

RICHARD T. SCHOEPHOERSTER

Professor and Chair
Wallace H. Coulter Chair in Biomedical Engineering
Department of Biomedical Engineering
Florida International University
10555 W. Flagler St., EC 2610
Miami, FL 33199
Ph: (305) 348-3722, Fx: (305) 348-6954
Email: schoepho@fiu.edu

EDUCATION

The University of Iowa, Iowa City, Iowa.

Ph.D. Mechanical Engineering, December 1989.

Dissertation: "Flow Dynamics and Turbulence Measurements Past Prosthetic Heart Valves in a Model Left Ventricle: Experimental and Numerical Results."

M.S. Mechanical Engineering, December 1986.

Thesis: "Comparative Analysis of the Performance of Prosthetic Mitral Valves in a Model Left Ventricular Pulsatile System."

B.S. Biomedical Engineering, May 1985.

APPOINTMENTS

At Florida International University, Miami, Florida:

Wallace H. Coulter Chair in Biomedical Engineering. May 2005 – Present.

Professor and Chair. Department of Biomedical Engineering. August 2003 - Present

Professor and Director. Biomedical Engineering Institute. August 2001 – August 2003.

Professor. Department of Mechanical Engineering. August 2001 – August 2003.

Associate Professor and Director. Biomedical Engineering Institute. January 1999 – July 2001.

Director. Cardiovascular Engineering Center . January 1998 – March 2001, July 2003-present.

Associate Professor. Department of Mechanical Engineering. August 1996 – July 2001.

Assistant Professor. Department of Mechanical Engineering. August 1992 - July 1996.

Research Associate. Department of Mechanical Engineering. January 1990 - July 1992.

HONORS

Tau Beta Pi, Pi Tau Sigma

Teaching/Research Fellowship at University of Iowa Graduate College

Who's Who Among Students at American Universities and Colleges: 1987, 1988, 1990

Invited Participant (Young Investigator), 3rd USA-China-Japan Conference on Biomechanics,
1991

Excellence in Research Award, Florida International University, 1994

Bronze , Silver , and Gold Service Award, American Heart Association, Florida Affiliate
Teaching Incentive Program Award, Florida International University

PROFESSIONAL ACTIVITIES

Session Chairman, Ninth ASCE Engineering Mechanics Conference, 1992
Session Chairman, Eleventh ASCE Engineering Mechanics Conference, 1996
Special Reviewer, NIH Special Study Section 8, June 1993, and NHLBI Surgery and Bioengineering Study Section, September 1995
Member, Research Peer Review Committee, American Heart Association, Florida Affiliate, 1991-1995
Research Committee, American Heart Association, Florida Affiliate
Member, 1993-2000; Vice-Chair, 1996-1998; Chair, 1998-2000
Chair, Research Peer Review Committee A, American Heart Association, Florida Affiliate, 1993-1995
Member, American Heart Association Affiliate Study Group C, 1995-1997.
Member, Board of Directors, American Heart Association, Florida Affiliate, 2000-2001
Member, Biomedical Engineering CAREER Review Panel, National Science Foundation, 2000-2004
Member, State of Florida Biomedical Research Advisory Council, 2000-2006
Member, American Heart Association Ohio Valley/Southeast Consortium Peer Review Committee 1B, 2001-2003
Member, American Heart Association (National) Research Committee, 2003-Present
Chair, American Heart Association (National) Bioengineering and Biotechnology Study Group, 2003-2005
Chair, American Heart Association (National) Research Peer Review Sub-Committee, 2005-Present
Member, Early Career Award Panel, Wallace H. Coulter Foundation, 2005-Present
Member, American Heart Association (National) Bioengineering and Biotechnology Study Group, 2006-present
Reviewer for Journal of Biomechanics, Catheterization and Cardiovascular Diagnosis, Biotechnology Progress, Annals of Biomedical Engineering, Journal of Biomechanical Engineering
Member, American Heart Association (Council of Basic Science), Biomedical Engineering Society, American Society of Engineering Education

ACADEMICS

COURSES TAUGHT

Statics
Dynamics
Transport Phenomena
Transport Phenomena Laboratory
Design Project I

COURSES DEVELOPED AND TAUGHT

Design of Biomedical Systems and Devices
Engineering Hemodynamics
Biomechanics of Cardiovascular Systems
Applied Biomedical and Diagnostic Measurements (graduate)
Fluid Mechanics Applications in Physiological Systems (graduate)
Solid Mechanics Applications in Physiological Systems (graduate)
Advanced Biofluid Mechanics (graduate)
Biomaterials Science (graduate)
Engineering Analysis of Biological Systems
Biomedical Engineering Data Evaluation Principles

PROGRAMS DEVELOPED

Biomedical Engineering M.S. Program at FIU, implemented Fall 1999
Biomedical Engineering undergraduate minor at FIU, implemented Fall 1999
Biomedical Engineering B.S. Program at FIU, implemented Fall 2002
Biomedical Engineering Ph.D. Program at FIU, implemented Fall 2004

ADVISOR

Founding Chapter Advisor (Florida Theta) for Tau Beta Pi, 1992-2000
Founding Chapter Advisor (Alpha Kappa) for Pi Tau Sigma, 1994-2000

UNIVERSITY SERVICE

Member, Biomedical Exchange Human Resource Education Subcommittee, 1994-1997
Member, Mechanical Engineering Department Search and Screen Committee, 1994-95
Secretary, College of Engineering and Design Faculty Council, 1994-95
Vice-chair, College of Engineering and Design Faculty Council, 1995-96
Chair, Mechanical Engineering Department Search and Screen Committee, 1995-96
Member, College of Engineering (M.E. Chair) Search and Screen Committee, 1995-1996
Chair, College of Engineering and Design Faculty Council, 1996-97
Member, University Faculty Senate, 1995-97
Chair, Mechanical Engineering Department ABET Committee, 1996
Chair, Biomedical Engineering Search and Screen Committee, 1998-1999
Chair, Biomedical Engineering Search and Screen Committee, 1999-2000
Chair, Biomedical Engineering Search and Screen Committee, 2001-2002
Co-Chair, University Cross Functional Action Planning Committee – Health Theme, 2002-2003
Chair, College of Engineering (ISE Chair) Search and Screen Committee, 2004-2005
Member, Provost's Medical School Steering Committee
Member, College of Medicine Dean Search and Screen Committee

ACADEMIC LEADERSHIP TRAINING

FIU Executive Development Program, July 30-August 10, 2001
Whitaker Academic Leadership Program, September 19-22, 2002

Department Chairs Workshop, Institute for Academic Leadership, Florida State University, October 12-15, 2003

EXTRAMURAL AND INTRAMURAL FUNDING

1991-1994 NIH Academic Research Enhancement Award (sole PI) \$106,420
"Influence of Flow Dynamics on Thrombogenesis"

1991-1994 American Heart Association, Florida Affiliate Initial Investigatorship (sole PI) \$235,407
"Enhancement of Techniques for the Clinical Assessment of Natural and Prosthetic Heart Valve Performance"

1993-1996 The Whitaker Foundation (sole PI) \$178,080
"Development of a Three Dimensional Model of Left Ventricular Flow Dynamics for Function Evaluation in Man"

1995 FIU Foundation (sole PI) \$10,679
"Mathematical Modeling of Blood Platelet Deposition in an Arterial Stenosis"

1995-1997 American Heart Association, Florida Affiliate, Grant-in-Aid 9501342 (PI) \$79,812
"Fluid Dynamics and Platelet Deposition in a Model Arterial Stenosis"

1998-2000 FIU Quality Improvement Program (PI) \$250,000/year
"Biomedical Engineering at FIU"

1999-2001 The Whitaker Foundation Special Opportunity Award (PI) \$999,378
"A New Model in Biomedical Engineering for Innovations in the Delivery of Medicine"

1999-2000 SMLX Technologies, Inc. (PI) \$19,228
"Characterization and Design Evaluation of SMLX Simplex Airbrator"

2000-2001 IDEXX Laboratories, Inc. (PI) \$31,036
"Computational Fluid Dynamic Modeling of Laminar Flow in the IDEXX Flow Cell Funnel Assembly"

2000 Bioheart, Inc. (PI) \$44,487
"Support for Design and Development of a Myocardial Implant and Its Delivery System"

2000-2001 National Research Council (PI) \$16,000
"Mechanical and hydrodynamic characterization of a novel artificial trileaflet aortic heart valve fabricated from composite material"

2000-2001 SMLX Technologies, Inc. (PI) \$38,225
"SMLX Airbrator Project, Phase II: Design Optimization"

2000-2001 3D Imaging Technologies, Inc. (PI) \$42,304
"Development of a Tool to Transform a 3-D Data Set into a Composite 2-D Image Viewable as a 3-D Image with Application to the Entertainment and Medical Industries"

2000-2004 National Institutes of Health (MBRS SCORE) (Co-PI) \$815,764
"Flow effects on platelet deposition in stented arteries"

2000-present Wallace H. Coulter Foundation (PD) \$5,000,000 gift + \$5,000,000 State match Endowment with approximate annual earnings - \$500,000

- 2001 “The Biomedical Engineering Institute – A Proposal for Education and Research Excellence in South Florida”
IDEXX Laboratories, Inc. (PI) \$17,126
“Fluid Transport Modeling of IDEXX Fluidic System”
- 2001-2003 American Heart Association, Florida Affiliate Grant-in-Aid 0151061B (PI) \$120,000
“In Vitro Performance Characterization of a Novel Trileaflet Synthetic Heart Valve”
- 2002-2005 National Science Foundation Partnerships for Innovation Program (Co-PI, Program Director) \$599,613
“The Biomedical Engineering Partnership Program at FIU: Fostering Technology Entrepreneurship, Commercialization, and Clinical Implementation”
- 2003 Innovia, LLC (Co-PI on SBIR Phase I from the NHLBI HL070401, sub-contract to FIU) \$32,994
“A novel trileaflet polymer heart valve”
- 2004-2007 Innovia, LLC (Co-PI on SBIR Phase II from the NHLBI HL070401, sub-contract to FIU) \$132,070
“A novel trileaflet polymer heart valve”
- 2005-2006 Heartware, Inc. \$40,073
“Thrombogenic Potential of the Heartware LVAD”
- 2006-2007 Heartware, Inc. \$104,543
“Hemocompatibility Testing of Polymers for the Driveline of the HeartWare Next Generation LVAD”

GRADUATE STUDENT SUPERVISION

As Major Professor

Cesar Silva, M.S., December 1991.

Thesis: "A Numerical Model of Systolic Flow Dynamics for Normal and Abnormal Left Ventricular Wall Motion"

Flavio Souza-Campos, M.S., December 1993.

Thesis: "Performance Assessment of Prosthetic Heart Valves using Orifice Area Formulae and the Energy Index Method"

Erick Gonzalez, M.S., December 1994.

Thesis: "Development of a Three Dimensional Model of Left Ventricular Flow Dynamics"

Lijun Niu, M.S., December 1995.

Thesis: "Flow Characteristics in Models of Arterial Stenosis and Aneurysm: Relationship to the Development of Mural Thrombus"

Michael Langlais, M.S., December 1996.

Thesis: "Fluid Dynamics and Platelet Deposition in a Model Arterial Stenosis"

Flavio Souza-Campos, Ph.D., May 1997.

Dissertation: "On Contractility, Energetic Requirements of the Cardiovascular System, and the Formation of Arterial Sclerosis"

Tong Ding, M.S., December 1997.

- Thesis: “Development and Validation of a Realistic Three Dimensional Model of Left Ventricular Flow Dynamics”
Hoshang Engineer, M.S. December 1999.
Thesis: “Mathematical Modeling of Platelet Deposition in Arterial Stenosis with Major Emphasis on Fluid Flow Effects”
Yanran Liu, M.S. August 2002.
Thesis: “A Three-Dimensional Model of A Polymer Composite Trileaflet Aortic Valve Using Finite Element Analysis”
Andres Aguirre, M.S. August 2003.
Thesis: “Static And Dynamic Mechanical Testing Of A Polymer With Potential Use As Heart Valve Material”
Bok-kyu Lee, M.S. August 2003.
Thesis: “Reconstruction of Artificial Heart Valve Leaflet Motion Using Photogrammetry and Biquintic Finite Element Method”
Siobhain Gallocher, M.S. April 2004.
Thesis: “A Novel Polymer Heart Valve: Quantification of Hydrodynamic Function, Platelet Deposition, and Platelet Activation State”
Tejas Choksi, M.S. August 2004.
Thesis: “Modification of a Novel Polymer With Potential Use In Artificial Heart Valves: Effects on Hemocompatibility and Mechanical Properties”
Fernando Jaramillo, M.S. August 2005.
Thesis: “The Development of a Catheter Based Heart Valve”
Qiang Wang, M.S. August 2005.
Thesis: “Feasibility Analysis of a Stent-Valve Combination Device: In Vivo Evaluation Of The Novel Polymer Valve And In Vitro Evaluation Of An Alternative Fixation Method”
Nandini Duraiswamy, Ph.D. December 2005.
Dissertation: “Effect of Blood Flow Patterns On Localized Platelet Adhesion Under Physiologic Flow Conditions Using 2D And 3D Stent Models – An Experimental and Computational Approach”
Siobhain Gallocher, Ph.D. expected April 2007.
Christopher Haugh, M.S. expected April 2007.
Qiang Wang, Ph.D. expected April 2008.
Kanchana Iyer, Ph.D. expected December 2008.

As Committee Member

- Marc Zampino, M.S., 1992.
Ivan Muguercia, M.S., 1994.
Richard Burton, M.S., 1995.
Edmundo Largaespada, M.S., 1995.
Mansoor Kapadvanjwala, Ph.D., 1995.
Jian Ling, M.S., 1996.
Ivan Muguercia, Ph.D., December 1997.
Mohammad Zaki, M.S., December 1998.
Scott Scargle, M.S., December 1998.
Erland Weydel, M.S., August 1999.

Kalyana Sundaram, Ph.D., May 2000
 Arun Singal, M.S., May 2001
 Benjamin Boyter, M.S., December 2002
 Samuel Robaina, M.S., April 2002
 Michael Moreno, M.S., April 2003
 Maria Caceres, M.S., August 2003
 Stephanie Barcelona, M.S., August 2004
 Martha Vallejo, M.S., August 2004
 Sachin Gursahani, M.S., December 2004
 Sujit Tatke, M.S., December 2004
 Sachin Gusahani, December 2004
 Human Arjomandi, M.S., May 2005
 Christine Pou, M.S., May 2005
 David Isaza, M.S. August 2005
 Melissa Hoo, M.S., December 2005
 Rozita Fallahinejad, M.S., May 2006
 Mahwish Ahmed, M.S., August 2006
 Rohit Chawla, M.S., August 2006
 Rosaura De Zayas, M.S., August 2006

PUBLICATIONS

PEER-REVIEWED ARTICLES AND CONFERENCE PAPERS

1. Schoephoerster, R., Wertz, P.W., Madison, K.C., and Downing, D.T. (1985) "A survey of polar and non-polar lipids of mouse organs." Comp. Biochem. Physiol., 82B:229-232.
2. Chandran, K.B., Fatemi, R., and Schoephoerster, R. (1986) "Dependance of tissue valve leaflet motion on the viscosity of blood analogue fluid." Life Support Systems, 4:289-303.
3. Chandran, K.B., Schoephoerster, R., Fatemi, R., and Dove, E.L. (1988) "An in vitro experimental comparison of Edwards-Duromedics and St. Jude bileaflet heart valve prostheses." J. Clin. Phys. Physiol. Meas., 9:233-241.
4. Chandran, K.B., Schoephoerster, R., and Dellsperger, K.C. (1989) "Effect of prosthetic mitral valve geometry and orientation on flow dynamics in a model human left ventricle." J. Biomechanics, 22:51-65.
5. Chandran, K.B., Fatemi, R., Schoephoerster, R., Wurzel, D., Hansen, G., Pantalos, G., Yu, L-S, and Kolff, W.J. (1989) "In vitro comparison of velocity profiles and turbulent shear distal to polyurethane trileaflet and pericardial prosthetic valves." Artificial Organs, 13:148-154.
6. Chandran, K.B., Schoephoerster, R., Wurzel, D., Hansen, G., Yu, L-S, Pantalos, G., and Kolff, W.J. (1989) "Hemodynamic comparison of polyurethane trileaflet and tissue valve prostheses." ASAIO Transactions, 35:132-138.
7. Schoephoerster, R., and Chandran, K.B. (1989) "Effect of systolic flow rate on the prediction of effective valve orifice area." J. Biomechanics, 22:705-716.

8. Schoephoerster, R., Yearwood, T.L., and Chandran, K.B. (1989) "Prediction of stenotic valve orifice area: An in vitro study on a bioprostheses." Catheterization and Cardiovascular Diagnosis, 18:36-47.
9. Schoephoerster, R.T. and Chandran, K.B. (1991) "Velocity and turbulence measurements past mitral valve prostheses in a model left ventricle." J. Biomechanics, 24:549-562.
10. Schoephoerster, R.T., Silva, C.L., and Ray, G. (1993) "A finite analytic model for left ventricular systolic flow dynamics." J. Engineering Mechanics, 119:733-747.
11. Schoephoerster, R.T., Oynes, F., Nunez, G., Kapadvanjwala, M., and Dewanjee, M.K. (1993) "Effects of local geometry and fluid dynamics on regional platelet deposition on artificial surfaces." Arteriosclerosis and Thrombosis, 13:1806-1813.
12. Schoephoerster, R.T., Silva, C.L., and Ray, G. (1994) "Evaluation of left ventricular function based on simulated systolic flow dynamics computed from regional wall motion." J. Biomechanics, 27:125-136.
13. Souza-Campos, F. and Schoephoerster, R.T. (1996) "Performance assessment of prosthetic heart valves using the energy index method." ASAIO Journal, 42:170-176.
14. Bluestein D., Niu, L., Schoephoerster, R.T., and Dewanjee, M.K. (1996) "Steady flow in an aneurysm model: Correlation between fluid dynamics and blood platelet deposition." J. Biomechanical Engineering, 118:280-286.
15. Souza-Campos, F., and Schoephoerster, R.T. (1996) "Effect of simulated valvular stenoticity on predicted flow area for a bileaflet valve using the Gorlin equation." Artificial Organs, 20:218-226.
16. Gonzalez, E.A., and Schoephoerster, R.T. (1996) "A simulation of three dimensional systolic flow dynamics in a spherical ventricle: Effects of abnormal wall motion." Ann. Biomedical Engineering, 24:48-57.
17. Bluestein D., Niu, L., Schoephoerster, R.T., and Dewanjee, M.K. (1997) "Fluid mechanics of arterial stenosis: Relationship to the development of mural thrombus." Ann. Biomedical Engineering, 25:344-356.
18. Schoephoerster, R.T., Gutierrez, C., and Londono, M. (1997) "Vortex shedding in steady flow through an axisymmetric model of arterial stenosis and its relevance to mural platelet deposition," Proceedings of the ASME Fluids Engineering Division Summer Meeting, Vancouver, British Columbia, Canada, June 22-26, 1997 (eight page paper, peer-reviewed).
19. Bluestein, D., Gutierrez, C., Londono, M., and Schoephoerster, R.T. (1999) "Vortex shedding in steady flow through a model of an arterial stenosis and its relevance to mural platelet deposition," Ann. Biomedical Engineering 27(6):763-73.
20. Robaina, S., Jayachandran, B., He, Y., Frank, A., Moreno, M.R., Schoephoerster, R.T., and Moore J.E. (2003) "Platelet Adhesion to Simulated Stented Surfaces," J. Endovascular Therapy, 10:978-986.
21. Amit, O., Schoephoerster, R.T., Carsrud, A., and Prasad, V. (2004) "The Biomedical Engineering Partnership Program: An Integrated Educational Approach to Biomedical Innovation and Entrepreneurship," Proceedings of the 2004 American Society for Engineering Education Annual Conference & Exposition, Salt Lake City, Utah, June 20-23, 2004 (12 page paper, peer-reviewed).
22. Yin, W., Gallocher, S., Pinchuk, L., Schoephoerster, R.T., Jesty, J., Bluestein, D. (2005) "Flow Induced Platelet Activation in a St. Jude MHV, a Trileaflet Polymeric Heart Valve and a St. Jude Tissue Valve," Artificial Organs, 29(9):700-705.

23. Duraiswamy, N., Jayachandran, B., Byrne, J., Moore, J.E., and Schoephoerster, R.T. (2005) "Spatial Distribution of Platelet Deposition in Stented Arterial Models under Physiologic Flow," Ann. Biomedical Engineering, 33(12):1-11.
24. Gallocher, S.L, Aguirre, A., Kasyanov, V., Pinchuk, L., and Schoephoerster, R.T. (2006) "A novel polymer with potential use in a trileaflet heart valve." Accepted for publication in J. Biomed. Materials. Res.Pt B: Applied Biomaterials.
25. Liu, Y., Kasyanov, V., and Schoephoerster, R.T. (2006) "Effect of fiber orientation on the stress distribution within a leaflet of a polymer composite heart valve in the closed position." Accepted for publication in J. Biomechanics.
26. Duraiswamy, N., Schoephoerster, R.T., Moreno, M.R., and Moore, J.E. (2007) "Stented Artery Flow Patterns and Their Effects on the Artery Wall." Annu. Rev. Fluid Mech. 39:X—X.

MANUSCRIPTS SUBMITTED FOR PUBLICATION

Duraiswamy, N., Cesar, J., Schoephoerster, R.T. and Moore, J.E. "Spatial Distribution of Platelet Deposition in Stented in vitro Arterial Models under Physiologic Flow." Submitted to JVIR.

Gallocher, S.L., Lee, B., Cesar J.M., Byrne, J.D., Pinchuk, L., and Schoephoerster, R.T. "Hydrodynamic Evaluation of a Novel Polymer Trileaflet Heart Valve." Submitted to Int. J. Artificial Organs.

MANUSCRIPTS IN PREPARATION

Choksi, T.D., Pinchuk, L., and Schoephoerster, R.T. "Modification of a novel polymer with potential use in artificial heart valves: Effects on hemocompatibility." In preparation for submission to J. Biomaterials.

CONFERENCE ABSTRACTS AND PRESENTATIONS

1. Chandran, K.B., Fatemi, R., and Schoephoerster, R. (1986) "Dependence of tissue valve leaflet motion on the viscosity of blood analog fluid." Int. Biomedical Engr. Symp. and Expo., University of Utah, January 1986, p. 52.
2. Chandran, K.B., Schoephoerster, R., and Dellsperger, K.C. (1987) "Flow dynamics of bileaflet mitral valve prostheses." ASCE EMD Specialty Conference, Buffalo, N.Y., May 1987, pp. 133-137.
3. Chandran, K.B., Schoephoerster, R., Fatemi, R., Wurzel, D., Hansen, Yu, L-S, G., and Kolff, W.J. (1988) "In vitro hydrodynamic comparison of synthetic and pericardial heart valves." Proceedings of the 34th Annual ASAIO Meeting, May 1988, pp. 89-93.
4. Chandran, K.B., Schoephoerster, R., Wurzel, D., Hansen, G., Yu, L-S, Pantalos G. and Kolff, W.J. (1988) "Hemodynamic comparison of polyurethane trileaflet and tissue heart valve prostheses." ASME Advances in Bio-engineering, G.R. Miller(editor), pp.7-10.
5. Schoephoerster, R., and Chandran, K.B. (1989) "Effect of systolic flow rate on the prediction of effective valve orifice area." Physics Med. Bio., 33: Supp. I, p. 243. Presented at the World Congress on Medical Physics and Biomedical Engineering, August 6-12, 1988.

6. Schoephoerster, R., Yearwood, T.L., and Chandran K.B. (1989) "An in vitro study on the prediction of stenotic valve orifice area on a bioprosthetic aortic valve." 2nd Int. Symp. on Biofluid Mech. and Biorheology in Large Blood Vessels, Munich, West Germany, June 25-28, 1989, p. 51.
7. Wurzel, P., Chandran, K.B., Schoephoerster, R., Springborn, J., Hansen, G., Yu, L.S., and Kolff, W.J. (1989) "Flow patterns in a vacuum formed Philadelphia style ventricle." 7th World Congress of ISAO, Sapporo, Japan, Oct. 1-4, 1989, pp. 134-137.
8. Schoephoerster, R.T. and Chandran, K.B. (1990) "Velocity and turbulence measurements past mitral valve prostheses in a model left ventricle." The First World Congress of Biomechanics, La Jolla, California, August 30 - September 4, 1990, p. I-153.
9. Schoephoerster, R.T. and Ray, G. (1990) "A two-dimensional finite analytic method to simulate flow patterns to due wall motion abnormality during left ventricular ejection." The 12th Annual International Conference IEEE Engineering in Medicine and Biology, Philadelphia, Pennsylvania, November 1-4, 1990, pp. 533-534.
10. Schoephoerster, R.T. (1990) "Numerical simulation of low and high Reynolds number flow in the left ventricle using the finite analytic method." The Ninth Southern Biomedical Engineering Conference, Miami, Florida, November 17-18, 1990, p. 110.
11. Schoephoerster, R.T. and Chandran, K.B. (1990) "Numerical simulation of blood flow past mitral valve prostheses in a simplified two-dimensional left ventricle." Proceedings of the ASME Winter Annual Meeting, Dallas, Texas, November 25-30, 1990, pp. 131-134.
12. Schoephoerster, R.T. and Chandran, K.B. (1991) "Flow dynamics and turbulence measurements past mitral valve prostheses in a model left ventricle: experimental and numerical results." Proceedings of the 15th Annual Meeting of the American Society of Biomechanics, Tempe, Arizona, October 16-18, 1991, pp. 248-249.
13. Schoephoerster, R.T., Silva, C.L., and Ray, G. (1991) "Assessment of left ventricular flow dynamics using the finite analytic method: potential for clinical applications." Proceedings of the ASCE Eighth Engineering Mechanics Conference, Columbus, Ohio, May, 1991, pp. 278-282.
14. Schoephoerster, R.T., Silva, C.L., and Ray, G. (1991) "Numerical simulation of systolic flow dynamics for normal and abnormal left ventricular wall motion." Proceedings of the Third USA - China - Japan Conference on Biomechanics, Atlanta, Georgia, August 25-29, 1991, pp. 169-170.
15. Schoephoerster, R.T., and Gonzalez, E.A. (1992) "Numerical simulations of diastolic flow patterns in a model left ventricle with varying degrees of mitral stenosis." Proceedings of the ASCE Ninth Engineering Mechanics Conference, College Station, Texas, May 25-27, 1992, pp. 968-971.
16. Schoephoerster, R.T., Oynes, F., Nunez, G., Kapadvanjwala, M., and Dewanjee, M.K. (1992) "Differences in regional platelet deposition due to variations in geometry and resulting flow phenomena." Proceedings of the AAMI/NHLBI Cardiovascular Science and Technology Conference, Bethesda, Maryland, December 12-14, 1992, p. 264.
17. Schoephoerster, R.T., Oynes, F., Nunez, G., Kapadvanjwala, M., and Dewanjee, M.K. (1992) "Influence of flow rate on platelet deposition in an in vitro model stenosis using In-111 labeled platelets." Proceedings of the AAMI/NHLBI Cardiovascular Science and Technology Conference, Bethesda, Maryland, December 12-14, 1992, p. 260.
18. Schoephoerster, R.T., Oynes, F., Nunez, G., Park, D.C., Ramirez, J.A., and Dewanjee, M.K. (1993) "Application of neural computations to the prediction of regional platelet

- deposition and variation due to vessel geometry." Proceedings of the 12th Southern Biomedical Engineering Conference, New Orleans, Louisiana, April 2-4, 1993, pp. 84-86.
19. Souza-Campos, F.B., and Schoephoerster, R.T. (1993) "Efficacy of the Gorlin formula for the assessment of prosthetic valve function." Proceedings of the Annual Fall Meeting of the Biomedical Engineering Society, Memphis, TN, October 21-24, 1993, p. 21.
 20. Gonzalez, E.A., and Schoephoerster, R.T. (1993) "A three dimensional simulation model of systolic flow for evaluation of left ventricular function." Proceedings of the Annual Fall Meeting of the Biomedical Engineering Society, Memphis, TN, October 21-24, 1993, p. 10.
 21. Schoephoerster, R.T., and Gonzalez, E.A. (1993) "Central ejection region (CER) coefficient for the evaluation of left ventricular function." Proceedings of the Winter Annual Meeting of the ASME, New Orleans, Louisiana, November 28 - December 3, 1993, pp. 439-442.
 22. Schoephoerster, R.T., Viscarra, H., Nunez, G., Kapadvanjwala, M., and Dewanjee, M.K. (1994) "Flow-induced Platelet deposition in pulsatile flow as a function of local geometry and resulting dynamics of flow." Proceedings of the Scientific Conference on Atherosclerosis, Thrombosis, and Proliferation, Orlando, FL, February 23-26, 1994, p. 65.
 23. Bluestein D., Viscarra, H., and Schoephoerster, R.T. (1994) "Fluid mechanics of arterial stenosis and aneurysm: Relationship to blood platelet deposition on the wall." Proceedings of the CSCE Engineering Mechanics Symposium, Winnipeg, CA, June 1-4, 1994, pp. 115-120.
 24. Souza-Campos, F. and Schoephoerster, R.T. (1994) "Performance assessment of prosthetic heart valves using the energy index method." Proceedings of the Winter Annual Meeting of the ASME, Chicago, IL, November 6-11, 1994, pp. 299-300.
 25. Bluestein, D., Niu, L., Schoephoerster, R.T., and Dewanjee, M.K. (1995) "Flow in an aneurysm model: Correlation between numerical simulation and blood platelet deposition." Proceedings of the 1995 Bioengineering Conference, Beaver Creek, Colorado, June 28 - July 2, 1995, pp. 519-520.
 26. Gonzalez, E. and Schoephoerster, R.T. (1995) "Three dimensional model of systolic flow dynamics in a spherical ventricle: Potential for function evaluation in man," Proceedings of the 1995 Society of Engineering Science 32nd Annual Technical Meeting, New Orleans, LA, October 29 - November 2, 1995, p. 181.
 27. Schoephoerster, R.T., Niu, L., Ding, T., and Bluestein, D. (1995) "Application of digital particle image velocimetry to the study of pathological flow fields," 1995 Advances in Bioengineering (BED-Vol. 31), 1995 ASME International Mechanical Engineering Congress and Exposition, San Francisco, CA, November 12-17, 1995.
 28. Ding, T. and Schoephoerster, R.T. (1996) "Validation of a three-dimensional numerical model of LV ejection," Proceedings of the 11th ASCE Engineering Mechanics Conference, Fort Lauderdale, FL, May 19-22, 1996.
 29. Niu, L., Bluestein, D. and Schoephoerster, R.T. (1996) "Numerical simulation of steady and pulsatile flow past a St. Jude valve in the aortic position," Proceedings of the 11th ASCE Engineering Mechanics Conference, Fort Lauderdale, FL, May 19-22, 1996.
 30. Bluestein, D., Niu, L., and Schoephoerster, R.T. (1996) "Simulation of turbulent pulsatile flow past a mechanical heart valve," 1996 Advances in Bioengineering (BED-Vol. 32) 1996 ASME International Mechanical Engineering Congress and Exposition, Atlanta, Georgia, November 17-22, 1996.

31. Schoephoerster, R.T., Langlais, M., Niu, L., and Bluestein, D. (1997) "Potential for blood platelet activation and aggregation in arterial stenosis," Proceedings of the Fifth Pan American Congress on Applied Mechanics, San Juan, Puerto Rico, January 2-4, 1997.
32. Ding, T. and Schoephoerster, R.T. (1997) "Evaluation of global left ventricular function based on simulated flow dynamics computed from regional wall motion," Proceedings of the ASME Summer Bioengineering Conference, Sun River, Oregon, June 11-15, 1997.
33. Langlais, M.D., Dewanjee, M.K., and Schoephoerster, R.T. (1997) "Effect of platelet-surface reactivity on platelet deposition in a model of arterial stenosis," Proceedings of the ASME Summer Bioengineering Conference, Sun River, Oregon, June 11-15, 1997.
34. Souza-Campos, F.B. and Schoephoerster, R.T. (1997) "Conservation of cardiovascular input energy with a rhythmically contracting aorta," Proceedings of the 1997 International Mechanical Engineering Congress and Exposition (IMECE), Dallas, Texas, November 16-21, 1997.
35. Schoephoerster, R.T., Langlais, M.D., and Dewanjee, M.K. (1998) "Platelet deposition in an arterial stenosis flow field: Experimental measurements and model development," Proceedings of the Third World Congress of Biomechanics, Sapporo, Hokkaido, Japan, August 2-8, 1998.
36. Engineer, H. and Schoephoerster, R. (2000) "Simulation of Platelet Kinetics and Wall Shear-Dependent Deposition in a Model Arterial Stenosis," Proceedings of the 2000 World Congress on Medical Physics and Biomedical Engineering, Chicago, Illinois, July 23-28, 2000.
37. Schoephoerster, R.T. (2001) "A combined BS/MS degree program in biomedical engineering for industry," Proceedings of the 2001 Annual Fall Meeting of the Biomedical Engineering Society, Durham, North Carolina, October 4-7, 2001.
38. Schoephoerster, R.T., Gallocher, S., Pinchuk, L., and Kasyanov, V.A. (2001) "A novel trileaflet synthetic heart valve," Proceedings of the 2001 ASME IMECE, New York, New York, November, 11-16, 2001.
39. Schoephoerster, R.T., Gallocher, S., Aguirre, A., Pinchuk, L., and Kasyanov, V. (2002) "A Polymer Composite Trileaflet Aortic Heart Valve," Proceedings of the 6th Annual Hilton Head Workshop: Prosthetic Heart Valves, Hilton Head Island, SC, March 6-10, 2002.
40. Liu, Y., Kasyanov, V.A., and Schoephoerster, R.T. (2002) "Numerical Modeling and Optimization of the Stress Development in a Fiber Reinforced Polymer Heart Valve Leaflet Under a Static Load," Proceedings of the 21st Southern Biomedical Engineering Conference, Bethesda, MD, September 28-29, 2002.
41. Aguirre, A.F., Oliva, M., Schoephoerster, R.T., and Kasyanov, V.A. (2003) "Static and Dynamic Mechanical Testing of a Polymer with Potential Use as Heart Valve Material," Proceedings of the 2003 Summer Bioengineering Conference, Key Biscayne, FL, June 25-29.
42. Lee, B., Byrne, J.D., and Schoephoerster, R.T. (2003) "Reconstruction of trileaflet heart valve leaflet motion using photogrammetry and biquintic finite element method," Proceedings of the 2003 Summer Bioengineering Conference, Key Biscayne, FL, June 25-29.
43. Gallocher, V., Pinchuk, L., and Schoephoerster, R.T. (2004) "A comparative study of platelet deposition and platelet activation potential for a novel polymer heart valve," Proceedings of the European Society of Biomechanics, 'S-Hertogenbosch, The Netherlands, July 4-7, 2004.

43. Choksi, T.D., Pinchuk, L., and Schoepfoerster, R.T. (2004) "Surface modification of a novel polymer for use in artificial heart valves: Effects on blood biocompatibility and mechanical properties," Proceedings of the European Society of Biomechanics, 'S-Hertogenbosch, The Netherlands, July 4-7, 2004.
44. Yin , W., Gallocher, S., Pinchuk, L., Schoepfoerster, R.T., Jesty, J., Bluestein, D. (2004) "Comparative Measurements of Flow Induced Platelet Activation in a Trileaflet Polymeric Valve and a St. Jude Medical Bileaflet Mechanical Heart Valve," Proceedings of the 2004 Annual Fall Meeting of the Biomedical Engineering Society, Philadelphia, PA, October 13-16, 2004.
46. Wang, Q., Mathison, M.D., Gallocher, S., Jaramillo, F., Pinchuk, L., and Schoepfoerster, R.T. (2005) "In Vivo Preclinical Evaluation of A Novel Polymeric Valve in Sheep," Proceedings of the 2005 BMES Annual Fall Meeting, Baltimore, MD, September 28 – October 1, 2005.
47. Jaramillo, F., Wang, Q., and Schoepfoerster, R.T. (2005) "The development of a Collapsible Heart Valve with Polymer Leaflets," Proceedings of the 2005 BMES Annual Fall Meeting, Baltimore, MD, September 28 – October 1, 2005.
48. Duraiswamy, N., Jayachandran, B., Byrne, J., Moore, J.E., and Schoepfoerster, R.T. (2005) "Spatial Distribution of Platelet Deposition in Stented Artery Models under Physiologic Flow," Proceedings of the 2005 BMES Annual Fall Meeting, Baltimore, MD, September 28 – October 1, 2005.
49. Gallocher, S.L., Aguirre, A.F., Kasyanov, V., Pinchuk, L., Schoepfoerster, R.T. (2005) "Durability assessment of a novel polymer trileaflet heart valve," Proceedings of the First International Conference Mechanics of Biomaterials and Tissues, Waikola, HI, December 11-15, 2005.
50. Schoepfoerster, R.T., Gallocher, S., Wang, Q., Jaramillo, F., Kato, Y.P., and Pinchuk, L. (2006) "Polymer Valve with Potential for Minimally Invasive and Transcatheter Delivery," Proceedings of the 10th Annual Hilton Head Workshop and 2nd Biennial Heart Valve Meeting: Advances in Innovative Technologies and Tissue Engineering for the Treatment of Heart Valve Disease, Hilton Head Island, South Carolina, March 2-5, 2006.
60. Gallocher, S., Wang, Q., Mathison, M., Kato, Y., Pinchuk, L., Schoepfoerster, R.T. (2006) "Feasibility Analysis Of The Safety And Durability Of A Polymer Trileaflet Heart Valve," Proceedings of the 2006 Summer Bioengineering Conference, Amelia Island Plantation, Amelia Island, Florida, June 21 - 25, 2006.
61. Wang, Q., Gallocher, S.L., Mathison, M., Kato, Y., Pinchuk, L., Schoepfoerster, R.T. (2006) "*In vivo* Pre-Clinical Evaluation Of A Novel Polymeric Aortic Valve," Proceedings of the 2006 BMES Annual Fall Meeting, Chicago, Illinois, October 11-14, 2006.
62. Duraiswamy, N., Schoepfoerster, R.T., and Moore, J.E. (2006) "Blood Flow In Stented Artery Models And Their Relationship To Neointimal Formation," Proceedings of the 2006 BMES Annual Fall Meeting, Chicago, Illinois, October 11-14, 2006.