Appendix B

CLUSTER Dual Master Agreement between

Instituto Superior Técnico (IST) and Helsinki University of Technology (TKK)

Duration: Academic Year 08/09 to 10/11

Degree programme at IST:	**Master Program in Information Systems and Computer Engineering (MEIC)** (120 ECTS)
Degree awarded:	MSc.
Language of instruction	English
Entrance admission criteria:	Bachelor of Science in Computer Science or related field
Degree programme at TKK:	**Master Programme in Machine Learning and Data Mining (Macadamia)** (120 ECTS)
Degree awarded:	MSc
Language of instruction	English
Entrance admission criteria:	Bachelor of Science in Computer Science or related field
Number of students	2

Schematic Study Plan

Option 1			
Year	Institution	Studies	Remarks
1	TKK	Compulsory and elective courses	60 ECTS
2	IST	Courses + Master Thesis (co-supervised)	30+30 ECTS
Option 2			
Year	Institution	Studies	Remarks
1	IST	Compulsory and elective courses	60 ECTS
2	TKK	Courses + Master Thesis (co-supervised)	30+30 ECTS
The schematic study plan is applicable to students originated from TKK or IST indifferently. The detailed study plan must be defined by the academic coordinators for each student, avoiding redundant courses.			

Contacts:

Academic responsible for the programme (MEIC): Prof. Arlindo Oliveira	*Academic responsible for the programme (Macadamia)* Prof. Samuel Kaski
Contact person: Sílvia Santos, International Office (silvia.santos@ist.utl.pt)	*Contact person* Eija Kujanpää (eija.kujanpaa@tkk.fi)

Signatures:

Date: November 30th, 2008	Date: November 30th, 2008
For IST	For TKK
Prof. Carlos Matos Ferreira President, Instituto Superior Técnico	Prof. Olli Simula Dean of the Faculty of Information and Natural Sciences

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FIRST YEAR STUDIES	
IST	TKK
Fall Semester (minimum of 30 ECTS)	
Compulsory courses	Compulsory courses
Neural Networks and Machine Learning, 6	Foreign language test/course 3 ECTS
Computational Biology, 6	IT-Services at TKK, 2
Image Processing and Artificial Vision, 6	Machine Learning: Basic Principles, 5
Algorithms and Optimization, 7.5	Machine Learning and Neural Networks, 5
	Algorithmic Methods of Data Mining, 5
Elective courses:	Elective courses:
Natural Language, 7.5	Signal Processing in Neuroinformatics, 5
Intelligent Decision and Control, 7.5	Computational Complexity Theory, 5
Other courses: 3	Introduction to Bayesian Modelling, 5
	Special Course(s) in Computer and Information Science, 3-7 each
	Finnish 1A, 2
Spring Semester (minimum of 30 ECTS)	
Compulsory courses	Compulsory courses
Decision Support Systems, 7.5	Machine Learning: Advanced Probabilistic Methods, 5
Digital Signal Processing, 6	Information Visualization, 5
Functional Genomics and Bioinformatics, 6	
Advanced Topics in Algorithms, 6	
Elective courses:	Elective courses:
Computability and Complexity, 6	Statistical Natural Language Processing, 5
Information Theory, 7.5	High-Throughput Bioinformatics, 5
	Computer Vision, 5
	Image Analysis in Neuroinformatics, 5
	Special Course(s) in Computer and Information Science, 3-7 each
	Combinatorial Models and Stochastic Algorithms, 6

SECOND YEAR STUDIES	
IST	TKK
Fall Semester (minimum of 30 ECTS)	
Compulsory courses	Compulsory courses
Progress report on the Master's thesis, 12 ECTS	Foreign language test /course, 3
Elective courses	Elective courses
Computational Biology, 6 ECTS	Research Project in Computer and Information Science, 10
Image Processing and Artificial Vision, 6	IT-Services at TKK, 2
Algorithms and Optimization, 7.5	Special Course(s) in Computer and Information Science, 3-7 each
Natural Language, 7.5	Algorithmic Methods of Data Mining, 5
Intelligent Decision and Control, 7.5	Signal Processing in Neuroinformatics, 5
Search and Planning, 7.5	Computational Complexity Theory, 5
Artificial Intelligence, 7.5	Introduction to Bayesian Modelling, 5
Human Computer Interaction, 7.5	Finnish 1A, 2
Spring Semester (30 ECTS)	
Thesis related activities 30 ECTS supervised by both partners	