NAME: POMBRIO, JUSTIN LEE

BLACK AND WHITE OR COLOR COPY OF THIS TRANSCRIPT IS NOT OFFICIAL

CLASS: CLASS OF 11 MAJOR: COMPUTER SCIENCE

MAJOR 2: MATHEMATICAL SCIENCES

ENTRY DATE: AUGUST 23, 2007 DEGREE AWARDED: BACHELOR OF SCIENCE ADMITTED FROM: MANCHESTER HIGH SCHOOL

DATE: MAY 14, 2011

ADVISOR: VOLKOV, D. (MA) HONORS: WITH HIGH DISTINCTION

| DVISOR: VCEROV, B.                            | OF LOTHIC MOTHER              | · MADIR  |          |  |  |            | 110  | NORS. WITH HIGH DISTIN  | CITON   |  |
|---|-------------------------------|--|----------|--|--|------------|--|---|---------|--|
| MAJOR DEGREE REQUIREMENT DATE COMPLETED       |                               | TITLE TITLE  |          |  |  |            | CHAIRMAN/PRJ ADVISOR   | UNITS   | EVAL.   |  |
| MAJOR QUALIFYING PROJECT MAY 2, 2011          |                               | PROTOCOL ANALYSIS VIA THE CHASE  |          |  |  |            | GUTTMAN, J. D.   | 1 1/3   | A       |  |
|   |                               |  |          |  |  |            |  |   |         |  |
| INTERACTIVE QUALIFYING PROJECT MARCH 12, 2010 |                               | PHYSICS AND EDUCATION INTERDISCIPLINARY  |          |  |  |            | IANNACCHIONE, G. S.  | 1   | A       |  |
| EQUED DATVIE                                  | PHNIC IN STITLITE & WORL      | QUALIFYI   | NG PRO   | JECT   |  |            | HITE .   | ARCESTER POLY   |         | OIN  |
| SUFFICIENCY MAY 6, 2010                       |                               | PHILOSOPHY AND TECHNOLOGY  |          |  |  |            | SANBONMATSU, J.  |   | Д       |  |
| WORT TO STEH H                                |                               |  | 112 1112 | 1001   |  |            |  |   |         |  |
| RM COURSE NO.                                 | COURSE OR PROJECT TITLE       | UNITS  | EVAL.    | TRM  | V  | COURSE NO. | COURS  | E OR PROJECT TITLE  | UNITS   | EVAL   |
|   |                               | 616  | 2 (4     |  | 1  | 0051       | NO. INC.   |   | CLC III | 5.07   |
| 07 BB 1000                                    | BIOLOGY ELECTIVE              | 1/3  | L        | 100 A  | 3. 000000000000000000000000000000000000  | 2051       | COCHOCO MODURAN MINERO BOOKS   | Y DIFFER. EQUATIONS   | 1/3     | A  |
| ESTER POLYTE                                  | ADVANCED PLACEMENT            |  | -        | C 37, 1997 (1990) 1  | The state of the state of  | 2071       | The state of the s | S&LINEAR ALGEBRA I  | 1/3     | A  |
| 100 011 1010                                  | MOY BOUT AN TON               | 1 10   | . 1      | The second second second   | District April 1 and   | 2271       | GRAPH T  |   | 1/3     | A  |
| '07 CH 1010                                   | MOLECULARITY                  | 1/3  | L        |  |  | 2273       | COMBINA  | SANGE THE THE TRANSPORT OF THE PARTY OF THE | 1/3     | A  |
|   | ADVANCED PLACEMENT            | 1  |          | 2 CO (80 C ) CO (10 C  | Laurence - Miller - Miller - Miller  | 2611       |  | STATISTICS I  | 1/3     | A  |
|   | COMPUTED CONTINUE OF FORTH    | 0.43   |          | AND THE RESERVE OF THE PARTY OF | Company of the Company   | 2631       | PROBABI  |   | 1/3     | A  |
| 07 CS 1000                                    | COMPUTER SCIENCE ELECTIVE     | 2/3  | 1        | The Residence of the Control of the  | Committee of the commit | 3233       | PROFILE AND DESCRIPTION OF RESIDENCE AND ADDRESS.  | E OPTIMIZATION  | 1/3     | A  |
| 27 22 1122                                    | ADVANCED PLACEMENT            | 1/2  | 12       | The second second  | The Property of the Park of th | 3823       | GROUP T  |   | 1/3     | A  |
| 07 CS 1102                                    | ACCELERTD INTRO TO PROGR DES  |  | A        | 1 The Control  | 100000   | 3831       | THE RESERVE AND ADDRESS OF THE PARTY AND ADDRE | D CALCULUS I  | 1/3     | A  |
| 308 CS 2011                                   | INTRO-COMP ORG&ASSEMBLER      | 1/3  | A        | 100000000000000000000000000000000000000  | Control of   | 3832       | The second second second second  | D CALCULUS II   | 1/3     | A  |
| 008 CS 2223                                   | ALGORITHMS                    | 1/3  | A        |  | The second second  | 4291       | APA TO STATE OF THE PARTY AND ADDRESS OF THE PARTY.  | BLE COMPLEX VAR   | 1/3     | A  |
| 09 CS 3013                                    | OPERATING SYSTEMS             | 1/3  | A        | The second section of the sect | THE SCHOOL SECTION   | 4451       | THE RESERVE OF THE PARTY OF THE | Y VALUE PROBLEMS  | 1/3     | A  |
| 310 CS 3043                                   | SOCIAL IMPL OF INFO PROCESSI  |  | A        | 10-705-3607-460  | C. B. Charles  | 4473       | TOTAL SECTION SERVICES AND SECURITY SECTION SE | DIFF EQUATIONS  | 1/3     | C  |
| 308 CS 3733                                   | SOFTWARE ENGINEERING          | 1/3  | A        | 109  | MA   | 535        | ALGEBRA  | ECHNIC NICTIFIED  | 1/3     | В  |
| 10 CS 4032                                    | NUM METH FOR LIN & NONLIN SY  | AND THE RESERVE OF THE PERSON NAMED IN COLUMN 1  | A        | 1 200  |  | 1011       |  |   |         | V.   |
| 08 CS 4120                                    | ANALYSIS OF ALGORITHMS        | 1/3  | A        | A08  | MU   | 1611       | FUNDAME  | NTALS OF MUSIC I  | 1/3     | A  |
| 09 CS 4233                                    | OBJ-ORIENTED ANALYSIS & DESI  |  | A        |  | -  | .6         |  |   |         |  |
| 10 CS 4401                                    | SOFTWARE SECURITY ENGINEERIN  | The second secon | В        | The State of the S | THE THE GROWN BOTH   | 1004       | \$10000 BORNA TO STORY #4500 BORNA TO PRO-   | BL TENNIS, GOLF, TENN   | 1/12    | 10 - 200000 S00000 W   |
| 310 CS 4513                                   | DISTRIBUTED COMPUTER SYSTEMS  | The second secon | В        | THE PARTY OF THE P | N MODELLAND  | 1077       | ACCOUNT ASSAULT OF THE PARTY OF | G FOR FITNESS   | 1/12    | A STATE OF THE STA |
| 211 CS 4515                                   | COMPUTER ARCHITECTURE         | 1/3  | A        | The state of the s | The same of  | 1077       | THE RESERVE OF THE PROPERTY OF THE PARTY OF  | G FOR FITNESS   | 1/12    | 100 March 1997   |
| 09 CS 4533                                    | TECHN OF PROGR LANG TRANSL    | 1/3  | В        | C09  | PE   | 1117       | MISCELL  | ANEOUS (YOGA)   | 1/12    | A  |
| 09 CS 503                                     | FOUNDATIONS OF COMP SCI       | 1/3  | A        |  | L/L  | THEORING   | NO   | TIE - MORCEZIEI   |         |  |
| 310 CS 521                                    | LOGIC IN COMPUTER SCIENCE     | 1/3  | A        | F07  | PH   | 1000       | [1] FINAL ROOMS & RESIDENCE AND DESCRIPTION (1992).  | ELECTIVE  | 1/3     | L  |
| 09 CS 536                                     | PROGRAMMING LANGUAGE DESIGN   | 1/3  | A        |  |  |            | The second secon | D PLACEMENT   | YYUN    |  |
| DIMEDITY KIT                                  | NSTITUTE - NAME OF STEE       | P(1 Y)   |          | 10 TO ST COLUMN TO   | 2 May 12 (1992) 10 July 20   | 3401       | 1) T ( 12 57 5 10 6 6 7 5 10 6 6 7 5 10 6 6 7 5 10 6 6 7 5 10 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6  | MECH I  | 1/3     | В  |
| 107 ECON 1120                                 | INTRODUCTORY MACROECONOMICS   | 1/3  | A        | F-12 - 10 - 11 - 11 - 11 - 11 - 11 - 11 -  | The state of the s | 3402       | THE RESERVE THE PROPERTY OF THE PARTY OF THE | MECH II   | 1/3     | A  |
| profile * VVOECE                              | SILKPODY FOLIXIONS            |  |          | C11  | PH   | 3501       | RELATIV  | TTY YOU   | 1/3     | A  |
| 010 HU 3900                                   | INQ SEM: PHILOSOPHY & TECHNOL | 1/3  | A        |  | -  |            |  |   | 1       | -  |
| ESTEN POLYTE                                  | CHING INSTITUTE • WORK        | ALO I E  |          | F07  | PS   | Y 1400     | TALL AND DESCRIPTION OF THE PARTY OF THE PAR | O PSYCHOLOGICAL   | 1/3     | L  |
| 707 MA 1021                                   | CALCULUS I                    | 1/3  | LOT      | 100  | 1  |            | SCIENCE  | ADVANCED PLACEMENT  |         | 1  |
| A SUMPLE I FULL                               | ADVANCED PLACEMENT            | AACU   | LOIL     | 1 40   | 1  |            | NO III   | OIL WOLDEDIE  |         | E  |
| 707 MA 1022                                   | CALCULUS II                   | 1/3  | L        | B07  | PY   | 1731       |  | O PHILOSOPHY & RELIGI   | 1/3     | A  |
|   | ADVANCED PLACEMENT            |  |          | C08  | PY   | 2731       |  | CTORY ETHICS  | 1/3     | A  |
| 707 MA 1023                                   | CALCULUS III                  | 1/3  | L        | D08  | PY   | 3731       | PROB IN  | ETHICS & SOCIAL PHIL  | 1/3     | В  |
|   | ADVANCED PLACEMENT            |  | 1        |  | 1  |            | BILL   | DE  |         |  |
| 307 MA 1024                                   | CALCULUS IV                   | 1/3  | A        | A07  | SP   | 2521       | INTERME  | DIATE SPANISH I   | 1/3     | A  |

Heather L. Jackson, Unit PART NUTS Tar

ITE • MORGESTER POLY

ID: 105 12 6153

CLASS: CLASS OF 11

MAJOR: COMPUTER SCIENCE MAJOR 2: MATHEMATICAL SCIENCES

ENTRY DATE: AUGUST 23, 2007

DEGREE AWARDED: BACHELOR OF SCIENCE

ADMITTED FROM: MANCHESTER HIGH SCHOOL DATE: MAY 14, 2011

NAME: POMBRIO, JUSTIN LEE

A BLACK AND WHITE OR COLOR COPY OF THIS TRANSCRIPT IS NOT OFFICIAL

| MAJOR DEGREE REQUIREMENT DATE COMPLETED  |  | . WODC   |                         | TITLE   | CHAIRMAN/PRJ ADVISOR   | UNITS  | EVAL.       |                             |
|--|--|----------|-------------------------|---|--|--|-------------|-----------------------------|
| MAJOR QUALIFYING PROJECT INTERACTIVE QUALIFYING PROJECT SUFFICIENCY  | THE FULL TO  | ALC ING! | ND EDUCATI<br>G PROJECT | IA THE CHASE ON INTERDISCIPLIN  | GUTTMAN, J. D.  IANNACCHIONE, G. S.  SANBONMATSU, J.   | 1,1/3<br>    1,5<br>    1,5<br>      1,5<br>      1,5<br>    1,5<br>    1,5<br>    1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5<br>  1,5 | A<br>A<br>A |                             |
| TRM COURSE NO. CO  | OURSE OR PROJECT TITLE   | UNITS I  | EVAL. TRM               | COURSE NO.  | COURS  | E OR PROJECT TITLE   | UNITS       | EVAL                        |
| B09 IQP-42-GSI-0902 INTE<br>C10 IQP-42-GSI-0902 INTE<br>D10 MQP-ID-JOG-1467 DIST<br>A10 MQP-ID-JOG-1467 DIST<br>B10 MQP-ID-JOG-1467 DIST<br>C11 MQP-ID-JOG-1467 DIST | ERACTIVE QUALIFYING PROJE ERACTIVE QUALIFICATION ERACTIVE QUALIFYING ERACTIVE QUALIFICATION ER | 1/3 7    | A<br>A<br>A             | SOLVE OF THE CHINE OF TECHNIC OF | ORIGINAL PROPERTY AND SHARING THE NATIONAL PROPERTY AND SHARING THE NATION | STEP POLYTECHN INSTITUTE WOF INSTITUTE STEP POLYTECHN INSTITUTE OF WOF INSTITUTE STEP POLY INSTITUTE FOR POLY INSTITUTE STEP POLY INSTITUTE OF INS   |             | THE STRUCTURE OF STRUCTS OF |

\*CONTINUED\*

Heather L. Jackson, University Registrar

CLASS: CLASS OF 11

MAJOR: COMPUTER SCIENCE

ID: 105 12 6153 MAJOR 2: MATHEMATICAL SCIENCES

NAME: POMBRIO, JUSTIN LEE

ENTRY DATE: AUGUST 23, 2007

DEGREE AWARDED: BACHELOR OF SCIENCE

QUALIFYING PAPER ABSTRACTS

ADMITTED FROM: MANCHESTER HIGH SCHOOL

DATE: MAY 14, 2011

ADVISOR: VOLKOV, D. (MA)

HONORS: WITH HIGH DISTINCTION

QUALIFYING PAPER ABSTRACTS

MAY 6, 2010

MAJOR QUALIFYING PROJECT

MAY 2, 2011 GRADE: A UNITS: 1 1/3

PROTOCOL ANALYSIS VIA THE CHASE

WE EXPOUND A METHOD OF ANALYZING CRYPTOGRAPHIC PROTOCOLS USING GEOMETRIC LOGIC AND THE CHASE, GEOMETRIC LOGIC IS A FORMAL SYSTEM OF LOGIC COMPARABLE TO FIRST ORDER LOGIC, AND THE CHASE IS AN ALGORITHM WHICH FINDS MODELS FOR A GIVEN GEOMETRIC LOGIC THEORY. WE USE THE STRAND SPACE FORMALISM AS A MODEL OF PROTOCOL EXECUTION. OUR WORK INCLUDES A RIGOROUS TRANSLATION OF THE STRAND SPACE FORMALISM,

TRANSLATES CRYPTOGRAPHIC PROTOCOLS INTO GEOMETRIC LOGIC THEORIES, AND AN ALGORITHM FOR CHECKING ISOMORPHISM BETWEEN PROTOCOL EXECUTIONS IN A SPECIAL CASE IN LINEAR TIME.

DEVELOPED AT MITRE, INTO GEOMETRIC LOGIC, A COMPILER THAT

CHAIR/AD: GUTTMAN, J. D.

INTERACTIVE QUALIFYING PROJECT

MARCH 12, 2010

GRADE: A UNITS: 1

PHYSICS AND EDUCATION INTERDISCIPLINARY QUALIFYING PROJECT

OUR PURPOSE WAS TO CREATE TOOLS FOR THE WPI PHYSICS DEPARTMENT TO FACILITATE LEARNING THROUGH THE WEB. WE DESIGNED JAVA APPLETS AS WEB BASED LEARNING TOOLS, REDESIGNED THE LAYOUT OF THE LAB WEBSITE, AND CREATED A TOOL FOR MANAGING THE SITE'S DATA AND DESIGN. WITH THESE TOOLS THE WPI PHYSICS DEPARTMENT WILL BE BETTER ABLE TO SERVE THE STUDENTS' NEEDS THROUGH THE MEDIUM OF THE WEB.

CHAIR/AD: IANNACCHIONE, G. S.

SUFFICIENCY

GRADE: A

PHILOSOPHY AND TECHNOLOGY

THE HUMANITIES AND ARTS REQUIREMENT WAS COMPLETED WITH COURSES IN PHILOSOPHY, RELIGION, AND MUSIC THEORY, CULMINATING IN A PORTFOLIO OF ESSAYS ON THE SUBJECT OF THE PHILOSOPHY OF TECHNOLOGY. THE PORTFOLIO CONSISTED OF FIVE CRITICAL SUMMARIES OF SUCH PHILOSOPHERS AS ARISTOTLE, HEIDEGGER, AND MUMFORD, AS WELL AS A RESEARCH PAPER ON MARX?S THOUGHTS ON THE EFFECTS OF TECHNOLOGY IN THE TRANSITION FROM CAPITALISM TO SOCIALISM.

CHAIR/AD: SANBONMATSU, J.

Heather L. Jackson, University Registrar