

## JOINT-PHD AGREEMENT

Between

UNIVERSITY POLITEHNICA OF BUCHAREST

and

UNIVERSITY OF TWENTE

## AGREEMENT

THIS AGREEMENT is made the day of 2016-XXXXXXX . 2016-7-14

BETWEEN

UNIVERSITY POLITEHNICA OF BUCHAREST

Splaiul Independenței 313, București 060042, Romania ("UPB")

AND

UNIVERSITY OF TWENTE, Drienerlolaan 5, 7522 NB Enschede, The Netherlands ("UT")

RECITALS:

A. UPB and UT have agreed to establish a Joint-PhD.

B. This agreement sets out the framework under which the Joint-PhD arrangement will operate.

THE PARTIES AGREE:

### 1. DEFINITIONS AND INTERPRETATION

#### 1.1 Definitions

In this agreement (including the Recitals, any Schedules and Annexures) unless the context otherwise requires:

"Annexure" means an annexure to this agreement.

"Academic Supervisor" means a representative of UPB or UT (as the case may be) as detailed in an Annexure "A" document.

"Commencement Date" means the date of this agreement.

"Confidential Information" in respect of a party means all Information submitted or disclosed by one party to the other party at any time in connection with the subject matter of this agreement (including during negotiations, discussions and meetings) and includes without limitation:

(a) Information which at the time of disclosure by a party is identified as being confidential;

(b) Information which, of implied necessity, is confidential;

(c) Information which a party knows or ought reasonably be expected to know is confidential,

but does not include Information which:

- is in the public domain otherwise than as a result of a breach of the terms of this agreement or any other obligations of confidentiality owed by a party;
- prior to disclosure by a party was lawfully known to the other party and in respect of which the other party is not bound by any other obligations of confidentiality; or
- is required by law to be disclosed.

“Joint-PhD” means a PhD Program between UPB and UT whereby the candidature of a doctoral candidate is conducted under joint supervision and enrolment arrangements of the “Home” and “Host” institution. Upon successful completion of the Program the names and badges of both “Home” and “Host” institution will appear on the single testamur awarded.

“Home Institution” means the institution (whether UPB or UT) at which the Candidate undertakes the majority of the Program.

“Host Institution” means the institution other than the Home Institution (whether UPB or UT) at which a Candidate will undertake part of the Program in accordance with this agreement.

“Information” means information, inventions and ideas, which may be oral, written, recorded or stored in a machine readable form.

“Program” means the PhD program applicable to the relevant Joint-PhD arrangement as set out in each instance in a document in the form of Annexure “A”.

“Regulation” means a regulation of UPB or UT, as the case may be. In particular for UPB: : the PhD student contract and Doctoral Regulations. In particular for UT: the PhD Charter and the Doctoral Regulations. In both cases also general applicable regulations apply, as for example on conduct and integrity.

“Statute” means a statute of UPB or UT, as the case may be.

“Candidate” means a candidate enrolled in the Program at the Home Institution and the Host Institution as detailed in an Annexure “A” document.

## 1.2 Interpretation

In this agreement (including the Recitals and any Annexures or Schedules) unless the context otherwise requires:

(a) a reference to this agreement or another instrument includes any amendment or replacement of it and despite any change in the identity of the parties;

(b) if any party to this agreement comprises two or more persons then the obligations of those persons are joint and several;

(c) a provision of this agreement which is in favor of two or more persons is for the benefit of them jointly and severally;

(d) a reference to any person includes that person's legal personal representatives and if any person is a corporation a reference to that person includes its successors and assigns;

(e) words denoting the singular number include the plural number and vice versa and words importing one gender include the other gender.

## 2. PROGRAM COLLABORATION

2.1 The parties agree to collaborate to jointly provide the Program in accordance with this agreement.

2.2 Both parties must obtain and maintain throughout the Term approval for the Program from their respective governing boards.

2.3 Upon completion and signing by UPB, UT and the Candidate of a document in the form of Annexure "A" for Joint-PhD with a particular Candidate that document shall on each occasion be deemed to form a separate agreement between the parties and the terms of this agreement shall apply to the Joint-PhD for that Candidate.

2.4 Each party will appoint an Academic Supervisor for the Candidate to coordinate and manage the roles of the respective parties with respect to the Candidate and this Agreement.

2.5 A Candidate will be enrolled as required at both the Home Institution and the Host Institution for the duration of the Program.

2.6 A Candidate who successfully completes the Program will not be deemed to have completed PhDs at each institution, but shall qualify for a single award and shall be entitled to receive a testamur sealed by both parties in the form of Annexure "B". Either party may, if it so chooses, refer to the award as a "joint award" or "joint degree".

2.7 In order to validate the degree on both sides two paper folders will be arranged for: one for UT and another for UPB. The folder for UPB should include the decision of the jury (signed by all members of the Jury) and the written evaluation report of all Jury members excepting the president. The folder for UT should include the written evaluation report of all Jury members

2.8 The duration of a Joint-PhD is between three and four years.

## 3. EXCHANGE CONDITIONS

3.1 Candidates at UPB may attend UT for a period of between 30% and 50% of the total duration of the PhD Program or, by negotiation, for a period of no less than 6 months. Candidates from UT may attend the UPB for a period of between 30% and 50% of the total duration of the PhD Program or, by negotiation, for a period of no less than 6 months.

3.2 Each party will screen applications from its candidates and recommend candidates suitable for a Program. Each party will reserve the right to make final judgements on the admissibility of each candidate nominated for entry into the Program.



3.3 Each Candidate will register and pay tuition and other required fees at their Home Institution. The Host Institution will also register the candidate for the entire time of the program, but waive all tuition fees.

3.4 Candidates enrolled in the Host Institution will be subject to the same rules and regulations that apply to local Candidates. Candidates will generally be eligible for all the services and rights normally provided to locally enrolled candidates.

3.5 The Host Institution will provide the incoming Candidates assistance in arranging accommodation for the period of the Program.

3.6 Each Candidate will be responsible for arranging at his or her own cost the necessary visa and the costs of accommodation, international travel, travel in the host country, books, equipment, consumables, hospitalisation, health and travel insurance, and other incidental expenses arising out of the Program.

3.7 No exchange of funds between the Home Institution and the Host Institution will occur.

#### 4. EXAMINATION REQUIREMENTS

4.1 The Examination of the Candidates is to be carried out as follows:

(a) At least six months before the intended date of submission/presentation of the research for examination, the senior supervisors will recommend 6 examiners to the delegated authorities of the Home and Host Institutions for endorsement and appointment .

(b) At least two examiners shall be appointed by each party, including not more than one internal examiner from UT who should not have had direct involvement with the Candidate's research program. Two examiners may be appointed from UPB, two examiners from UT, and two external examiners to both UPB and UT (total min. 4 and max. 6). Examiners should not have had direct involvement with the Candidate's research program. Next to the examiners, the senior supervisors and if required co-supervisors (total max. 3) and chairman/secretary make part of the graduation committee (overall max. 10 persons).

(c) The Candidate shall be required to provide the oral defence of the thesis in English and to provide an oral summary.

(d) The Candidate will not progress to the oral defence stage if the examiners are not convinced of the Candidate's prima facie preparedness.

(e) Copies of the thesis will be dispatched to the examiners, who shall prepare draft written assessment reports on the thesis.

(f) In order to prepare for the oral examination Candidates will need at least two months to prepare submission of the thesis/project prior to the oral defence. This schedule is required in order to give the panel members sufficient time to read the thesis and summarise the points that will be addressed during the defence.



(g) For the oral examination, the panel should comprise 3 to 6 members. A third of the panel should not belong to any of the universities in which the Candidate is enrolled. Half of the panel must be professors; the panel should be balanced between members from UPB and UT.

(h) The process of the oral defence will normally take around 45 minutes during which time the Candidate presents their research to the panel and defends his/her thesis/project. The oral defence can only occur after the completed written assessment of the thesis report.

4.2 When the required conditions for joint candidature and examination have been met a Candidate for the degree of Doctor will receive a Joint-PhD doctorate. The successful candidate will receive a single testamur acknowledging the joint-PhD agreement and bearing the imprint of both institutions.

## 5. SUPERVISORS

The Annexure "A" document shall list the two principal supervisors who are to undertake the joint supervision in the two parties for the duration of the Program. Additional supervisors and/or consultants may be appointed from either party, subject to the thesis supervision plan being acceptable to all parties.

## 6. RESEARCH COSTS

A needs analysis will be conducted at the commencement of the candidature to assess and agree on the provision for the Candidate's research costs including laboratory/fieldwork funding. This will normally be conducted by the Home Institution.

## 7. LANGUAGE REQUIREMENTS

7.1 Instruction will be in English at both UPB and UT.

7.2 English language requirements for Candidates on exchange to UPB will be as follows:

(a) Candidates from countries where English is not the lingua franca must meet the English Language requirements as set out by UPB by way of original documents or certified copy.

7.3 Language requirements for Candidates on exchange to UT will be as follows:

UPB Candidates going to UT who are nationals from non-English speaking countries require an English language certificate. Candidates must have 6.5 Overall IELTS, or 90 TOEFL iBT equivalent – Cambridge CAE or CPE). An exception will be made if the candidate has received 2 years of continuous secondary or tertiary education prior to his exchange, at an English speaking institution.

## 8. APPORTIONMENT OF RESEARCH TIME AT EACH PARTY

The involvement of a Candidate is to be divided between the two countries of the respective parties with alternate stays in each of the countries for a period of between 30% and 50% of the total duration of the PhD program or, by negotiation, for a period of no less than 6 months.

## 9. LIAISON

Each party will name an individual staff member to serve as the liaison officer with his/her counterpart at the other party.

## 10. FURTHER OBLIGATIONS OF HOME INSTITUTION

10.1 The Home Institution will receive and consider applications for enrolment in accordance with that party's usual procedures. Prior to accepting an application from a prospective Candidate, the Home Institution must liaise with the Host Institution and obtain written confirmation from the Host Institution that it is able to provide to the Candidate those components of the Program nominated by the Candidate to be undertaken at the Host Institution.

10.2 The Home Institution will ensure that its enrolment forms permit the sharing of data concerning the relevant Candidate with the Host Institution. The enrolment forms must also require the Candidate to comply with the Statutes and Regulations at the Host Institution.

10.3 Any act or omission by a Candidate at or with respect to the Home Institution which would constitute a breach of a discipline regulation relating to academic misconduct or general misconduct at the Home Institution will be treated as such by the Home Institution under the discipline procedures applicable at the Home Institution.

10.4 Any act or omission by a Candidate at or with respect to the Host Institution which would constitute a breach of a discipline regulation relating to academic misconduct or general misconduct at the Host Institution will be treated as such by the Host Institution under the discipline procedures applicable at the Host Institution.

10.5 The conferring ceremony and the issue of awards relating to the Program will take place at the cost and expense of the Home Institution, unless otherwise agreed in the Annexure "A".

## 11. FURTHER OBLIGATIONS OF HOST INSTITUTION

11.1 The Host Institution will provide Candidates with the same access to its library, computer facilities as it provides to its enrolled Candidates generally.

11.2 The Host Institution must maintain academic records for all Candidates who undertake components of the Program at the Host Institution.

11.3 Six monthly reports should be exchanged between the parties for each Candidate.

## 12. TERM OF AGREEMENT

12.1 The Term of this agreement begins on XXXXXXXXX Date and ends after five years, unless extended or terminated earlier pursuant to this agreement.

12.2 Prior to expiration of the Term, the parties may agree in writing to extend the Term.

12.3 Either party may terminate the agreement by giving six months' notice of termination in writing to the other party. Termination of the agreement will not affect the exchange of candidates accepted for a Program pursuant to this agreement or the obligations of each party to the exchange balance where such acceptance or obligations arise prior to the date of receipt of the termination notice.

12.4 The parties will review the agreement annually on a date to be agreed between the parties.



12.5 The parties will prepare and sign a final written report to be completed by Expiry Date. The report will be submitted to the respective signatories of this agreement.

### 13. CONFIDENTIAL INFORMATION

13.1 Each party undertakes to keep secret and protect and preserve the confidential nature and secrecy of the Confidential Information of the other party. Without limiting this obligation, a party must not:

- (a) use or permit any person to use the other party's Confidential Information for any purpose other than the performance of this agreement;
- (b) disclose or in any way communicate to any other person any of the other party's Confidential Information except as authorised by the other party;
- (c) permit unauthorised persons to have access to places where the other party's Confidential Information is displayed, reproduced or stored; or
- (d) make or assist any person to make any unauthorised use of the other party's Confidential Information.

13.2 Each party must take reasonable steps to enforce the confidentiality obligations imposed by clause 13.1 above including diligently pursuing, at its own cost, any breach or threatened breach of those obligations by a person to whom the party has disclosed the Confidential Information.

13.3 A party may disclose the other party's Confidential Information to its advisers in relation to its rights under this agreement or to its employees and sub-contractors on a need to know basis, solely to assist in the performance of obligations under this agreement and on the condition that such persons do not disclose the Confidential Information to any other person.

13.4 The obligations of confidentiality under this agreement shall survive expiration or earlier termination of this agreement.

### 14. EVENTS OF DEFAULT, TERMINATION AND FORCE MAJEURE

14.1 An Event of Default occurs if any one or more of the following events occurs in respect of a party ("defaulting party"):

- (a) default be made by the defaulting party in the performance or observance of any other obligation on its part contained in this agreement and if such default can be remedied, is not remedied within twenty one (21) days of written notification from the other party that it requires that default to be remedied;
- (b) the defaulting party becomes insolvent or unable to pay its debts, or ceases its business operations.

14.2 If an Event of Default occurs in respect of a defaulting party, then the other party may in its discretion terminate this agreement by written notification to the defaulting party.

### 15. ARBITRATION



15.1 Any dispute, controversy or claim arising out of or in relation to this contract or the breach, termination or invalidity thereof may be settled by arbitration. The award of an arbitrator will be final and binding upon the parties. An arbitration shall be in accordance with the UNCITRAL Arbitration Rules for ad-hoc arbitration as in force at the date of this contract. The parties agree to the appointment of a single arbitrator only who shall be nominated by the parties in the manner provided for in the UNCITRAL Arbitration Rules.

15.2 Pending the reference to arbitration or until the arbitrator publish the award the parties shall continue to perform their obligations under the Agreement without prejudice to a final adjustment in accordance with the award.

## 16. MISCELLANEOUS

### 16.1 Variation and Waiver

A provision of or a right created by this agreement cannot be waived except in writing signed by the party granting the waiver. No variation to or amendment of this agreement can be made without the consent in writing of all of the parties.

### 16.2 Approvals and Consents

Where any provision of this agreement provides for a party to provide its consent or approval then such party may conditionally or unconditionally in its absolute discretion give or withhold such consent or approval unless this agreement expressly provides otherwise.

### 16.3 Entire Agreement

This agreement contains all of the terms, conditions, representations and warranties in connection with the agreement reached between the parties with respect to the subject matter of this agreement.

### 16.4 Relationship of Parties

Nothing in this agreement creates an agency relationship or a partnership or joint venture between the parties, and no party can bind or pledge the credit of the other party.

### 16.5 Governing Law and Jurisdiction

This agreement is governed by and construed in all respects in accordance with the national laws.

### 16.6 Costs

The parties agree to bear their own costs (including legal costs) in respect of this agreement.

### 16.7 Assignment

A party must not novate, assign or subcontract this agreement or any of its obligations under this agreement without the prior written consent of the other party.

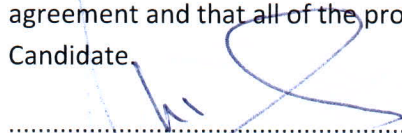
### 16.8 Counterparts

ANNEXURE "A"

PROGRAM

1. PROGRAM DETAILS
2. CANDIDATE DETAILS
3. ACADEMIC SUPERVISOR(S)
4. HOME INSTITUTION
5. HOST INSTITUTION
6. ORGANISATIONAL COMPONENT/SCHOOL
7. SPECIAL CONDITIONS

In accordance with the agreement dated the day of ("the agreement") we hereby agree that the Program detailed in this document is incorporated in the agreement and that all of the provisions of the agreement shall apply to the Program and the Candidate.

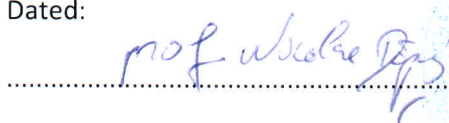
 M. van Steen

for and on behalf of University of Twente

Dated: 14/7/2016

.....  
for and on behalf of University POLITEHNICA of Bucharest

Dated:

 Prof. Valeriu Popescu

Candidate

ANNEXURE "B"

PRO-FORMA TESTAMUR

This agreement can be executed in a number of counterparts and the counterparts taken together will be deemed to constitute the one and the same document.

EXECUTED as an agreement.

SIGNED for and on behalf of UNIVERSITY POLITEHNICA OF BUCHAREST

The Rector:

Signature

Name



PhD Supervisor:

Signature

Name

*[Handwritten signature]*

Theodor BORANGIU

SIGNED for and on behalf of UNIVERSITY OF TWENTE

The Rector:

Signature

Name

*[Handwritten signature]*  
prof. dr. H. Brinkema

PhD Supervisor:

Signature

Name

*[Handwritten signature]*  
M. van Steen



UNIVERSITY  
OF TWENTE.



## ANNEXURE "A"

### Joint PhD (University Polytechnic Bucharest and the University of Twente)

To be completed by the relevant School/Academic Unit and a copy sent to:

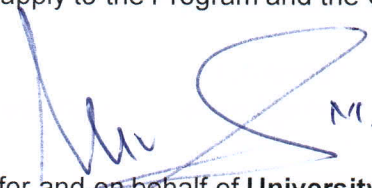
School of Graduate Research University Polytechnic Bucharest (UPB)

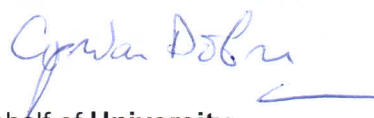
Twente Graduate School, Dr. Paul van Dijk, and to the secretary of the Doctorate Board,  
Mrs. Marieke, T. Zwennes at University of Twente.

- |                                                                          |                                                                                                                                                                                                             |
|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Candidate's Name                                                      | Family name<br>Stanciu                                                                                                                                                                                      |
|                                                                          | Given name(s)<br>Valeriu                                                                                                                                                                                    |
|                                                                          | Male                                                                                                                                                                                                        |
| 2. Candidate's home institution                                          | University Polytechnic of Bucharest (UPB)                                                                                                                                                                   |
| 3. Home institution details                                              | UPB<br>Faculty of Automatic Control and Computers<br>Computer Science and Engineering<br>Department                                                                                                         |
| 4. Candidate's host institution                                          | University of Twente (UT)                                                                                                                                                                                   |
| 5. Host institution details                                              | Faculty of Electrical Engineering, Mathematics,<br>and Computer Science<br>Pervasive Systems Group                                                                                                          |
| 6. Candidate's admission and enrolment at the Home and Host Institutions | The Candidate was granted entry into the Degree of Doctor of Philosophy (at UPB) and Degree of Doctor at the University of Twente in accordance with the entry requirements in the academic year 2015       |
| 7. Award                                                                 | Joint PhD                                                                                                                                                                                                   |
| 8. Thesis or project detail                                              | Exploring the design space for privacy preservation in WiFi-tracking systems for crowd monitoring. The goal is to come to a solution that allows for highly anonymous tracking of streams of crowd members. |
| 9. Home institution's supervisor(s)                                      | Dr. Ciprian Dobre, Associate Professor<br>Prof. Dr. Valentin Cristea, Full Professor                                                                                                                        |
| 10. Host institution's supervisor(s)                                     | Prof. Dr. Ir. Maarten van Steen, Full Professor<br>Dr. Andreas Peter, Assistant professor                                                                                                                   |
| 11. Duration of candidature                                              | Four years                                                                                                                                                                                                  |
| 12. Date of commencement award                                           | 01 October 2015 (M0)                                                                                                                                                                                        |
| 13. Expected completion date                                             | 01 October 2019 (M48)                                                                                                                                                                                       |
| 14. Anticipated date of candidate at host institution                    | M31-M36: 01 April 2018 – 01 October 2018<br>M43-M48: 01 April 2019 – 01 October 2019                                                                                                                        |
| 15. Arrangements for completing candidate induction                      | N/A                                                                                                                                                                                                         |

- |                                                                                           |                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16. Arrangements for completing any coursework and or/training requirements or equivalent | N/A                                                                                                                                                                                                                                                                                                                                      |
| 17. Arrangements for completing milestone requirements or equivalent progress reviews     | The confirmation of candidature has been successfully completed (01/10/2014).                                                                                                                                                                                                                                                            |
| 18. Scholarship or funding details                                                        | The candidate will hold a position as an employee and receive the accompanying salary by UT for the period of 12 months the student is present at UT. Next to these costs for travelling once from and to Bucharest per visiting period will be covered. Also, a benchfee of 5000 Euro will be made available for attending conferences. |
| 19. Intellectual property                                                                 | N/A.                                                                                                                                                                                                                                                                                                                                     |
| 20. Ethics approval                                                                       | Not required                                                                                                                                                                                                                                                                                                                             |
| 21. Examination                                                                           | No variation                                                                                                                                                                                                                                                                                                                             |
| 22. Special conditions                                                                    | The aim is to have the public defense at UT before the one at UPB. Additional costs to make this happen will be covered by UT.                                                                                                                                                                                                           |

In accordance with the agreement dated the                      day of                      ("the agreement") we hereby agree that the Program detailed in this document is incorporated in the agreement and that all of the provisions of the agreement shall apply to the Program and the Candidate.

  
M. van Steen  
for and on behalf of **University of Twente**

  
for and on behalf of **University Polytechnic Bucharest**

Dated: 14 / 7 / 2016

Dated: 26 / 7 / 2016

**Candidate**

Dated:                      /

## ANNEXURE "A"

### Joint PhD (University Polytechnic Bucharest and the University of Twente)

To be completed by the relevant School/Academic Unit and a copy sent to:

School of Graduate Research University Polytechnic Bucharest (UPB)

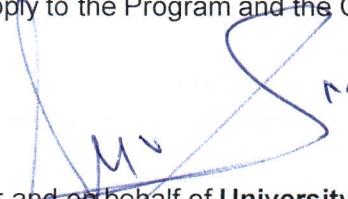
Twente Graduate School, Dr. Paul van Dijk, and to the secretary of the Doctorate Board,  
Mrs. Marieke, T. Zwennes at University of Twente.


- |                                                                          |                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Candidate's Name                                                      | Family name<br>Chilipirea                                                                                                                                                                                                                                                                                                                               |
|                                                                          | Given name(s)<br>Cristian                                                                                                                                                                                                                                                                                                                               |
|                                                                          | Male                                                                                                                                                                                                                                                                                                                                                    |
| 2. Candidate's home institution                                          | University Polytechnic of Bucharest (UPB)                                                                                                                                                                                                                                                                                                               |
| 3. Home institution details                                              | UPB<br>Faculty of Automatic Control and Computers<br>Computer Science and Engineering<br>Department                                                                                                                                                                                                                                                     |
| 4. Candidate's host institution                                          | University of Twente (UT)                                                                                                                                                                                                                                                                                                                               |
| 5. Host institution details                                              | Faculty of Electrical Engineering, Mathematics,<br>and Computer Science<br>Pervasive Systems Group                                                                                                                                                                                                                                                      |
| 6. Candidate's admission and enrolment at the Home and Host Institutions | The Candidate was granted entry into the Degree of Doctor of Philosophy (at UPB) and Degree of Doctor at the University of Twente in accordance with the entry requirements in the academic year 2014                                                                                                                                                   |
| 7. Award                                                                 | Joint PhD                                                                                                                                                                                                                                                                                                                                               |
| 8. Thesis or project detail                                              | Exploring the design space of a large-scale distributed wireless crowd-monitoring system. The initial work concentrates on WiFi-tracking systems, including the methods and techniques for data analysis. This research will be extended with device-to-device detections, and take into account that monitoring should be indoors as well as outdoors. |
| 9. Home institution's supervisor(s)                                      | Dr. Ciprian Dobre, Associate Professor<br>Prof. Dr. Valentin Cristea, Full Professor                                                                                                                                                                                                                                                                    |
| 10. Host institution's supervisor(s)                                     | Prof. Dr. Ir. Maarten van Steen, Full Professor                                                                                                                                                                                                                                                                                                         |
| 11. Duration of candidature                                              | Four years                                                                                                                                                                                                                                                                                                                                              |
| 12. Date of commencement award                                           | 01 October 2014 (M0)                                                                                                                                                                                                                                                                                                                                    |
| 13. Expected completion date                                             | 01 October 2018 (M48)                                                                                                                                                                                                                                                                                                                                   |
| 14. Anticipated date of candidate at host institution                    | M31-M36: 01 April 2017 – 01 October 2017<br>M43-M48: 01 April 2018 – 01 October 2018                                                                                                                                                                                                                                                                    |
| 15. Arrangements for completing candidate induction                      | N/A                                                                                                                                                                                                                                                                                                                                                     |



- |                                                                                           |                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16. Arrangements for completing any coursework and or/training requirements or equivalent | N/A                                                                                                                                                                                                                                                                                                                                      |
| 17. Arrangements for completing milestone requirements or equivalent progress reviews     | The confirmation of candidature has been successfully completed (01/10/2014).                                                                                                                                                                                                                                                            |
| 18. Scholarship or funding details                                                        | The candidate will hold a position as an employee and receive the accompanying salary by UT for the period of 12 months the student is present at UT. Next to these costs for travelling once from and to Bucharest per visiting period will be covered. Also, a benchfee of 5000 Euro will be made available for attending conferences. |
| 19. Intellectual property                                                                 | N/A.                                                                                                                                                                                                                                                                                                                                     |
| 20. Ethics approval                                                                       | Not required                                                                                                                                                                                                                                                                                                                             |
| 21. Examination                                                                           | No variation                                                                                                                                                                                                                                                                                                                             |
| 22. Special conditions                                                                    | The aim is to have the public defense at UT before the one at UPB. Additional costs to make this happen will be covered by UT.                                                                                                                                                                                                           |

In accordance with the agreement dated the                      day of                      ("the agreement") we hereby agree that the Program detailed in this document is incorporated in the agreement and that all of the provisions of the agreement shall apply to the Program and the Candidate.

  
M. v. Steen  
for and on behalf of **University of Twente**

  
for and on behalf of **University Polytechnic Bucharest**

Dated: 14 / 7 / 2016

Dated:                      /                      /

  
**Candidate** CRISTIAN CHELUPIREA

Dated: 01 / 08 / 2016

## ANNEXURE "A"

### Joint PhD (University Polytechnic Bucharest and the University of Twente)

To be completed by the relevant School/Academic Unit and a copy sent to:

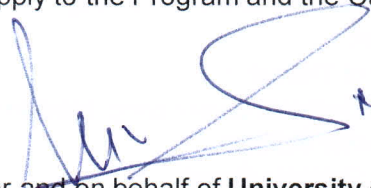
School of Graduate Research University Polytechnic Bucharest (UPB)

Twente Graduate School, Dr. Paul van Dijk, and to the secretary of the Doctorate Board,  
Mrs. Marieke, T. Zwennes at University of Twente.

- |                                                                          |                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Candidate's Name                                                      | Family name<br>Petre<br><br>Given name(s)<br>Andreea<br><br>Male                                                                                                                                                                 |
| 2. Candidate's home institution                                          | University Polytechnic of Bucharest (UPB)                                                                                                                                                                                        |
| 3. Home institution details                                              | UPB<br>Faculty of Automatic Control and Computers<br>Computer Science and Engineering<br>Department                                                                                                                              |
| 4. Candidate's host institution                                          | University of Twente (UT)                                                                                                                                                                                                        |
| 5. Host institution details                                              | Faculty of Electrical Engineering, Mathematics,<br>and Computer Science<br>Pervasive Systems Group                                                                                                                               |
| 6. Candidate's admission and enrolment at the Home and Host Institutions | The Candidate was granted entry into the Degree of Doctor of Philosophy (at UPB) and Degree of Doctor at the University of Twente in accordance with the entry requirements in the academic year 2014                            |
| 7. Award                                                                 | Joint PhD                                                                                                                                                                                                                        |
| 8. Thesis or project detail                                              | Data-driven analysis of crowd behavior with a focus on estimating and predicting paths that crowd members (will) take. Analysis is based on data gathered during the project, from at least two large setups with WiFi scanners. |
| 9. Home institution's supervisor(s)                                      | Dr. Ciprian Dobre, Associate Professor<br>Prof. Dr. Valentin Cristea, Full Professor                                                                                                                                             |
| 10. Host institution's supervisor(s)                                     | Prof. Dr. Ir. Maarten van Steen, Full Professor                                                                                                                                                                                  |
| 11. Duration of candidature                                              | Four years                                                                                                                                                                                                                       |
| 12. Date of commencement award                                           | 01 October 2014 (M0)                                                                                                                                                                                                             |
| 13. Expected completion date                                             | 01 October 2018 (M48)                                                                                                                                                                                                            |
| 14. Anticipated date of candidate at host institution                    | M31-M36: 01 April 2017 – 01 October 2017<br>M43-M48: 01 April 2018 – 01 October 2018                                                                                                                                             |
| 15. Arrangements for completing candidate induction                      | N/A                                                                                                                                                                                                                              |

- |                                                                                           |                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16. Arrangements for completing any coursework and or/training requirements or equivalent | N/A                                                                                                                                                                                                                                                                                                                                      |
| 17. Arrangements for completing milestone requirements or equivalent progress reviews     | The confirmation of candidature has been successfully completed (01/10/2014).                                                                                                                                                                                                                                                            |
| 18. Scholarship or funding details                                                        | The candidate will hold a position as an employee and receive the accompanying salary by UT for the period of 12 months the student is present at UT. Next to these costs for travelling once from and to Bucharest per visiting period will be covered. Also, a benchfee of 5000 Euro will be made available for attending conferences. |
| 19. Intellectual property                                                                 | N/A.                                                                                                                                                                                                                                                                                                                                     |
| 20. Ethics approval                                                                       | Not required                                                                                                                                                                                                                                                                                                                             |
| 21. Examination                                                                           | No variation                                                                                                                                                                                                                                                                                                                             |
| 22. Special conditions                                                                    | The aim is to have the public defense at UT before the one at UPB. Additional costs to make this happen will be covered by UT.                                                                                                                                                                                                           |

In accordance with the agreement dated the                      day of                      ("the agreement") we hereby agree that the Program detailed in this document is incorporated in the agreement and that all of the provisions of the agreement shall apply to the Program and the Candidate.

  
M. van Steen  
for and on behalf of **University of Twente**

for and on behalf of **University Polytechnic Bucharest**



Dated: 17 / 7 / 2016

Dated:                      /                      /

**Candidate**



Dated: 28 / 7 / 2016