Academy Member: N

Other Collaborators:

**Funding Support:**

### 1. Major activities:

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