

## **Agreement Between**

**The Department of Electrical and Computer Engineering at the  
University of Massachusetts at Amherst**

**and**

**The Department of Electrical and Computer Engineering at the  
University of Puerto Rico Mayaguez**

### **I. INTRODUCTION:**

The Department of Electrical and Computer Engineering (ECE) at the University of Massachusetts (UMass) at Amherst and the Department of Electrical and Computer Engineering at the University of Puerto Rico, Mayaguez (UPRM) agree to establish a collaborative Ph.D. program in Electrical and Computer Engineering. The main goals of this agreement are: 1) to encourage minority engineering students from UPRM to pursue graduate studies and careers in engineering research, and 2) to provide a means for faculty at UPRM to mentor Ph.D. graduate engineering students. UPRM does not currently offer a Ph.D. degree in ECE. Therefore, until such time as the UPRM ECE Department establishes a Ph.D. degree program, this collaborative agreement will serve as an important bridge for both UPRM students and faculty researchers. The Ph.D. degree will be granted by UMass and the student is required to spend a minimum of two consecutive semesters in residence on the UMass Amherst campus. However, it is anticipated that the student will conduct most of their research on the UPRM campus working with UPRM faculty.

### **II. FACULTY PARTICIPATION:**

1. One faculty member each from UMass and UPRM will serve as co-chair of the student's dissertation committee.
2. The UPRM faculty co-chair will work closely with the Ph.D. Student supervising their research and serving as their primary mentor.
3. UPRM faculty members must become members of the UMass ECE Graduate Faculty in order to serve as either a co-chair or as a member of the student's dissertation committee. To apply for graduate faculty status at UMass, UPRM faculty will state their interest in writing to the head of the UMass ECE Department along with a current curriculum vitae. Graduate faculty appointments are recommended by the Head of ECE and approved by the Dean of the Graduate School.
4. Other UPRM faculty may also elect to become graduate faculty members at UMass and serve on the student's dissertation committee.

5. UPRM dissertation committee members must be willing to travel to the UMass Amherst campus to attend both the student's oral Ph.D. comprehensive exam and Ph.D. dissertation defense.
6. UMass ECE faculty are encouraged to participate as dissertation committee members.

### **III. STUDENT PARTICIPATION:**

It is envisioned that the student will come to UMass early in the course of their Ph.D. program to both satisfy the UMass residency requirement and to take courses in preparation for written Ph.D. comprehensive exams. These and other requirements for the Ph.D. degree are described briefly below and in more detail in the UMass Graduate School Bulletin. However, these requirements are subject to change.

1. The student must be accepted into the UPRM Electrical and Computer Engineering Department as a 'visiting student' registering for 0-9 credits per semester.
2. The student must be accepted into the UMass Electrical and Computer Engineering Department Ph.D. program. It is recommended that the student submit their UMass application one semester prior to the start of their year in residence at UMass-Amherst. Official UMass graduate program deadlines are on or about October 1 for Spring admission and on or about January 15 for Fall admission.

In order to be admitted to the UMass Graduate School students must submit a completed graduate school application. The student must have graduated from an accredited university with a bachelor's degree, have a minimum 2.75 GPA on a 4.0 scale, have taken the GRE, submit at least 2 letters of recommendation and pay the application fee. Additional information provided by potential graduate students through essays and other correspondence will be taken into consideration as part of the admissions application process.

3. The student should indicate on their UMass application that they are applying to the UMass/UPRM ECE Collaborative Ph.D. program.
4. The student will be provided with office and laboratory space (as required) while on either the UMass or UPRM campus.
5. When the student applies to the UMass ECE Ph.D. program they may also be nominated by the UMass ECE Department for a Northeast Alliance Graduate Fellowship. Funds from this fellowship are available to students who are US citizens or permanent residents of African American, American Indian, Mexican American, Puerto Rican, or Alaskan Native heritage. Northeast Alliance Fellows will receive a stipend to support their year in residence at UMass (1st official year as a Ph.D. student) or to augment stipends from UPRM or UMass research grants.



6. Northeast Alliance Fellows are expected to attend Alliance Fellows workshops and seminars, occasionally assist with recruiting, and agree to mentor other underrepresented-minority students during their professional careers.

#### **IV. Ph.D. DEGREE REQUIREMENTS:**

To complete the Ph.D. degree, students must fulfill the same graduate school and departmental requirements as other UMass ECE Ph.D. candidates:

1. The student must spend a minimum of two consecutive semesters in residence on the Amherst campus, after their acceptance into the UMass ECE Ph.D. Program. The student must register for a minimum of 9 course credits (non-thesis credits) while satisfying the residence requirement. Student may register for thesis credits during subsequent semesters at UMass.
2. The student must pass two 700 level breadth courses or equivalent. These two courses must be in areas of ECE outside the student's area of concentration. The courses may be taken at UMass or transferred from UPRM with approval from the UMass ECE Graduate Program Director. Overall the student must maintain a 3.0 or higher GPA.
3. The student must pass two written Ph.D. Comprehensive exams. Ph.D. candidates may take the written exams at either institution but these must be identical to the exams offered in Amherst. They must be administered at the same time as the exams are given in Amherst and be graded by UMass professors.
4. The student must pass an oral Ph.D. comprehensive exam (must be conducted at the UMass Amherst campus). All committee members must attend.
5. The student must present a proposal for the Ph.D. dissertation to their dissertation committee. The UMass Graduate School does not require holding the dissertation proposal presentation on the Amherst campus. The proposal must be signed by all members of the dissertation committee and the UMass ECE Graduate Program Director, and submitted to the UMass Graduate School at least 7 months prior to the dissertation defense.
6. The student must defend their Ph.D. dissertation on the UMass Amherst campus and schedule with the UMass Graduate School at least 4 weeks in advance of the exam date. All committee members must be present for the defense.

#### **V. PROJECT FUNDING:**

Individual faculty members are responsible for funding their travel between campuses. At a minimum, the student and UPRM dissertation committee members must travel to the UMass Amherst campus to attend the student's oral Ph.D. comprehensive exam and Ph.D. Dissertation defense.

UPRM faculty are responsible for funding student stipend and student travel for the oral exam and dissertation defense through research grants or student fellowships, etc. While in residence at UMass, the student may receive a stipend from UPRM or one year of support through a Northeast Alliance Fellowship, as described above. We will not encourage students without a promise of funding from a UPRM faculty member to apply to this program.

#### **VI. UMASS MANDATORY STUDENT FEES:**

1. Students with UPRM-funded research assistantships are considered non-working fellows by the UMass ECE Dept. and are eligible to apply to the UMass Graduate Assistantship Office for a "courtesy tuition waiver". If granted the curriculum fee is also waived. Other required fees include basic health coverage, engineering fee, graduate student senate fee, and service fee. As of Fall 2002 these fees total \$941 per semester. These fees may increase in future years.
2. UMass requires resident students without hospitalization to purchase supplemental health coverage. As of Fall 2002 this cost is \$1,297 per year. Students must have proof of coverage in order to waive this fee. This fee may increase in future years. Additional fees will be charged for family coverage if required.
3. While at UPRM, Ph.D. candidates must pay a program fee to UMass. As of 2002 this fee is \$230 per semester. This fee must be paid to maintain status as a UMass Ph.D. student. This fee may increase in future years.

#### **VII. UPRM MANDATORY STUDENT FEES:**

1. The student is required to pay a small registration fee to UPRM while in residence at the UMass-Amherst campus. (As of September 2002, the fee includes a \$50 thesis fee plus a \$35 construction fee). These fees may increase in future years.
2. While at UPRM, students will register in a special Ph.D. program course with carries a flexible 0-9 credits hours load. The student can also register in courses approved by his/her graduate committee, which may be transferred to UMass in order to comply with UMass requirements as specified in Section IV.2.

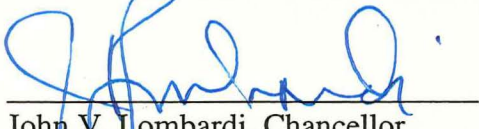
#### **VIII. DURATION OF AGREEMENT:**

This agreement will be in effect a minimum of 7 years beginning from the date it is signed by both parties. At the end of the seven years this agreement will be reviewed and considered for renewal by the both parties.

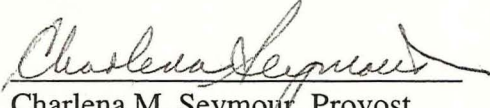


The undersigned approve this agreement on this 20 day of 12, 2002.

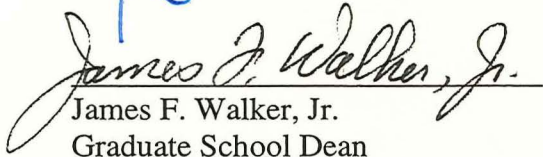
**University of Massachusetts at Amherst**



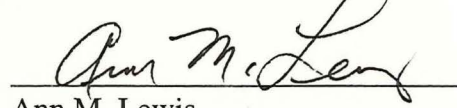
John V. Lombardi, Chancellor



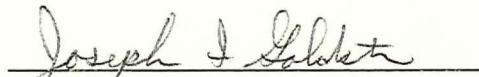
Charlena M. Seymour, Provost



James F. Walker, Jr.  
Graduate School Dean



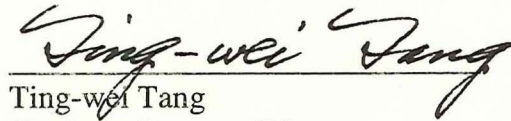
Ann M. Lewis  
Director Northeast Alliance



Joseph I. Goldstein,  
Dean College of Engineering

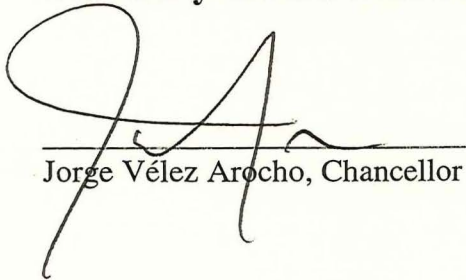


Seshu B. Desu  
ECE Department Head

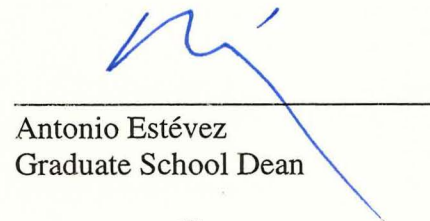


Ting-wei Tang  
Graduate Program Director

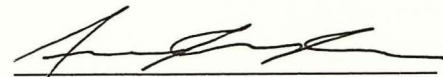
**University of Puerto Rico Mayaguez**



Jorge Vélez Arocho, Chancellor



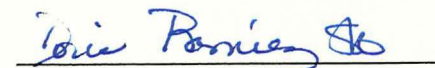
Antonio Estévez  
Graduate School Dean



Ramón Vázquez Espinosa  
Dean College of Engineering



Héctor Monroy  
ECE Department Head



Dr. Mildred Chaparro  
Dean of Academic Affairs