María Mercedes Larrondo-Petrie, PhD

Associate Dean of Academic & International Affairs, and
Professor of Computer Science and Engineering
College of Engineering and Computer Science
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Summary

- Over 20 years of demonstrated teaching excellence and leadership in public higher education in the areas of Computer Science and Engineering. Honors and accomplishments include:
    - appointed Associate Dean of Academic and International Affairs for the College of Engineering at FAU
    - received the FAU President's Leadership Award for Administration
    - named a McKnight Fellow by the Florida Endowment Fund
    - selected and funded by NSF to participate in the Women in Engineering Leadership Summit
    - completed the Harvard Institution for Higher Education Management Development Program
    - named distinguished faculty for the HERS Bryn Mawr Summer Institute for Women in Higher Education Administration
    - awarded the Florida LEAP award (Leadership in Education Advancement Program), later served as director
    - received or was nominated for six awards for teaching excellence
    - supervised 2 dissertations and 9 Master's theses to completion, currently supervising 2 PhD and 2 Masters.
- Awarded $2.720M of funded research. Principal area is software engineering -- focusing on security, analysis, modeling, and visualization of complex object-oriented systems, secure systems engineering, integrating formal and informal methods, and software engineering support environments.
  Research focuses on the following types of systems
    - Security and access control systems   - ecological & architectural systems - adv. graphical user interfaces
    - multimedia and distance learning systems - distributed & wireless systems   - database systems
- Experience with collaborative research and projects
    - funded by NATO as one of four investigators in an international collaborative research project
    - chair, Research Collaboration Committee, Latin American & Caribbean Consortium of Engineering Institutions
    - co-chair of Palm Beach County Distance Learning Consortium Grant Writing Committee
- 171 publications and edited books have received 127 external citations
    - appointed to the editing board of the new Journal of Latin American & Caribbean Engineering and Education
    - 9 refereed journal publications,
    - 115 refereed conference proceedings publications, 1 *Best Paper Award*
    - 30 books and book chapters (5 books authored, 10 books edited, 15 book chapters)
    - 17 technical reports archived at federal or state agencies.
- Over 20 years of active participation and leadership in professional societies, including
    - elected to the Board of the International Federation of Engineering Education Societies (IFEES), appointed to the IFEES Strategic Planning Committee, and Co-Chair of the IFEES Global Engineering Education Summit
    - elected Vice President of Research of the Founding Executive Board of the Latin American & Caribbean Consortium of Engineering Institutions (LACCEI) and appointed as Executive Vice President
    - elected to Board of Directors of the Minorities in Engineering Division and of the International Division, American Society for Engineering Education (ASEE)
    - elected President and to the Executive Council of the Upsilon Pi Epsilon International Honor Society for the Computing and Information Disciplines (UPE),
    - appointed to numerous National Science Foundation research grant review and program review panels,
    - elected to ACM SIGGRAPH Education Board, and appointed chair of ACM SIGGRAPH Curriculum Committee
    - appointed chair of Tri-County Committee of the Florida Commission on the Status of Women
    - awarded Leadership Award by the UPE International Honor Society for Computing and Information Disciplines
    - co-organizer of two international NSF funded workshops on Industrializing Formal Specifications Techniques
    - appointed Conference Chair of the 3rd LACCEI Conference, and appointed to steering committees and co-organizing chair of the 1st and 2nd LACCEI International Conferences
    - appointed to steering committees for two Software Engineering Research Forum conferences

Education

PhD   Computer Engineering, College of Engineering, Florida Atlantic University, Boca Raton, FL

MCS   Computer Science, Inst. of Computer Science, Florida Atlantic University, Boca Raton, FL.

BS   Mathematics, Barry University, Miami, FL. Minors: Spanish, and Secondary Education.

Academic Experience

1985-   **Florida Atlantic University,** Boca Raton, FL
      Associate Dean of Academic and International Affairs of the College of Engineering, appointed 2002
      Professor of Computer Science & Engineering, College of Engineering, promoted 2003
      Graduate Faculty, College of Engineering & Computer Science, appointed 2002
      Associate Professor of Computer Science & Engineering, College of Engineering, tenured and promoted 1998
      Assistant Professor of Computer Science and Engineering, promoted to tenure track 1992.
      Instructor of Computer Science, appointed 1985.

1993   **Universidad IberoAmericana,** Mexico City, Mexico**.** Summer 1993.
      Visiting Lecturer, Departamento de Informática.   Awarded Outstanding Lecturer "San Ignacio" Medal.

1983   **Broward Community College,** Fort Lauderdale, FL
      Adjunct Instructor in the Department of Computer Science.

1981   **College of Boca Raton**, (now **Lynn University**), Boca Raton, FL
      Adjunct Instructor in the Mathematics Department. Taught Calculus and Differential Equations

Administrative Experience

2002-   *Florida Atlantic University*
Present **Associate Dean of Academic and International Affairs**, College of Engineering and Computer Science

2006-2009 *International Federation of Engineering Education Societies* (IFEES)
      Vice President, 2007-2009
      Executive Board Member, 2006-2009
      IFEES Strategic Planning Committee Member, 2006-2009
      IFEES Global Engineering Education Summit Steering Committee Co-Chair, 2006-2008
      LACCEI Liaison, UPE Liaison, 2006-2007

2002-2008 *Latin American and Caribbean Consortium of Engineering Institutions* (LACCEI)
      Executive Director, 2008-present
      Executive Vice President, 2005-present
      International Liaison to IFEES, 2006-present
      Editorial Board of the LACCEI Journal, 2005-present
      Vice President of Research and **Executive Board Member**, 2003-present
      Steering Committee 1st, 2nd, 3rd, 4th, 5th Annual Conference on Engineering & Technology, 2002-2007
      Chair of the **Research Collaboration Committee,** 2003-present
      Conference Chair of 3rd and 5th Annual Conferences, 2005
      Chair of **Governing Board Nominations Committee**, 2004
      Co-Chair of **Organizing Committee** of the 1st and 2nd Annual Conferences, 2003-2004
      Co-Chair of **Governing Board Nominations Committee**, 2002-2003
      Vice President of the **Founding Executive Board**, 2002

2003-2009 *American Society for Engineering Education* (ASEE)
      <u>*Minorities in Engineering Division*</u>:
      Member-At-Large Officer and **Board of Directors,** 2003-2009

> **Chair** of MIND Links Initiative, 2004-2009
> *International Division:*
> **Secretary-Treasurer** and **Board of Directors**, 2005-2007
> **Webmaster**, 2007-2008
> *Women in Engineering Division*
> **Member-At-Large Officer** and **Board of Directors**, 2007-2009

2007-present *Red Cartagena de Ingenieria (Cartagena Network for Engineering)*
> **Vice President**, 2007-present

1990-present *Upsilon Pi Epsilon International Honor Society for the Computing and Information Disciplines* (UPE)
> **International Liaison to IFEES**, 2005-present
> **President**, 1996-1997
> **Executive Council Board Member**, 1993-1998
> **Founding President** of the **Florida Epsilon Chapter**, 1990-1992
> Awarded **Leadership Award** top distinction for best chapter president internationally, 1992

1994-1999 *Association of Computing Machinery* (ACM)
> **ACM SIGGRAPH Education Board Member**, 1994-1999
> **Chair** of the **ACM SIGGRAPH Computer Science Curriculum Committee**, 1991-1999.
> ACM is the premier professional society for Computer Science, Special Interest Group in Computer Graphics (SIGGRAPH) is the premier society for computer graphics and animation.

1987-2005 *School District of Palm Beach County, Florida*
> Appointed **Chair** of the Engineering Academies Taskforce 2002-2005. Member of the Information Academies Taskforce 2002-2003. Member of the School Design Taskforce, 2002-2003. Member of Palm Beach County School Board Magnet School Taskforce to designing magnet programs 1987-1992.
> Appointed **Director** of High Tech Magnet at *Suncoast Magnet School*, *School Board of Palm Beach County 1989-1990*: Responsibilities included administration, curriculum development, design of facilities, teacher training, grant writing, textbook and technology adoption, system administration of 70-computer network and a $650,000 budget.
> Appointed **Department Chair** of **Computer Science**, *Boca Raton Community High School* 1982-1985.
> Designated **Master Teacher**, l985, by scoring in the top 10% of Florida public school teachers in mastery of both content area and teaching skills, certified to conduct peer teacher evaluation and training.
> Achieved Rank 4 (highest rank) Tenured High School Teacher of Computer Science and Mathematics.

Sponsored Research

Dr. Larrondo-Petrie has led sponsored research as FAU faculty totaling **$2,720,037** since fiscal year 1994 **$2,720,037** She was part of 22 funded grants and contracts, in 14 of which she was the Principal Investigator

Submitted Under Review

2008	**International Workshop on Dependable Distributed Systems**	$60,000
	NSF 08-035 #0837333 OISE – Office of International Science and Education	
	PI: Dr. E. B. Fernandez; Co-Principal: Dr. M. M. Larrondo-Petrie	
2008	**CSR-DMSS: Small: A methodology for building secure networked distributed systems**	$450,000
	NSF 08-538 CNS-Computer Systems - Computer Systems Research #6790774	
	PI: Dr. E. B. Fernandez; Co-Principal: Dr. M. M. Larrondo-Petrie, Dr. M. VanHilst	
2008	**CT-ISG: A methodology for building secure infrastructure software systems**	$500,000
	NSF 08-521 Cyber Trust #6572545	
	PI: Dr. E. B. Fernandez; Co-Principal: Dr. M. M. Larrondo-Petrie, Dr. M. VanHilst	
2008	**Coverage and Guidance with Security Patterns**	$451,863
	NSF -07-599 #6759869 #0820157, Software for the Real World	

PI: Dr. M. VanHilst, Co-Principal: Dr. M. M. Larrondo-Petrie, Dr. E. Fernandez

| 2007 | **III-COR: Small: Models and patterns for privacy negotiation and enforcement** | $450,000 |

NSF 07-577 CISE - IIS #0811927
PI: Dr. M. M. Larrondo-Petrie, Co-Principal: Dr. M. VanHilst and Dr. E. Fernandez

Awarded

2008   **NSF Workshop on Globalizing Engineering Education: Lessons Learned
from African and USA Partnerships**, Cape Town, South Africa, 17-18 October 2008
NSF OISE – International Plan & Workshops
Principal Investigators: Andy Ward, Ann Cristy, Funded Participant: Dr. M. M. Larrondo-Petrie

2007-2008 **Net Enabled Command Capability** $167,245
Contract: *A survey and analysis on Service-Oriented Architectures and related technologies.*
U.S. Department of Defense's Defense Information Security Agency (DISA)
Principal Investigator: Dr. E. B. Fernandez, Co-Principal: Dr. M. Larrondo-Petrie, Dr. M. VanHilst

2007   **U.S.-Mexico Workshop on Global Engineering Education Challenge for the Americas** $30,503
NSF 4-035 – OISE – International Plan & Workshops #0715263 – joint proposal w/Penn State
Principal Investigator Dr. I. Esparragoza, Co-Principal: M. Larrondo-Petrie, D. Sathianathan

2004-2008 **An Industry-Academia Partnership for Students in STEM Disciplines** $396,000
NSF 04-506 – CSEMS – DUE #0422256 07/01/04-06/30/08
Principal Investigator Dr. M. Huang, Co-Principal: Drs. Larrondo-Petrie, Schlossberg, Stevens.

2004-2007 **Secure Web Services in the Wireless Environment** $251,402
Federal Earmark in Telecommunication Security Research
U.S. Department of Defense's Defense Information Security Agency (DISA)
Principal Investigator: Dr. E. B. Fernandez, Co-Principal: Dr. M. Larrondo-Petrie

2003-2008 **Governor's Engineering Scholars Program Grant** $133,622
Principal Investigator: Dr. Larrondo-Petrie, Co-PI: Dr. Sharon Schlossberg

2003-2004 **Broward County Environmental Operations Division** $20,602
Principal Investigator on 4 grants: Dr. Larrondo-Petrie

1994-2000 **South Florida Water Management District** $170,835
Dr. Larrondo-Petrie was Principal Investigator of the following projects completed through
Florida Atlantic University and the Florida Center for Environmental Studies:

  1997-2000: *Lake Okeechobee Ecosystem Study (LOES) Graphical User Interface*, $85,000
        Principal Investigator: Dr. Larrondo-Petrie
        (Project Manager: Mr. Sergio Lostal,
        Okeechobee System Research Division)
  1996:   *An Object-Oriented Data Model and Scientific Data Description* $8,000
            Language for the Lake Okeechobee Ecosystem Study,
        Principal Investigator: Dr. Larrondo-Petrie
        (Project Manager: Dr. Todd Tisdale,
        Okeechobee System Research Division)
  1996:   *Parallel and Distributed Processing for SFWMD Simulations,* $22,835
        Principal Investigator: Dr. Matt Evett, Co-PI: Dr. Larrondo-Petrie
        (Project Manager: Dr. Frederick Sklar,
        Hydrologic System Modeling Division)
  1995-1996: *Water Quality Monitoring Databases and Data Verification*, $25,000
        Principal Investigator: Dr. Larrondo-Petrie
        (Project Manager: Ms. Linda Moscato,
        Water Quality Monitoring Division)
  1994-1995: *Application of Object-Oriented Models, Databases, and Visualization* $30,000
            Techniques in the Water Management Domain,
        Principal Investigator: Dr. Larrondo-Petrie

(Project Manager: Dr. Jayantha Obeysekera,
Hydrologic System Modeling Division)

1996-1998 **NATO**, $30,000
        Care4HW: Computer Assisted Requirements Engineering for Hardware Design.
        Multinational grant that funded collaborative research travel (U.S.A., Spain, UK).
        Principal Investigator: Dr. Peter Breuer (Spain)
        CoPrincipal Investigator: Drs. Larrondo-Petrie, Robert France (USA);
        and Jonathan Bowen (UK)

1983-1996 **IBM**, $1,006,171
        1993-1996 *Smart Programming and Testing*, Principal Investigator $16,000
                  Principal Investigator: Dr. Larrondo-Petrie
        1993-1995 *Mach Distributed Computer Environment Research and Dev.* $231,000
                  Principal Investigator: Dr. Larrondo-Petrie
        1993-1995 *Personal Systems: Operating Systems* $659,171
                  Principal Investigator: Dr. Larrondo-Petrie
        1983-1985 *Secondary Model School Project at Boca Raton Comm. High School* $100,000
                  Principal Investigator: Dr. Larrondo-Petrie

1995,1997 **National Science Foundation** $50,000
        NSF Software Engineering Grant for *Workshop for Industrializing Formal*
        Specification Techniques, Co-Principal (Principal: Dr. R. B. France)

1995,1997 **IEEE Computer Society** $50,000
        Workshop for Industrializing Formal Specification Techniques,
        Co-Principal (Principal: Dr. R. B. France)

1991-1992 **State University System Grant** $35,000
        Awarded by Florida Atlantic University for 9 month leave to complete PhD degree

Honors and Awards

2006-2007 **International Federation of Engineering Education Societies (IFEES)International Board Member**
        2006-2009 Elected to the <u>Executive Committee</u>   **International Board Member**
        2007-2009 Elected <u>Vice President</u>   **International Vice Presidency**
        2007-2008 Co-Chair of IFEES Global Engineering Education Summit   **International Summit Chair**
        2007-2008 Member of the Strategic Planning Committee   **International Strategic Planning**
        2006-2009 Appointed <u>Liaison Representative</u> by LACCEI and UPE   **International Liaison**

2003-2007 **American Society for Engineering Education (ASEE)**
        2003-2009 Elected <u>Member-At-Large, Minority Division Board</u>   **National Board Member**
        2007-2009 Elected <u>Member-At-Large, Women in Engineering Division</u>   **National Board Member**
        2005-2007 Elected <u>Secretary-Treasurer, International Division Board</u>   **National Board Member**

2002-2007 **Latin American and Caribbean Consortium of Engineering Institutions**
        2008-present Appointed <u>Executive Director</u>   **International Executive Directorship**
        2005-2007 Appointed <u>Executive Vice President</u>   **International Executive Vice Presidency**
        2002-2003 Elected <u>Vice President of Founding Executive Board</u>   **International Vice Presidency**
        2002-2007 Appointed <u>Chair of Research Collaboration Committee</u>
        2003-2007 Elected <u>Vice President of Research</u>   **International Vice Presidency**
        2003-2007 Elected to <u>Founding Board of Directors</u>   **International Board Member**
        2004-2007 Appointed to <u>Editorial Board</u> of LACCEI Journal **International Journal Editorial Board**
        2003   Selected to present the LACCEI Meritorius University Medal
               to Universidad Sergio Arboleda, Bogotá, Colombia August 19, 2003

2005   **Honorary Professor, Universidad Sergio Arboleda**   Medal
        Honorary Professorship and medal of distinction awarded at LACCEI Annual Conference.

| 2005 | **Honorary Distinguished Professor, Universidad Privada del Norte, Perú** | Medal and Plaque |

2005   **Honorary Distinguished Professor, Universidad Privada del Norte, Perú**   Medal and Plaque
Honorary Professor Medal and plaque of distinction awarded at Annual International Seminar.

2004   **Keynote Speaker, CONFINI 2004, Perú**   Certificate
CONFINI is annual conference of the national organization of industrial engineering faculty

2004,2008 **Keynote Speaker, NSF Alliance for Minority Participation (AMP) Expo 2004 and 2008**   Plaque
NF New York Urban AMP, New York, NY, USA, Apr 11-13, 2008
NSF Florida-Georgia Louis Stokes AMP, Gainesville, FL, USA, Feb 29-Mar 2, 2008
NSF Florida-Georgia Louis Stokes AMP, Miami, FL, USA Jan 29 – Feb 1, 2004

2004   **NSF** funded participant in the **Women Engineers in Leadership Summit** $1,000
May 3-5, 2004, U. of Connecticut, Storrs, Conn.

2003   **International Engineer**   Medal
Universidad Sergio Arboleda,. Bogotá, Colombia, awarded for service to the International
Engineering Education Community.
Received medallion and was keynote speaker at graduation of their 1st class of Engineers

2003   **President's Leadership Award in Administration** $500
Awarded by Florida Atlantic University President in three categories, Administration,
Faculty, and Staff. Cited for rendering services of an extraordinary nature and
demonstrating leadership roles resulting in substantial benefits to the University and the
community at large. Specifically cited for volunteering to direct the Leadership In
Education Advancement Program (LEAP). Awarded March 18, 2003.

2003   **Florida Atlantic University "Save a Student" Award**   Plaque
Awarded by the Florida Atlantic University Director of Student Retention in recognition
to commitment to students and for going the extra mile to help a student in need.
Awarded October 1, 2003

2003   **Parliament of OWLS**   Honorary Member Pin
Nominated for induction into this Florida Atlantic University honorary leadership
society for alumni, created to recognize alumni who led student organizations while at
FAU and now hold significant leadership roles that benefit South Florida, the country or
the world.

2003-2004 **HERS/Bryn Mawr Distinguished Leadership Faculty**   Honorarium
Invited as Distinguished Faculty to the HERS/Bryn Mawr Summer Institute for Women in
In Higher Education Administration to present panels and workshops on Leadership Styles
and on Institutional Culture, June 24, 2003, and June 29, 2004.

1999   **Bryn Mawr Higher Education Leadership Award** $5,000
Nominated by Florida Atlantic University and selected from international competition to
participate in *Summer Institute for Women in Higher Education Administration*, a month
of leadership training at Bryn Mawr University sponsored by Bryn Mawr and Higher
Education Resource Services (HERS).

1998   **LEAP Award (Leadership in Education Advancement Program)** $1,000
Competitive Florida State University System award to attend 3 leadership conferences and
seminars, one professional conference, and one year internship under the direction of the
Provost of Florida Atlantic University.

1991-1998 **Upsilon Pi Epsilon International Honor Society for the Computing and Information Disciplines**
     2006-   Liaison Representative to IFEES
     1996-1997 Elected <u>President</u>   **International Presidency**
     1993-1998 Elected <u>Executive Council</u>   **International Executive Council**
     1992-   Faculty Advisor for Florida Beta Chapter
     1992   Awarded <u>First Place International Leadership Award</u> at the
           Upsilon Pi Epsilon International Convention
     1991-1992 Awarded Graduate Scholarship for <u>Academic Achievement Award</u> $1,000
     1990-1992 Founding <u>Chapter President</u> of the Florida Beta Chapter

1996	Nominated for Florida Atlantic University College of Engineering Outstanding Teacher of the Year Award.	
1993	**Medallon de San Iganio Outstanding Lecturer and Service Medal** Competitive award for lecturers at Universidad IberoAmericana de Mexico.	Medallion
1992	**Distance Learning - Teleteaching** Awarded by Florida Atlantic University to participate in a summer-long specialized training	$8,761
1991-1992	**State University System Grant** Awarded by Florida Atlantic University for 9 month leave to complete PhD degree	$35,000

1990-1999 **ACM SIGGRAPH** (Professional Society for Computer Science)

1994-1999	Appointed Chair, ACM SIGGRAPH Computer Science Curriculum Committee	Chair
1994-1999	Appointed Member, ACM SIGGRAPH Education Committee	
1990	**Computer Graphics Educator's Grant** Awarded thru ACM international competition of computer graphics educators	$2,000

1992-1999 **National Science Foundation Grant Review Panelist and UTE Participant**　　Honorariums
Invited to serve on 1996-1999 NSF Grant Review Panels: CISE Career,
- CCLI (A&I) Grant Proposals Panel and CCLI Program Evaluation Review Panel, 1999.
- UFE, CDD, and POWR Grant Proposals Panels, and CCLI New Program Review Panel, 1998
- CISE Research Grant Proposals, and Computer Graphics Research Grant Proposals Panels, 1996
Selected as participant in Workshops in Undergraduate Teaching Enhancement:
- Formal Methods 1994 and 1996,　　　　- Parallel Computing 1993,
- Computer Graphics 1993 and 1994,　　　- Clean Room Engineering 1992

1988-1989 **McKnight Fellow**　　　　　　　　　　　　　　　　　　　　　　**Fellowship**
Awarded the J. P. McKnight Achievement Award and bestowed a McKnight Fellowship　$25,000
by the Florida Endowment Fund, which funded my PhD coursework as part of the
McKnight Minority Jr. Faculty Development Fellowship Program

1987-1992 **School Board of Palm Beach County Magnet School Taskforce**　　Appointment
Charged with designing two High-Tech and Engineering Magnet Schools, and also was
appointed member of the **District Council for Computer Science**

1985-1986 **Sabbatical** from **School Board of Palm Beach County** to start PhD.　　$40,000

1985　　**State of Florida Department of Education S.S.A.T. Committee**　　Appointment
Selected as the Palm Beach County representative at Princeton meeting, charged
with reviewing computer literacy competencies to be tested through S.S.A.T. examinations

1985　　**State of Florida Master Teacher**　　　　　　　　　　　　　　Designation
Designation based on scoring in the top 10% in both mastery of content area and
mastery of teaching skills

1984-1985 **American Statistical Association Award** for *Quantitative Literacy Project*　　$5,000

1984　　Nominated for the Palm Beach County Teacher of the Year Award

1983　　**Harry T. Cohen Award for Teaching Excellence**　　　　　　　　Plaque
Competitive award within Palm Beach County.

1983　　Nominated for the University of Miami's South Florida Teacher of the Year Award

1983　　**Teacher of the Year**　　　　　　　　　　　　　　　　　　　　Plaque
Competitive award within Boca Raton Community High School, Boca Raton, FL

1980-1985 **School Board of Palm Beach County Computer Curriculum Taskforce**　　Appointment
Charged with designing and developing Pre-Kindergarten through twelfth grade
computer curriculum for Palm Beach County public schools.

Consultancies

1999- **Coquí Software & Training**
President and CEO of certified Minority-Owned S Corporation. Contracts for educational consulting, course development and delivery, educational publications, conference management, software development and web site development.

1999-2001 **Internet Protection Resources**
Consultant to new start-up corporation as Chief Technical Officer. Designed and implemented new secure credit-card payment web applications (using UML, HTML, Java), wrote Security Master Plan.

1999-2001 **Alliance Networking Technologies**
Advanced Technical Course Development and Delivery at Siemens Corporation

1998 **JHL Technologies.** Curriculum developer and trainer Object-Oriented courses (CRC, UML)

1982-1983 **School Board of Palm Beach County**
Consulting Systems Analyst, responsible for designing and programming the *Microcomputer Scheduling-Registration System*, and interfacing to existing student attendance application to be used in all Palm Beach County public high schools.

1980-1991 **School Board of Palm Beach County**
1990-1991 Contracted to adapt software to new state-of-the-art multimedia foreign language computer-networked laboratories in the public high schools
1989   Sole author of *Computer Science Fortran Curriculum Guide*
1981   Part of the Writing Team for Gifted Curriculum
1980-1982 Part of the Writing Team for Secondary Mathematics Curriculum
Sole author of *Gifted Geometry Curriculum Guide,*
Coauthor of *Algebra I, General Mathematics I and II Curriculum Guides*

1988-2004 Reviewer for various publishers
Reviewed technical books for John Wiley Publishers, West Publishers, Prentice-Hall and PWS Publishers, Aurora Publishing.

Other Professional Development Experience

2003 **Harvard University Management Development Program (MDP)**
Intensive 1 week long training for Higher Education Administrators

2000 **National Institute for Standards and Technology (NIST)**.
Participated in intensive training (60 hours total) on the *International Common Criteria*, the new standard for security assurance

1999-2000 **Alias-Wavefront Maya Certification**
Completed certificate program through the Center for Electronic Communication, Fort Lauderdale, FL for Computer Graphics and Animation (120 hours total)

1998-2000 **ICOMOS American Technical Representative** on two ICOMOS Research Expeditions to Cuba
Appointed as the American Technical Representative to the first U.S. sanctioned trip to Cuba commissioned to evaluate historical heritage sites being restored, 1998. Re-appointed for the second ICOMOS expedition, 2000. Assigned as lead on multimedia research and documentation project.

1993-1994 **Novell**. Completed training required for Novel Certified Netware Engineer certification.

1990 **Fundamentals of Engineering Examination Review Seminars**. Completed studies.

1990 **School Board of Palm Beach County Workshops**
Cooperative Learning (Teaching using Group Projects) Seminars
Learning Styles Workshop

1989-1990 **International Baccalaureate Program Teaching Seminars**

Membership in Scientific and Professional Societies

- *International Federation of Engineering Education Societies (IFEES),* founding member 2006-present
  - Elected **Vice President**, 2007-2009
  - Elected **Member of the Executive Committee**, 2006-2009
  - Appointed **Member of the Strategic Planning Committee**, 2006-2007
  - Appointed **Member of the Conference Steering Committee**, 2006-2007
  - Appointed **Co-Chair of Global Engineering Education Summit**, 2007 (Istanbul), 2008 (Cape Town)
  - Appointed **International Liaison**, representing UPE in IFEES, 2005 - present
  - Appointed **International Liaison** representing LACCEI in IFEES, 2005 – present

- *Latin American and Caribbean Consortium of Engineering Institutions (LACCEI),* founding member 2002-present
  - Appointed **Executive Director**, 2008-present
  - Appointed **Executive Vice President,** 2005-present
  - Elected **Vice President of Research**, 2003-present
  - Elected **Board of Directors**, 2003-present
  - Appointed to **Editorial Board** of LACCEI Journal, 2004-present
  - Elected **Vice President of Founding Board**, 2002-2003
  - Appointed **Proceedings Editor/Co-Editor**, 2003-present
  - Appointed **Conference Chair**, 5th Latin American and Caribbean Conference for Engineering and Technology, Tampico, Tamaulipas, Mexico, June 2007.
  - Appointed **Technical Co-Chair**, 4th Latin American and Caribbean Conference for Engineering and Technology, Mayagüez, Puerto Rico, June 2006.
  - Appointed **Conference Chair**, 3rd Latin American and Caribbean Conference for Engineering and Technology, Cartagena de la India, Colombia, 8-9 June 2005.
  - Appointed **Organizing Co-Chair,** 2nd Latin American and Caribbean Conference for Engineering and Technology, Miami, FL, 4-6 June 2004.
  - Appointed **International Liaison** representing LACCEI in the International Federation of Engineering Education Societies (IFEES), 2005 – present
  - Appointed **Chair** of **Accreditation and Program Recognition Taskforce**, 2005-present
  - Appointed **Chair** of **International Research Collaboration Committee**, 2002-present

- *Association of Computing Machinery (ACM),* voting member since 1976
  - Member of *ACM Special Interest Group in Computer Graphics, (ACM SIGGRAPH)*
    - Appointed to **International Education Board**, 1994-1999
    - Appointed **Chair** of **Computer Science Curriculum Committee**, 1994-1999
  - Member of *ACM Special Interest Group in Computer Science Education, (ACM SIGCSE)*

- *Institute of Electrical and Electronics Engineers (IEEE),* voting member since 1986.
  - *IEEE Computer Society*, voting member since 1986.

- *American Society of Engineering Educators (ASEE)*, member since 2002
  - Elected **Secretary/Treasurer, Board of Directors, ASEE International Division**, 2005-2007
  - Appointed **Web Master**, **ASEE International Division,** 2006-present
  - Elected **Member-At-Large, Board of Directors, ASEE Minorities in Engineering Division**, 2003-present
  - Elected **Member-At-Large, Board of Directors, ASEE Women in Engineering Division**, 2007
  - **Chair**, MIND Link Committee, 2004-present

- *Red Cartagena de Ingeniería (Cartagena Networks for Engineering)*
  - Elected **Vice President**, 2007-present

- *Upsilon Pi Epsilon International Honor Society for the Information and Computing Disciplines*, inducted 1989
  - **International Liaison**, representing UPE in the International Federation of Engineering Education Societies (IFEES), 2005 - present
  - **International President** 1996-1997
  - **Executive Council** 1993-1998
  - Outstanding International Chapter **Leadership Award** 1992

- **Founding President**, Upsilon Pi Epsilon Florida Beta Chapter**,** 1990-1992

- *ICFEM*
  - **Program Chair**, 9th International Conference on Formal Engineering Methods, ICFEM 2007, Boca Raton, Florida, USA, 13-15 November 2007.

- *Tau Beta Pi Engineering Honor Society*, inducted 1991
  - **Lead Faculty Advisor**, Tau Beta Pi Florida Epsilon Chapter, 2004-2007

- *Phi Kappa Phi Honor Society*, inducted 1985

- *International Council on Monuments and Sites (ICOMOS)* , member since 1997

- *American Creativity Association*, charter member since l998

- *Who's Who in Formal Methods*

Professional Event Organization

- Summit Co-Chair, 2nd IFEES Global Engineering Education Summit and Assembly, Cape Town, South Africa, 19 October – 20 October 2008.
- Conference Co-Chair, Program Committee, and Proceedings Co-Editor*,* 9th International Conference on Formal Engineering Methods (ICFEM 2007), Boca Raton, Florida, 14-15 November 2007. Proceedings published by Springer Verlag. http://www.icfem2007.org/
- Summit Co-Chair, 1st IFEES Global Engineering Education Summit and Assembly, Istanbul, Turkey, 30 September – 1 October 2007. http://www.ifees.net
- Plenary Program Chair, 5th LACCEI Latin American and Caribbean Conference on Engineering and Technology, Tampico, Tamaulipas, México, 29 May – 1 June 2007.
- Workshop Organizer, 2nd OAS Workshop on Advancing Strategies for Achieving Quality Assurance in Latin America and the Caribbean Engineering Education, sponsored by Organization of American States (OAS) and the Latin American and Caribbean Consortium of Engineering Institutions (LACCEI), Tampico, Tamaulipas, México, 28 May 2007.
- Workshop Co-Organizer, NSF Mexico - US Workshop on Global Engineering Education Challenges for the Americas, sponsored by National Science Foundation (NSF) and the Latin American and Caribbean Consortium of Engineering Institutions (LACCEI), Tampico, Tamaulipas, México, 28 May 2007.
- Technical Program Co-Chair, 4th LACCEI Latin American and Caribbean Conference on Engineering and Technology, Mayaguez, Puerto Rico, 19 - 21 June 2006.
- Workshop Organizer, 1st OAS Workshop on Advancing Strategies for Achieving Quality Assurance in Latin America and the Caribbean Engineering Education, sponsored by Organization of American States (OAS) and the Latin American and Caribbean Consortium of Engineering Institutions (LACCEI), San Juan, Puerto Rico, 18 June 2006.

- **Publications**
  Summary: **171** publications: **5** books authored, **10** books edited, **15** book chapters, **9** refereed journal papers, **109** refereed proceedings papers, **6** refereed extended abstracts published in proceedings and **17** technical reports archived at a federal or state agency**.** *The publications have received at least **127** external citations*

Books
Number of books: Authored: **5**, Edited: **10**, Book Chapters: **14**, Citations: **49**

Books Authored:
Note: The five books below were commissioned by the School Board of Palm Beach County. All were adopted to achieve a County Standard for Objectives, Presentation, and Testing for each subject area. The first two books I developed as part of a writing team specially trained in writing Standardized Curriculum and Standardized Tests. The authors are listed in alphabetical order. All were critically refereed by School Board's Curriculum Specialists.

[5] M. M. Larrondo-Petrie, *Computer Programming: Fortran: Instructional Resource Guide,* W. Cornell (ed.), the School Board of Palm Beach County, 1989.

[4]   M. M. Larrondo-Petrie, *Algebra I: Instructional Resource Guide,* M.A. Dupont (ed.), the School Board of Palm Beach County, FL, l982.

[3]   M. M. Larrondo-Petrie, *Gifted Geometry: Instructional Resource Guide,* H. Franks (ed.), the School Board of Palm Beach County, FL, 1981.

[2]   S. Bernstein, E. Brown, C. Gregory, D. Hawkins, V. Jackson, R. Kimmer, M. M. Larrondo-Petrie and L. Sawyer, *General Mathematics I: Instructional Resource Guide* M.A. Dupont, V. Jackson and J. Scheiner, (eds.), The School Board of Palm Beach County, FL, 1980.

[1]   K. Alston, G. Granet, D. Hawkins, R. Kimmer, M. M. Larrondo-Petrie, C. Rieck and M. White, *General Mathematics II: Instructional Resource Guide*, M.A. Dupont, V. Jackson and G. Williams (eds.), the School Board of Palm Beach County, FL, 1980.

Books Edited:

[10] M. M. Larrondo-Petrie, J. Perez, J. Garcia and I. E. Esparragoza, (eds.), *Partnering for Success: Education, Innovation, Technology, and Practice – Proceedings of the 6th LACCEI Latin American and Caribbean Conference for Engineering and Technology,* Tegucigalpa, Honduras, 3 – 6 June 2008.
Archived: LACCEI: http://www.laccei.org/proceedings2008/

[9]   M. Butler, M. Hinchey, M. M. Larrondo-Petrie, (eds.), *Formal Methods and Software Engineering – 9th International Conference on Formal Engineering Methods, ICFEM 2007*, Boca Raton, Florida, USA, 14-15 November 2007, Proceedings, Lecture Notes in Computer Science, Volume 4789, Springer, Heidelberg, Germany, 2007.

[8]   I. E. Esparragoza, M. Bermudez, and M. M. Larrondo-Petrie, (eds.), *Developing Entrepreneurial Engineers for the Sustainable Growth of Latin America and the Caribbean: Education, Innovation, Technology, and Practice – Proceedings of the 5th LACCEI Latin American and Caribbean Conference for Engineering and Technology,* Tampico, Tamaulipas, Mexico, 28 May – 1 June 2007.
Archived: LACCEI: http://www.laccei.org/proceedings2007/

[7]   I. E. Esparragoza, M. M. Larrondo-Petrie and Dhushy Sathianathan (eds.), *Proceedings of the NSF-LACCEI Workshop on The Global Engineering Education Challenge for the Americas*, Tampico, Tamaulipas, Mexico, 29 May 2007, 146 pp.
Archived: http://www.engr.de.psu.edu/Ivan/NSFWorkshop.pdf

[6]   L. A. Godoy, M. M. Larrondo-Petrie and I. Pagan-Trinidad, (eds.), *Breaking Frontiers and Barriers in Engineering: Education, Research and Practice – Proceedings of the 4th LACCEI Latin American and Caribbean Conference for Engineering and Technology*, Mayagüez, Puerto Rico, 21-23 June 2006, Editorial ELIYAN, Mayagüez, Puerto Rico, 2006. ISBN: 0-9753270-2X
Archived: LACCEI: http://www.laccei.org/proceedings2006/

[5]   M. M. Larrondo-Petrie (ed.), *Advances in Engineering and Technology, A Global Perspective – Proceedings of the 3rd Latin American and Caribbean Conference for Engineering and Technology*, Cartagena de la India, Colombia, 8-10 June 2005, Latin American and Caribbean Consortium of Engineering Institutions (LACCEI), on CD, 2005.
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[4]   M. M. Larrondo-Petrie (ed.), *Challenges and Opportunities for Engineering Education, Research and Development – Proceedings of the 2nd Latin American and Caribbean Conference for Engineering and Technology,* Miami, Florida, 4-6 June 2004, Latin American and Caribbean Consortium of Engineering Institutions (LACCEI), 2004.
Archived: LACCEI: http://www.laccei.org/proceedings2004/

[3]   R. B. France, and M. M. Larrondo-Petrie (eds.), *Proceedings of the IEEE Workshop on Industrial Strength Formal Specification Techniques, WIFT'98*, Boca Raton, Florida, Institute of Electrical and Electronic Engineers IEEE Computer Society Press, Los Alamitos, California, USA, 1998.
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  • E. Letier, A. van Lamsweerde, "High Assurance Requires Goal Orientation," *Proceedings RHAS'02-International Workshop on Requirements for High Assurance Systems,* Essen, September 2002. http://citeseer.nj.nec.com/letier02high.html

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[4] R. B. France, and M. M. Larrondo-Petrie, "A Framework for Integrating Formal and Structured Analysis Techniques," Florida Atlantic University Technical Report, TR-CSE-93-24, 1993.

[3] E. B. Fernandez and M. M. Larrondo-Petrie, "A Method-Based Authorization Model for Object-Oriented Databases," Florida Atlantic University Technical Report, TR-CSE-92-31, l992.

[2] M. M. Larrondo-Petrie, "Primitive Software Complexity Measures for Parallel Programming," Florida Atlantic University, Department of Computer Science and Engineering Technical Report, TR-CSE-91-19, 1991.

[1] J. Wu and M. M. Larrondo-Petrie, "Cube-Connected Cubes Network," Florida Atlantic University Technical Report, CE90-5, l990.

Non-Refereed Invited Presentations

Presented **21** invited talks described below.

International

Invited Plenary Panelist, "Engineering Societies Going Global," LACCEI 2008 Latin American and Caribbean Conference on Engineering and Technology, Tegucigalpa, Honduras, 4-6 June 2008.

Invited Plenary Presentation, "Applying Lessons from Culture to Engineering Education," Global Gujarat Diaspora Conference, Modesa, India, November 2007.

Invited Plenary Presentation, "The Latin American and Caribbean Consortium of Engineering Institutions," *International Conference on Engineering and Education ICONEED 2007*, 14-16 October 2007, Cartagena Network for Engineering, Cartagena, Colombia.

Invited Presentation, "Bringing Everyone to the Table to Maximize Economic Impact and Knowledge Transfer," *American Society of Engineering Education Global Colloquium,* September 2007, Istanbul, Turkey.

Invited Tutorial Presentation, *Security patterns and secure systems design*, by E.B. Fernandez and M. M. Larrondo Petrie, presented at:
- *3rd IEEE International Conference on Wireless and Mobile Communications (ICWMC 2007),* 4-9 March 2007, Guadeloupe, French Caribbean.
- *Third IASTED International Conference on Communications and Computer Networks,* Lima, Peru, 4-6 October 2007.

Invited Speaker, "Global Engineering Capacity Building and Collaboration Strategies for Santa Marta, Colombia", Santa Marta, Colombia, 14 October 2006.

Invited Panelist, "Accreditation and Program Recognition for Engineering Programs in Latin America and the Caribbean," *4th Annual LACCEI Latin American and Caribbean Conference for Engineering and Technology,* Mayagüez, Puerto Rico, 22 June 2006.

Invited Panelist, "Brown vs. the Board of Education: Fifty-two years after the ruling," *American Society of Engineering Education Annual Conference and Exposition*, Chicago Illinois, USA, 20 June 2006.

Invited Speaker, "Engineering for the Americas: The Role of LACCEI," *OAS Engineering for the Americas Symposium*, Lima Perú, 29 November – 2 December 2005.

Keynote Speaker, "Consideraciones de Seguridad y Privacidad en Sistemas Inalámbricos," *Seminario Internacional*, Universidad Privada del Norte, Cajamarca, Perú, 26 November 2005.

Keynote Speaker, "Una Metodología para Diseñar Sistemas Seguros," *Seminario Internacional*, Universidad Privada del Norte, Trujillo, Perú, 25 November 2005.

Keynote Speaker, "Acreditación, Doble Titulación y Reconocimiento Internacional*," Seminario Internacional para Administradores Universitarios*, Universidad Privada del Norte, Trujillo, Perú, 25 November 2005.

National

Invited Keynote, "Starting your PhD Research in STEM Disciplines," Florida Education Fund's McKnight Doctoral Fellows' Research & Writing Institute, Tampa, Florida, USA, 26-31 June 2008.

Invited Keynote, "Towards Dissertation Completion: Writing and Research in STEM Programs," Florida Education Fund's McKnight Doctoral Fellows' Orientation Meeting: The Phd Experience: Expectation and Realities, Tampa, Florida, USA, 13-14 June 2008.

Keynote Speaker, "Opportunities for Preparing to be a Global Engineer," *New York Alliance for Graduate Education and the Professoriate Conference*, New York, New York, USA, April 2008.

Keynote Speaker, "Opportunities for Preparing to be a Global Engineer," *Florida-Georgia Alliance for Minority Participation Conference*, Gainesville, Florida, USA, February 2008.

Invited Plenary Presentation, "Employment Opportunities, Negotiating Contracts, Publishing and Earning Tenure and Promotion in Academia", by Laurence Alexander, Glen Jones, Maria Larrondo Petrie and Steven Ullman, presented at *2007 Florida Education Fund McKnight Fellows Conference*, 10 November 2007, Tampa, Florida, USA.

Invited Workshop, "Dissertation Proposal Development in Science and Engineering," *Florida Education Fund McKnight Fellows Summer Research and Writing Institute*, 1 August 2007, Tampa, Florida, USA

Invited Panelist, "Brown vs. the Board of Education: Fifty-two years after the ruling," *American Society of Engineering Education Annual Conference and Exposition*, Portland Oregon, USA, 16 June 2005.

Invited Distinguished Speaker, "Leadership Styles" and "Institutional Culture", HERS/Bryn Mawr Summer Institute for Women in Higher Education Administration, Bryn Mawr College, Bryn Mawr, Pennsylvania, USA, 21 June 2005.

Keynote Speaker, "Un Modelo para Evaluación y Mejoría Incremental de la Educación en Ingeniería y Tecnología en las Américas," *CONFINI*, Lima, Peru, 14 October 2004.

Invited Distinguished Speaker, "Leadership Styles" and "Institutional Culture", HERS/Bryn Mawr Summer Institute for Women in Higher Education Administration, Bryn Mawr College, Bryn Mawr, Pennsylvania, USA, 22 June 2004.

Keynote Speaker, "Preparing SMET Scholars for Science, Technology, Engineering and Mathematics Research and the Professoriate in a New Era," Florida-Georgia Alliance for Minority Participation, Miami, Florida, USA, 30 January 2004.

Keynote Speaker, "The International Engineer", Graduation of 1st Engineering Class, Universidad Sergio Arboleda, Bogotá, Colombia, September 19, 2003.

Invited Distinguished Speaker, "Leadership Styles" and "Institutional Culture", HERS/Bryn Mawr Summer Institute for Women in Higher Education Administration, Bryn Mawr College, Bryn Mawr, Pennsylvania, USA, 2 - 4 June 2003.

Invited Speaker, Latin American and Caribbean Consortium of Eingineering Institutions – Executive Board Meeting, "A Web Matrix to Support International Engineering Research Collaboration," Universidad Tecnologica de Santiago, Santiago de los Caballeros, Dominican Republic, October 7, 2002.

Local:

Invited Speaker, Florida Engineering Society - Treasure Coast Chapter Awards Banquet, "The Engineering Student of the 21st Century," Port St. Lucie, April 30, 2002.

Invited Speaker, South Florida Water Management District – Science Honor Society Chapter Meeting, "Design of the Lake Okeechobee Ecosystem Study Graphical User Interface," October 1998.

Invited Speaker, Florida Atlantic University Minority Student Services, "I Made It and So Can You", a motivational talk to two outreach programs in underprivileged and minority junior high school, 1992 and 1993.

Invited Lecturer, Florida Engineering Society, "A Review of Computer Science Concepts for the EIT Examination", 1990.

Invited Speaker, Palm Beach County Council of Teachers of Mathematics, "Quantitative Literacy: Integrating Statistics into the Mathematics Curriculum," 1985.

Invited Speaker, Palm Beach County Council of Teachers of Mathematics, "Teaching Advanced Placement Computer Science," 1984.

PhD Dissertations and Master Theses Supervision

PhD Dissertations Supervised to Completion:

[2] PhD Candidate: Nelly Delessy-Gassant. Tentative Title: *A Framework for Web Services Security,* Department of Computer Science and Engineering, Florida Atlantic University.

[1] PhD Dissertation: Gopal Raghavan, *Industrial Strength Formalization of Object-Oriented Real-Time System,* Department of Computer Science and Engineering, Florida Atlantic University, January 2000. ISBN: 0-599-64267-X.

PhD Dissertations Supervision in Progress:

[2] PhD Candidate: Mauricio Sadicoff, Tentative Title: *Security and Privacy Patterns,* Department of Computer Science and Engineering, Florida Atlantic University.

[1] PhD Candidate: Alvaro Escobar, Tentative Title: *Location-Based Access Control Models*, Department of Computer Science and Engineering, Florida Atlantic University.

Master Theses Supervised to Completion:

[9] Master Thesis: Mauricio L. Sadicoff, *Information Hiding: Digital Watermarking Techniques,* Department of Computer Science and Engineering, Florida Atlantic University, May 2002.

[8] Master Thesis: Lakshmi Thampi, *Analysis of Graphical User Interfaces designed for an Ecological Data System,* Department of Computer Science and Engineering, Florida Atlantic University, August 2000.

[7] Master Thesis: Ilya Portnoy, *Analysis Models and Implementation Issues for an Icon-Based Software Engineering Environment,* Dept. of Computer Science and Engineering, Florida Atlantic University, May l999.

[6] Master Thesis: Qinxi Huang, *A Framework for an Icon-Based Software Engineering Environment,* Department of Computer Science and Engineering, Florida Atlantic University, May l998.

[5] Master Thesis: Monika Saksena, *The Notion of Aggregation,* Department of Computer Science and Engineering, Florida Atlantic University, May 1998.

[4] Master Thesis: Malcolm Shroff, *Generating Formal Models from UML Class Diagrams,* Department of Computer Science and Engineering, Florida Atlantic University, December 1997.

[3] Master Thesis: Hemanth K. Vijayanagaram, *Approaches to Object/Relational Database Systems,* Department of Computer Science and Engineering, Florida Atlantic U., Dec.1996. Co-chair M. Solomon

[2] Master Thesis: Sergio L. Lostal, *Software Development for Ecological Data Systems.* Department of Computer Science and Engineering, Florida Atlantic University, December 1996. Co-chair M. Solomon.

[1] Master Thesis: Kai Jin, *Asynchronous Distributed Algorithms for Multi-Agent Supporting Systems.* Department of Computer Science and Engineering, Florida Atlantic University, April l996.

Master Theses Supervision in Progress:

[2] Master Thesis: David Collodi, *A Bipedal 3-D Interface,* Department of Computer Science and Engineering, Florida Atlantic University.

[1] Master Thesis: Sai Babu Dara, *An Intelligent Interface for the Lake Okeechobee Ecosystem Data,* Department of Computer Science and Engineering, Florida Atlantic University.