

## BIOGRAPHICAL SKETCH

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## PROFESSIONAL PREPARATION

*Postdoctoral studies:* University of California

Santa Barbara: June - December, 1986, San Diego: January - June, 1987

*Ph.D. 1983 in Mathematics:* State University of Campinas-UNICAMP – Brazil, 1983.

Ph.D. advisor: Prof. Francesco Mercuri, *Manifolds of Pure Curvature Operator*.

*B.A. in Mathematics:* State University of Campinas-UNICAMP – Brazil, 1977.

## ACADEMIC/PROFESSIONAL APPOINTMENTS

2012 – present	Interim Associate Vice President for Research and Graduate Studies	California State University, Northridge
1997-present	Professor	California State University, Northridge
2009-2011	Program Director	Division of Mathematical Sciences,
	Topology and Geom. Analysis	National Science Foundation
2006-2008	Department Chair	California State University, Northridge
2000-2002	Program Director	Division of Mathematical Sciences,
	Topology and Geom. Analysis	National Science Foundation
1990 to 1997	Assistant & Associate Professor	California State University, Northridge
1989 to 1990	Visiting Researcher	University of California Los Angeles
1983 to 1987	Assistant & Associate Professor	UNICAMP - Brazil.

## PUBLICATIONS

*Area of Research:* *Differential Geometry* with interest in manifolds of nonnegative curvature, homogeneous manifolds, conformal structures, Kähler manifolds and Submanifold Geometry. I have published 28 papers.

### *Selected Publications*

1. *On the holonomy algebra of manifolds with pure curvature operator*, *Balkan Journal of Geometry and its Applications*, Volume 17 (2012), No. 1, pp. 88-94.
  2. *Splitting theorems for submanifolds of nonnegative isotropic curvature*, *Results Math.* **60**, (2011), 235-243 (DOI 10.1007/s00025-011-0152-7).
  3. *Codimension three nonnegatively curved submanifolds with infinite fundamental group* (with J. Foss, M. De Martino and G. Santos) *Math. Z.* (2011) 267: 403-411 (DOI 10.1007/s00209-009-0625-5).
  4. *Compact manifolds of nonnegative isotropic curvature and pure curvature tensor* (with Martha Dussan), *Balkan Journal of Geometry and its Applications*. Vol. **10**, n. 2, (2005).
  5. *Codimension two homogeneous submanifolds of Space Forms* (with Helvecio de Castro), *Note di Matematica* vol. **21**, n. 2, (2003), 83-109.
  6. *Manifolds with 2-nonnegative Ricci operator*, (with Martha Dussan), *Pacific J. of Math.* **204**, No 2, (2002), 319 - 334.
  7. *Homogeneous submanifolds of codimension two*, (with Helvecio de Castro), *Geometriae Dedicata*, **78** (1999) 89-110.
  8. *Conformal flatness, cohomogeneity one and hypersurfaces of revolution*, (with F.Mercuri), *Differential Geometry and its Applications*, **9** (1998) 243-249.
  9. *Low codimensional submanifolds with nonnegative isotropic curvature* (with F. Mercuri), *Transactions of the American Mathematical Society*, **348** (1996) 2711 - 2724.
- Textbook Author.** *Euclidean and Non-Euclidean Geometries*, Prentice Hall, New Jersey, 2002.

## SYNERGISTIC ACTIVITIES

- *Principal Investigator of NSF grant INT-0306998*, a U.S.- Brazil collaboration for Research Experiences in Mathematics for Undergraduate Students.
- *Principal Investigator of NSF-GK-12 grant DGE-0440547*, **FERMAT**, Fellows Engaged as Resources in Mathematics to Assist Teachers.
- *Principal Investigator of NSF-MCTP grant DMS-0502258*, **PUMP**, Preparing Undergraduates through Mentoring towards Ph.D.s.
- *Principal Investigator of NSF grant OISE-0526008*, **IRES**, International Research Experiences for Students.
- *Co- Principal Investigator of the NSF grant DUE-0630452 (CSUN) Robert Noyce Scholarship Program.*
- *Co- Principal Investigator of the NSF grant HRD 1139803*, **CSU-LSAMP Bridge to the Doctorate Cohort 9** at California State University, Northridge.
- *Principal Investigator of NSF Workforce Grant: CSU Alliance for Preparing Undergraduates through Mentoring towards Ph.D.s.* in partnership with other CSUs campuses: Channel Island, Dominguez Hills, Fullerton, Long Beach, Los Angeles, Pomona, and San Bernardino.

## STUDENT ADVISEMENT

- *Ph.D.'s dissertations*, both at UNICAMP, Brazil:  
Helvecio de Castro, August 1996 and Martha Dussan, August 2000.
- *Masters thesis*, all at CSUN: Susan Tummers, Joseph Elakodical, Jesus Carbonnel, Arash Baharemand, Matthew Rayner, Cynthia Flores, and John Foss (in preparation).
- *International REU*. The following students worked with me in the International REU that I co-organized with Prof. Carlos Tomei at PUC, Rio de Janeiro (July 2003) and with Prof. Marcelo Firer at UNICAMP (July 2004).
  - Maia Averett (UCSB), Lisa Helene Feigenbaum (Harvard University), Juliana Freire (PUC - Rio de Janeiro), and Mikhail Lev (UCLA). *Multi-Channel Wireless Telecommunication Systems: An Algorithm for Optimal Channel and Power Allocation*.
  - Brendan Creutz (Cal Poly, San Luis Obispo), Patricia Cirilo and Renato Zanforlin (UFMG), and Jean Carlo P. Garcia (UFRS). *Functions from the plane to the plane*. This work won a bronze medal in an undergraduate research competition sponsored by IMPA, Rio de Janeiro in 2004.
  - Sharon Lutz (University of Colorado at Boulder), Patricia Cirilo (Universidade Federal de Minas Gerais), and José Regis A. Varão Filho (UNICAMP). *Closed and Exact Differential Forms in  $\mathbb{R}^n$* . This work received honorable mention in an undergraduate research competition sponsored by IMPA, in 2005.
- **IRES**. Ricardo Martins (UNICAMP), Rogerio Medeiros (USP), and Silas Richelson, (Harvard): *On the holonomy algebra of codimension three submanifolds*. IRES program, co-organized with Prof. Helena Lopes at UNICAMP (July 2006). John Foss (CSUN), Marcelo De Martino (UNICAMP), and Gleison Santos (UFP): *On the codimension three submanifolds of Euclidean space with nonnegative curvature*. IRES program, co-organized with Prof. Abdenego Barros at UFC-BRAZIL (July 2008).
- **MCTP-PUMP**. Cynthia Flores (CSUN): *Dressing Actions*. This work was presented in the 9<sup>th</sup> Nebraska Conference for Undergraduate Women in Mathematics. Ariel Alcazar Alcaide (CSUN): *On the holonomy algebra of nonnegative curvature operators*. Nickolas Andes Castro (CSUN): *Codimension two Cohomogeneity-one Submanifolds*.

**COLLABORATORS IN PAST 48 MONTHS:** Francesco Mercuri and Helena Lopes (UNICAMP-Brazil); M. Dussan (USP-BRAZIL); Ruy Tojeiro (UFSCAR-BRAZIL); Carlos Tomey (PUC-Rio, Brazil); Abdenego Barros (UFC-BRAZIL), Fabio Podesta (Universita` di Firenze, Italy).