

CURRICULUM VITAE

A. Personal Information

Name **Sundeep Mangla, M.D.**
Business Address 450 Clarkson Avenue, Box 1189
Brooklyn, New York 11203-2098
Business Phone (718) 270 4141 or 2111
(718) 270 7241 (fax)

B. Education

High School Charles F. Brush HS, Lyndhurst, OH, 1986
University **B.S.**, University of Akron, Akron, OH, 1988
Medical School **M.D.**, Northeast Ohio Universities College of
Medicine, Rootstown, OH, 1992
Internship **Preliminary Medicine**, 7/92-6/93
Saint Thomas Medical Center, Akron, OH
Residency **Diagnostic Radiology**, 7/93-6/97
Northeast Ohio Universities College of
Medicine Diagnostic Radiology Residency-
Canton Affiliated Hospitals, Canton, OH
Fellowships **Diagnostic Neuroradiology**, 7/97-6/98
University of Southern California and
Los Angeles County Medical Center,
Los Angeles, CA

**Fellowship/
Attending Radiologist**

Interventional Neuroradiology, 7/98-2/99
Yale-New Haven Medical Center,
New Haven, CT

Interventional Neuroradiology, 4/99-9/00
University of Iowa Hospital and Clinics
Iowa City, IA

Attending/Faculty

Interventional Neuroradiology, 10/00-8/03
New York Presbyterian Hospital
Columbia University and Cornell University
New York, NY

Interventional Neurodiology, 8/03-current
SUNY Downstate Health Science Center
Brooklyn, NY

Honors and Awards

1986	National Merit Scholar
1986	Ohio Board of Regents Scholar
1986-88	Akron University BS/MD Honors Scholar
1989	American Heart Association Summer Research Fellow
1997	NEOUCOM Radiology Research Conference Award winner
1997	RSNA Radiology Resident Research Award

Licensure/Board Certification

California, 5/2/97 (ID# G083729) exp: 2/28/09
New York, 9/00 (ID# 219126) exp: 1/31/08
DEA, (BM5296416) exp: 1/31/09

National Board of Medical Examiner, 1993

Diplomate of American Board of Radiology, 6/11/97

C. Professional Background

Academic and Clinical Appointments

Director of Interventional Neuroradiology, SUNY Downstate Health Science Center, 08/03-current

Director of Research, Department of Radiology, 1/06-current

Associate Professor of Radiology, Neurosurgery, and Neurology, SUNY Downstate Health Science Center, 06/07-current

Faculty Member, School of Graduate Studies, Dept. of Biomedical Engineering, SUNY Downstate Medical Center, 12/07-current

Adjunct Professor of Radiology, Columbia University, 08/03-current

Visiting Associate Professor of Radiology, Neurosurgery, and Neurology, SUNY Downstate Health Science Center, 08/03-06/07

Assistant Professor of Radiology (in Neurology and Neurosurgery), Columbia University, 01/02-08/03

Assistant Professor of Radiology, Columbia University, 10/00-08/03

Assistant Attending, Interventional Neuroradiology, New York Presbyterian Hospital, 10/00-08/03

Clinical Associate, Diagnostic Radiology, University of Iowa Hospital and Clinics, 4/99-9/00

Attending Physician Diagnostic Neuroradiology, University of Iowa Hospital and Clinics, 4-99-9/00

Fellow of Interventional Neuroradiology, University of Iowa Hospital and Clinics, 4-99-9/00

Clinical Instructor, Diagnostic Radiology, Yale University School of Medicine, 7/98-2/99

Attending Physician Diagnostic Neuroradiology, Yale-New Haven Medical Center, 7/98-2/99

Fellow of Interventional Neuroradiology, Yale-New Haven Medical Center, 7/98-2/99

Clinical Instructor, Diagnostic Radiology, University of Southern California School of Medicine, 7/97-6/98

Specific Teaching Responsibilities

1. Visiting Associate Professor of Radiology, Neurology, and Neurosurgery, SUNY Downstate Health Science Center, with primary clinical, didactic, and administrative supervision of medical students, resident, and fellows rotating on Diagnostic and Interventional Neuroradiology service, 08/03-current
 - i. Course development and teaching
 1. Department of Radiology – Interventional Neuroradiology Curriculum (8-10 core lectures per annum) – 9/03 to current
 2. Department of Neurology – Interventional Neuroradiology Curriculum (8-10 core lectures per annum) – 7/06 to current
 3. Department of Radiology – Academic Research Curriculum Development and Faculty/Resident/Student Matching program
 4. Departments of Radiology, Neurosurgery, and Neurology – Created and co-direct Neurovascular Grand Rounds (monthly, 7/04 to current) (10-12/annum)
-

5. SUNY DMC College of Medicine – Interventional Neuroradiology
Clinical Elective – 7/06 to current
 6. Invited Intra-institutional grand rounds (numerous, 2003-2006)
 - a. Depts of
 - i. Neurology
 - ii. Neurosurgery
 - iii. ENT
 - iv. Ophthalmology
 - v. Radiology
 - vi. Nursing
 1. MICU/SICU
 2. Recovery Room
 3. 7th floor Neurology
 4. Interventional Radiology
 7. Invited local extramural grand rounds (numerous, 2003-2006)
 - a. LICH
 - b. Methodist Medical Center
 - c. Maimonides Medical Center
 - d. Coney Island Hospital
 - e. Kings Highway Hospital
 - f. Interfaith Hospital
- ii. Diagnostic Neuroradiology Fellows Trained:
1. Rajan Agarwal, MBBS (7/1/03 – 6/30/04)
 2. Ashok Madan, MD (7/1/04 – 6/30/05)
 3. Suzette Powell, MD (7/1/05 – 6/30/06)
 4. Mohammade Anwar, MBBS (9/1/06 – current)
2. Interventional Neuroradiology Fellowship Program
- a. Co-Director, Columbia University, 10/00-01/03
 - i. Recruitment of 2002, and 2003 fellows (5 fellows)
 - ii. Preparation for ACGME accreditation
 - iii. Integration and development of the bicampus fellowship program at both NYP campuses (Columbia and Cornell)
 - iv. Preparation of INR curriculum
 - v. Submission for grant support for 2003 (Boston Scientific)
 - vi. Interventional Neuroradiology Fellows Trained:
 1. Ranjit Bagga, MD
 2. Ronald Sattenberg, MD
 3. Christopher Joy, MD
 4. Kevin Jones, MD
 5. Kuo Chao, MD
 6. Ah-Hsi Liu, MD
 7. David Carrington, M.D.
3. Assistant Professor of Interventional Neuroradiology with primary clinical, didactic, and administrative supervision of medical students, residents, and fellows rotating on the interventional neuroradiology service, 10/00-08/03
-

4. Clinical instructor in Diagnostic and Interventional Neuroradiology for radiology fellows and residents, 4/99-current
5. Clinical instructor in Diagnostic and Interventional Neuroradiology for radiology fellows and residents, 7/98-2/99
6. Clinical instructor in Diagnostic Neuroradiology for radiology residents, 7/97-6/98
7. Clinical instructor in Diagnostic Radiology for medical students, 7/95-6/97
8. Teaching assistant in Anatomy and Neuroanatomy for medical students, 9/89-6/90

D. Society Memberships and Committee Service

Society Memberships

1993-Present	American Roentgen Ray Society
1993-Present	Radiologic Society of North America
1993-Present	American College of Radiology
1998-Present	American Society of Neuroradiology (Senior member)
1999-Present	American Society of Interventional and Therapeutic Neuroradiology (Senior Member)
2003-Present	Neurocritical Care Society (Active)
2007-Present	American Stroke Association/AHA

Editorial Reviewer:

CardioVascular and Interventional Radiology, (2005-2006)

Dierk Vorwerk, MD - Editor-in-Chief - Ingolstadt , Germany

Committee Service

Medical Records and Informatics Committee (SUNY DMC, Dept of NS, 12/03-6/05)

Graduate Medical Education Committee (SUNY DMC, Dept of NS, Alternate, 12/03 to current)

Executive Medical Board Committee (SUNY DMC, Dept of NS, Alternate, 12/03 to current)

Clinical Associations Guideline Committee (SUNY DMC, INR Division, NS Dept, Rad Dept., 10/05 to current)

Radiology Resident Interview Committee (SUNY DMC, Dept of Radiology, 11/03 to current)

Medical Student Interviewer Committee (SUNY DMC COM, 1/06 to current)

Department of Radiology Executive Committee (SUNY DMC COM, 7/06 to current)

E. Research Activities

Peer Reviewed Published Research

(*represents first senior faculty authorship supervising fellow, resident, student, or trainee)

1. Choi JH, Bateman BT, **Mangla S***, Marshall RS, Prabhakaran S, Chong J, Mohr JP, Mast H, Pile-Spellman J: Endovascular recanalization therapy in acute ischemic stroke caused by large vessel occlusion: standard of care. *Stroke*. 2006 Feb;37(2):419-24. Epub 2005 Dec 22.
 2. Jin Y, Angelini E, **Mangla S***, Choi IS, Kemker R, Timmer J, Laine A: Multiscale denoising and enhancement of 3D rotational X-ray Imaging for percutaneous vertebroplasty. *25th Annual Meeting Conference of the IEEE EMBS Society*, Cancun, Mexico, 2003. pp. 782-785.
 3. Gupta R, Schumacher CH, **Mangla S***, Meyers PM, Duong H, Khandji AG, Marshall RS, Mohr JP, Pile-Spellman J: Urgent endovascular revascularization for symptomatic intracranial atherosclerotic stenosis. *Neurology* 2003;61(12):1729-35.
 4. Joshi S, Hartl R, Wang M, Feng L, Hoh D, Sciacca RR, **Mangla S**: The acute cerebrovascular effects of intracarotid adenosine in nonhuman primates. *Anesth Analg*. 2003 Jul;97(1):231-7.
 5. Schumacher CH, Tanji K, **Mangla S***, Meyers PM, Pile-Spellman J, AP Hays, JP Mohr: Intracranial Angioplasty of the Middle Cerebral Artery: Morphologic, Histopathologic, and Angiographic Correlation. *Stroke* 2003 Sep;34(9):e170-3. Epub 2003 Aug 07
 6. Bateman BT, Meyers PM, Schumacher HC, **Mangla S**, Pile-Spellman J: Conducting Stroke Research With an Exception From the Requirement for Informed Consent. *Stroke* 2003;34(5):1317-23. Epub 2003 Mar 27.
 7. Lesley WS, Chaloupka JC, Weigele JB, **Mangla S**, Dogar MA: Preliminary Experience with Endovascular Reconstruction for the Management of Carotid Blowout Syndrome. *AJNR Am J Neuroradiol*. 2003 May;24(5):975-81.
 8. Feng L, **Mangla S***, Haskal Z, Pile-Spellman J: Rheolytic Thrombectomy of Acute Stent Thrombosis of Cervical Vertebral Artery. *Interventional Neuroradiology* 2002; 8:305-312.
 9. Joshi S, **Mangla S**, Hartl R, Wang M, Feng L, Pile-Spellman J: Intraarterial 133Xe Measurements Suggest a Dose-dependent Increase in Cerebral Blood Flow After Intracarotid Adenosine in Nonhuman Primates. *Journal of Neurosurgical Anesthesiology* 2002; 14(2):108-13.
 10. Joshi S, Duong H., **Mangla S**, Wang M, Libow AD, Popilskis SJ, Weng TS, Pile-Spellman J., Young WL: In Nonhuman Primates Intracarotid Adenosine, but not Sodium
-

- Nitroprusside, Increases Cerebral Blood Flow. *Anesthesia & Analgesia* 2002; 94(2):393-396.
11. Weigele JB, Chaloupka JC, Lesley WS, **Mangla S**, Hitchon PW, VanGilder JC, Adams HP: Peripherical Aneurysm of the Lateral Posterior Choroidal Artery: Clinical Presentation and Endovascular Treatment: Report of Two Cases. *Neurosurgery* 2002; 50(2):392-396.
 12. **Mangla S**, Chaloupka JC, Huddle DC: Early Clinical Experience with a Dedicated Portable Computed Tomography Scanner Used in the Biplane Neuroangiography Suite: Assessment of Feasibility and Utility. *Interventional Neuroradiology* 2000; 6:211-220.
 13. Chaloupka JC, **Mangla S**, Huddle DC, Mitra S, Patel T, Sasaki CT: Evolving Experience with Direct Puncture Therapeutic Embolization for Adjunctive and Palliative Management of Head and Neck Hypervascular Neoplasms. 1999. *Laryngoscope* 1999; 109:1864-1872.
 14. Chaloupka JC, **Mangla S**, Huddle DC: Use of Mechanical Thrombolysis Via Microballoon Percutaneous Transluminal Angioplasty for the Treatment of Acute Dural Sinus Thrombosis: Case Presentation and Technical Report. *Neurosurgery* 1999; 45(3): 650-657.
 15. **Mangla S**, Teitelbaum GP: Multichannel Fenestration of the Internal Carotid Artery. *American Journal of Neuroradiology* 1999; 20: 590-592.

Book Chapters and Review Publications:

1. Schumacher CH, Dumoulin CL, Feng L, **Mangla S**, Meyers PM, Hirsch J, Mohr JP, DeLaPaz RL, Pile-Spellman J: Real-time magnetic resonance imaging for interventional neuroradiological procedures. *Surg Technol Int*. 2003;XI:183-196
 2. Chaloupka JC, Weigele JB, **Mangla S**, Lesley W: Cerebrovascular Angioplasty and Stenting for the Prevention of Stroke. *Current Neurology and Neuroscience Reports* 2001; 1(1):39-53.
 3. Joshi S, Young WM, **Mangla S**: Anesthetic Management of Diagnostic and Therapeutic Interventional Neuroradiologic Procedures. *Handbook of Neuroanesthesia* (Lippincott Williams & Wilkins, New York, 2006 edition)
 4. Simaga M, Nguyen T, **Mangla S**: Ischemic Stroke (book chapter). *Management of Complex Cardiovascular Problems: The Consultant's Approach*. (3rd edition, Blackwell, Oxford, UK; 2006 edition)
 5. **Mangla S**: Evolution of Aneurysm Therapy – The Neurointerventionalist's Perspective. *ASA Refresher Courses in Anesthesiology*. (Editor, Alan Jay Schwartz, 2006 edition)
 6. Nguyen T, Simaga M, **Mangla S**, Stroke (book chapter). *Management of Complex Cardiovascular Problems: The Evidence Based Approach*. New York, NY, Blackwell Publishing, 2007.
-

7. **Mangla S.** Endovascular Intracranial Neurointervention (book chapter). *Practical Handbook of Advanced Interventional Cardiology*. New York, NY, Blackwell Publishing 2007

Other Research Activity

Recent/Current Projects and Areas of Interest (1998-2005): Principle or Co-Investigator

1. In vitro modeling studies for the technical development and feasibility assessment of endosaccular occlusion of intracranial aneurysms using a nonadhesive liquid co-polymer (ethylene vinyl alcohol), and microballoon assisted (“neck plastic”) techniques. (Onyx) (1998-2000)
2. In vivo preclinical studies to assess feasibility and efficacy of endosaccular obliteration of aneurysms using a nonadhesive liquid co-polymer (ethylene vinyl alcohol), and microballoon assisted techniques in a swine model (Onyx). (1998-2000)
3. Development of a fluid mechanics laboratory for studying hemodynamic pathophysiology of intracranial aneurysms. (1998-2000)
4. In vivo preclinical studies to assess the dose response of intracarotid vasodilators and effects on cerebral blood flow in nonhuman primates.(2000-2003)
5. In vivo clinical studies to evaluate CBF following intraarterial administration of vasoactive agents, thrombolytic agents, and mechanical revascularization (stenting and angioplasty) (1998-2003)
6. In vivo preclinical studies to assess feasibility and efficacy of endosaccular obliteration of aneurysms and AVM’s using a nonadhesive liquid co-polymer in a swine model (Biocure). (2000-2002)
7. Development of Real-Time Navigation of Endovascular Devices within a Three-Dimensional Volumetric Data Set Utilizing an Artificial Intelligence Enhanced Surgical Robotic Prototype (2002-current) (PI)
8. Population Based MRA Study for the detection of incidental Unruptured Aneurysms in a screening asymptomatic population. (2003-current)(Co-PI)
9. Definitive Embolization of Intracranial Meningiomas (2005-current, IRB in preparation)(Co-PI)
10. Development of a Nano-fiber activated semi-robotic device for thrombus retrieval in stroke therapy (2005-current)(Co-PI)
11. Development and Evaluation of a novel catheter system for neuroprotection (2006-current).(Co-PI)
12. Development of a Nano-sensor to evaluate inflammatory markers in acute stroke (2005-current)(Co-PI)

Active and Current IRB Protocols (SUNY DMC):

1. **Title: The Neuroform Microdelivery Stent System, a Humanitarian Use Device**
(Boston Scientific, H020002)
Study number: SUNY DMC/UHB 06-038 (approved 4/18/06)
 2. **Title: The Wingspan™ Stent System and Gateway™ PTA Balloon Catheter: a Humanitarian Use Device** (Boston Scientific, H050001)
Study number: SUNY DMC/UHB 06-071 (approved 5/12/06)
-

Patents:

- 1. Title:** System for Autonomous Robotic Navigation
Inventors: Sundeep Mangla, John Pile-Spellman (equal)
Status: patent pending, submitted 2005
- 2. Title:** Nano-fiber activated semi-robotic device for thrombus retrieval
Inventors: Sundeep Mangla, Yong Shi, Ming Zhang (equal)
Status: patent filing in preparation 2006

Grants and Contracts (Awarded and Submitted)

- 1. Novel Catheter System for Neuroprotection (pending review)**
PI: John Pile-Spellman(Columbia Univ.)
Co-PI: Sundeep Mangla
Grant submitted (3/30/07): NIH-NINDS STTR, 100K, 12/01/07-11/30/08
 - 2. Novel Nano-fiber Activated Device for Thrombus Retrieval in Stroke Therapy (pending review)**
PI: Yong Shi
Co-PI's: Sundeep Mangla, Ming Zhang
Grant Submitted (2/07): NIH- *PAR-06-189* (\$395,647– 2 years)
 - 3. Real-Time Navigation of Endovascular Devices within a Three Dimensional Volumetric Data Set Utilizing an Artificial Intelligence Enhanced Surgical Robotic Prototype (completed)**
PI: Sundeep Mangla
Grant: NewYork-Presbyterian Hospital Enterprises Innovator Grant (10,000-12/30/02-12/30/03)
 - 4. MR Fluoroscopic based Neurointerventional Therapy.** Introduction, development, and application of MRI guided interventional endovascular therapy in the management of neurovascular disease. *(completed)*
PI: John Pile-Spellman
Role: Sundeep Mangla (Co-investigator)
Contract: GENELE CU51865701 - General Electric (2.5 million, 12/20/02-06/30/05)
 - 5. “Philips Medical Research and Columbia University Joint Development Agreement in Medical Imaging”;** To jointly develop new methods in the areas of denoising, enhancement, and quantification of quantifying of 3D and 4D medical images. *(completed)*
-

PI: Andrew Laine
Role: Sundeep Mangla (Co-investigator)
Contract: Philips Medical Research, USA. (07/1/01-7/1/03)

Multi-Center and Clinical Trials

1. **ARUBA Trial** - A Randomized Multicenter Clinical Trial of Unruptured Brain AVMs (*Active*)
Overall PI: J.P. Mohr
Site PI: S. Mangla
Grant Support: NINDS 1R01-NS51483/1UO1NS51566
Time Period: 07/01/06-07/01/09

 2. Prospective clinical trial to evaluate carotid stenting with CEA (**CREST Trial**) (*completed role at Columbia 2003*)
PI: J.P. Mohr
Role: S. Mangla, Co-investigator and Bi-campus physican coordinator (Columbia and Cornell Universities)
Grant support: NIH (NINDS) RO1 NS38384
Time Period: 7/01 to 07/03

 3. Prospective, non-randomized evaluation of the **Concentric clot retriever system** for the treatment of neurovascular thrombotic occlusions. (*Concentric Medical*)(*completed*)
PI: John Pile-Spellman
Role: S. Mangla, Co-investigator
Industry Grant support: CONCENT US-TR-001
Time Period: 02/05/02-12/31/03

 4. **Principal Investigator** for a prospective trial to evaluate the safety of a novel neck bridging coil (*Trispan-Boston Scientific*) in the treatment of wide-necked aneurysms. (*completed*)
PI: Sundeep Mangla
Grant support: 16-30,000 based on patient recruitment (study cancelled by Boston Scientific, 2002)

 5. Phase II Clinical Multicenter prospective randomized clinical trial to evaluate the safety and efficacy of a new liquid embolic agent in the treatment of cerebral arteriovenous malformations. (*Provasis Incorporated*)(*completed*)
PI: John Pile-Spellman
Role: S. Mangla, Co-investigator
Industry Grant Support: PROVASIS NEURA-M-01
Time Period: 12/06/02-03/31/06
-

National and International Invited Presentations (selected):

1. **Embolization of Intracranial Aneurysms using Experimental Liquid Embolic Agents – Benchtop Investigations.** Loyola University, Chicago, IL, 2000
2. **Endovascular Management of Acute Ischemic Stroke.** Emergency Radiology IICME Course, New York, NY, 2003
3. **Hemorrhagic Stroke – Imaging and Therapy.** Emergency Radiology IICME Course, New York, NY, 2003
4. **Hemorrhagic Stroke – Imaging and Therapy.** Emergency Radiology IICME Course, New York, NY, 2004
5. **Evolving Endovascular Techniques for Intracranial Aneurysm Therapy.** Vietnamese American Medical Association (VAMA) International Conference, Sydney, Australia, 2004
6. **Acute Ischemic Stroke – Interventional Therapy.** Vietnamese American Medical Association (VAMA) International Conference, Washington D.C., Sept. 2005
7. **Cerebral Aneurysm Management: Is My Practice Going to Be in the Operating Room , or the Neuroradiology Suite? Evolution of Aneurysm Therapy - The Neurointerventionalist's Perspective.** American Society of Anesthesia(ASA) Annual Meeting, Atlanta, Ga, Oct. 2005
8. **Cerebral Aneurysm Therapy – An Evidenced Based Approach.** Emergency Radiology IICME Course, New York, NY, Nov 2005
9. **Cerebral Aneurysm Therapy – An Evidenced Based Approach.** Emergency Radiology IICME Course, New York, NY, Nov 2006
10. **Hemorrhagic and Ischemic Stroke.** New York State Society of Anesthesia Meeting– Brooklyn, New York, Nov 2007

National and International Presentations***(Peer-reviewed published abstracts, oral, and poster presentations)***

1. Roth TC, Putman CM, **Mangla S**, Katz L, Chaloupka JC. Superselective Transarterial Embolization in the Management of Hypervascular Tumors of the Cranio-spinal Skeleton: An Application of Interventional Neuroradiologic Techniques. Annual Meeting of the Eastern Neuroradiologic Society. October, 1996.
 2. Putman CM, **Mangla S**, Roth TC, Katz L, Chaloupka JC. Aggressive Transarterial Embolization of Hypervascular Tumors of the Skull and Spine: A Specialized Application of Endovascular Therapeutic Techniques. 34th Annual Meeting of the American Society of Neuroradiology. June, 1996.
 3. **Mangla S**, Teitelbaum G. Multichannel Fenestration of the Internal Carotid Artery. Annual Meeting of the Western Neuroradiologic Society. September, 1997.
 4. **Mangla S**, Chaloupka JC, Huddle DC, Mitra S, Ross DA, Sasaki CT. Evolving experience with direct puncture therapeutic embolization for adjunctive and palliative management of head and neck hypervascular neoplasms. 1999 Eastern Sectional Triological Society Meeting. January, 1999
-

5. **Mangla S**, Chaloupka JC, Huddle DC. Early Clinical Experience with a Dedicated Portable Computed Tomography Scanner Used in the Biplane Neuroangiography Suite: Assessment of Feasibility and Utility. 1999 Joint Meeting of the American Society of Interventional and Therapeutic Neuroradiology (ASITN) and Joint Section on Cerebrovascular Surgery. February, 1999.
 6. Chaloupka JC, Mitra S, Huddle DC, Bemporad JA, **Mangla S**, Sasaki CT. Outcomes Analysis of Aggressive Multidisciplinary Management of the Carotid Blowout Syndrome in 47 Consecutive Patients. 1999 Joint Meeting of the American Society of Interventional and Therapeutic Neuroradiology (ASITN) and Joint Section on Cerebrovascular Surgery. February, 1999.
 7. Chaloupka JC, Huddle DC, **Mangla S**, Alderman JL. Evaluation of Technical Feasibility of Coronary PTA Microballoon and Stent Devices for Intracranial Cerebrovascular Applications Using a Canine Model. 1999 Joint Meeting of the American Society of Interventional and Therapeutic Neuroradiology (ASITN) and Joint Section on Cerebrovascular Surgery. February, 1999.
 8. **Mangla S**, Huddle DC, Bemporad JA, Chaloupka JC. Endovascular Treatment of Very Small Aneurysms; A Case Series Review of Technical Feasibility, Safety and Short Term Outcome. 1999 Joint Meeting of the American Society of Interventional and Therapeutic Neuroradiology (ASITN) and Joint Section on Cerebrovascular Surgery. February, 1999.
 9. Chaloupka JC, Huddle DC, **Mangla S**, Alderman JL. Technical performance evaluations of coronary PTA microballoon and stent devices for intracranial cerebrovascular applications using a canine model. 37th Annual Meeting of the American Society of Neuroradiology. May, 1999.
 10. Chaloupka JC, Mitra S, Huddle DC, Bemporad JA, **Mangla S**, Sasaki CT. Outcomes analysis of aggressive multidisciplinary management of the carotid blowout syndrome in 47 consecutive patients. 37th Annual Meeting of the American Society of Neuroradiology. May, 1999.
 11. Chaloupka JC, Huddle DC, **Mangla S**, Bemporad JA. Endovascular surgery of very small aneurysms; Technical feasibility, safety and short term outcomes. 37th Annual Meeting of the American Society of Neuroradiology. May, 1999.
 12. **Mangla S**, Chaloupka JC, Huddle DC, Mitra S, Ross DA, Sasaki CT. Direct puncture therapeutic embolization for adjunctive and palliative management of hypervascular neoplasms of the craniospinal axis. 37th Annual Meeting of the American Society of Neuroradiology. May, 1999.
 13. **Mangla S**, Huddle DC, Chaloupka JC. Early assessment of the feasibility and utility of a dedicated portable computed tomography scanner in the biplane neurointerventional suite. 37th Annual Meeting of the American Society of Neuroradiology. May, 1999.
 14. **Mangla S**, Chaloupka JC, Huddle DC. Mechanical thrombolysis with coronary microballoon percutaneous transluminal angioplasty as an alternative strategy for endovascular management of acute dural sinus thrombosis. 37th Annual Meeting of the American Society of Neuroradiology. May, 1999.
-

15. **Mangla S**, Chaloupka JC. Evolving Techniques for Endovascular Therapeutic Management of Acute Dural Sinus Thrombosis. Radiological Society of North America, 85th Scientific Assembly and Annual Meeting. November, 1999.
 16. Chaloupka JC, **Mangla S**, Huddle DC, Mitra S, Ross BA, Sasaki C. Direct Puncture Therapeutic Embolization for Preoperative and Palliative Management of Hypervascular Head and Neck Neoplasms: Evolving Clinical Experience. Radiological Society of North America, 85th Scientific Assembly and Annual Meeting. November, 1999.
 17. Chaloupka JC, **Mangla S**, Huddle DC, Alderman JL. Use of the Rabbit Hypervascular Tumor Model to Assess Optimal Technical Parameters of Direct Puncture Acrylic Embolization of Neoplasms. Radiological Society of North America, 85th Scientific Assembly and Annual Meeting. November, 1999.
 18. Ueda T, Yuh WT, Maley JE, Hahn PY, Quets JP, Chaloupka JC, **Mangla S**. Viability of Acute Ischemic Lesions Evaluated by Perfusion MR Imaging. Radiological Society of North America, 85th Scientific Assembly and Annual Meeting. November, 1999.
 19. Chaloupka JC, **Mangla S**, Peters S. Evolving Clinical Experience with Coronary Micro-Balloon and Stent Devices for Endovascular Surgical Approaches to Cerebrovascular Disease. 2000 Joint Meeting of the AANS/CNS Section on Cerebrovascular Surgery and American Society of Interventional and Therapeutic Neuroradiology (ASITN). February, 2000.
 20. Chaloupka JC, **Mangla S**, Peters S, Fleener C. Endovascular Surgery of Intracranial Aneurysms and Occlusive Disease Using Coronary Stent Technology: The Preliminary UIHC Experience. 2000 Joint Meeting of the AANS/CNS Section on Cerebrovascular Surgery and American Society of Interventional and Therapeutic Neuroradiology (ASITN). February, 2000.
 21. **Mangla S**, Chaloupka JC, Peters S. Choroidal Type Vein of Galen Malformation with Direct Fistula of the Bilateral Distal Midline Middle Cerebral Artery Branches. 38th Annual Meeting of the American Society of Neuroradiology. April, 2000.
 22. **Mangla S**, Chaloupka JC, Maley J, Leusner C. Angiographic Assessment of the Common Femoral Arteries Following Percutaneous Surgical Closure Using the Techstar XL Device. 38th Annual Meeting of the American Society of Neuroradiology. April, 2000.
 23. Yuh WT, Taoka T, Chaloupka JC, Ueda T, **Mangla S**. Do Abnormal CT/MR Imaging and Prolong Ischemia Contraindicate Endovascular Recanalization? 38th Annual Meeting of the American Society of Neuroradiology. April, 2000.
 24. Chaloupka JC, **Mangla S**, Peters S, Fleener C. Endovascular Surgery of Intracranial Aneurysms and Occlusive Disease Using Coronary Stent Technology: The Preliminary UIHC Experience. 38th Annual Meeting of the American Society of Neuroradiology. April, 2000.
 25. **Mangla S**, Chaloupka JC, Peters S. Moyamoya Disease of the Distal MCAs and ACAs in the Absence of Classic Supraclinoid Internal Carotid or Posterior Circulation Involvement. 38th Annual Meeting of the American Society of Neuroradiology. April, 2000.
-

26. Chaloupka JC, **Mangla S**, Peters S, Fleener C. Evolving Clinical Experience with Coronary Microballoon and Stent Devices for Endovascular surgical Approaches to Cerebrovascular Disease. 38th Annual Meeting of the American Society of Neuroradiology. April, 2000.
 27. Joshi S, **Mangla S**, Hartl R, Wang M, Feng L, Pile-Spellman J. Intraarterial 133Xe Measurements Suggest a Dose-dependent Increase in Cerebral Blood Flow After Intracarotid Adenosine in Nonhuman Primates. American Society of Anesthesia 2001.
 28. **Mangla S**, Chaloupka JC, Vander Zwaag K, Ueda T, Lesley WS, Weigele JW, Yuh WTC. Endovascular Surgical Revascularization of the Brain after 6 Hours of Ischemia: Preliminary Technical and Clinical Outcomes. Joint Meeting of the AANS/CNS Section on Cerebrovascular Surgery and the American Society of Interventional and Therapeutic Neuroradiology. February, 2001.
 29. Lesley WS, Chaloupka JC, **Mangla S**, Weigele JW. Preliminary Experience with Endovascular Reconstructive Techniques for the Management of Carotid Blowout Syndrome(CBS): A Possible Change in Treatment Paradigm? Joint Meeting of the AANS/CNS Section on Cerebrovascular Surgery and the American Society of Interventional and Therapeutic Neuroradiology. February, 2001.
 30. Yuh WT, Chaloupka JC, Taoka T, Ueda T, **Mangla S**. Collateral Circulation Enhanced Protocol for the Treatment of Acute Stroke. Joint Meeting of the AANS/CNS Section on Cerebrovascular Surgery and the American Society of Interventional and Therapeutic Neuroradiology. February, 2001.
 31. Chaloupka JC, **Mangla S**, Ueda T, Taoka T, Lesley WS, Weigele J, Yuh WTC. Rapid Cerebral Revascularization in Acute Thromboembolic Stroke Using Primarily Percutaneous Transluminal Angioplasty (PTA): Initial Clinical Experience. Joint Meeting of the AANS/CNS Section on Cerebrovascular Surgery and the American Society of Interventional and Therapeutic Neuroradiology. February, 2001.
 32. Chaloupka JC, Vander Zwaag K, **Mangla S**, Weigele JB, Lesley WS. Incidence of Aneurysms Under 10 mm that have ruptured in a University Referral Population; Practical and Theoretical Implications. Joint Meeting of the AANS/CNS Section on Cerebrovascular Surgery and the American Society of Interventional and Therapeutic Neuroradiology. February, 2001.
 33. Lesley WS, Chaloupka JC, Weigele JB, **Mangla S**. Incidence and Significance of Cardiovascular Complications of Carotid PTA and Stenting: A Need for Reevaluation? American Society of Neuroradiology (ASNR), April 2001.
 34. Weigele JB, Chaloupka JC, Lesley W, **Mangla S**. Endovascular Management of a Middle Cerebral Artery Atheroembolus. American Society of Neuroradiology (ASNR), April 2001.
 35. Weigele JB, Chaloupka JC, Vander Zwaag K, **Mangla S**, Lesley W. Incidence of Aneurysms under 10 mm that Have Ruptured in a University Referral Population; Practical and Theoretical Implications. American Society of Neuroradiology (ASNR), April 2001.
-

36. Weigele JB, Chaloupka JC, **Mangla S**, Lesley WS. Reversible Brainstem Edema following Successful Endovascular Treatment of a Posterior Fossa Dural Arteriovenous Fistula. American Society of Neuroradiology (ASNR), April 2001.
 37. Weigele JB, Chaloupka JC, Lesley WS, **Mangla S**. Lateral Posterior Choroidal Artery Aneurysms: Clinical Presentation and Endovascular Management. American Society of Neuroradiology (ASNR), April 2001.
 38. **Mangla S**, Qalbani, Chaloupka JC. Transient Disruption of Cerebral Autoregulation following Intrarterial Papeverine Infusion in the Setting of Prolonged Cerebral Ischemia. American Society of Neuroradiology (ASNR), April 2001.
 39. **Mangla S**, Vander Zwaag K, Chaloupka JC, Hitchon P. Delayed Subarachnoid Hemorrhage 25 Years after Angiographically Confirmed Successful Microsurgical Clipping of a Posterior Communicating Artery Aneurysm. American Society of Neuroradiology (ASNR), April 2001.
 40. Sattenberg R, **Mangla S**, Khandji A, Pile-Spellman J. Vertebroplasty for Osteoporotic Compression Fractures to Stabilize the Body's Center of Gravity and Minimize the Risk of Falls. American Society of Neuroradiology (ASNR), April 2001.
 41. Bagga RS, Fitzsimmons B, Pile-Spellman J, Feng L, **Mangla S**, Sattenberg R, Marshall R, Lazar R. The Dissociative Effects of Lidocaine and Sodium Amytal in Superselective WADA Testing Prior to AVM Embolization. American Society of Neuroradiology (ASNR), April 2001.
 42. Chaloupka JC, Weigele JB, **Mangla S**, Ueda T, Lesley WS, Yuh WTC. Primary Percutaneous Transluminal Angioplasty for Rapid Mechanical Thrombolysis in Acute Thromboembolic Stroke: Technical and Short Term Clinical Results. American Society of Neuroradiology (ASNR), April 2001.
 43. Chaloupka JC, **Mangla S**, Vander Zwaag K, Weigele JB, Lesley WS, Ueda T, Yuh WTC. Acute Stroke Endovascular Intervention after Six Hours of Ischemia: The UIHC Experience. American Society of Neuroradiology (ASNR), April 2001.
 44. Chaloupka JC, Lesley WS, Weigele JB, **Mangla S**. Reconstructive Endovascular Surgery for the Management of the Carotid Blowout Syndrome: Technical Successes, Failures, and Pitfalls. American Society of Neuroradiology (ASNR), April 2001.
 45. Sattenberg R, **Mangla S**, Khandji A, Bagga R, Feng L, Pile-Spellman J. Technical Note: The Down the Barrel Way to Percutaneous Vertebroplasty. American Society of Neuroradiology (ASNR), April 2001.
 46. Feng L, **Mangla S**, Young WL, Joshi S, Berman M, Sattenberg R, Bagga R, Mohr JP, Pile-Spellman J. Evolving Emergency Management of Intraprocedural Hemorrhage during Neuroendovascular Procedure Utilizing Protamine, Profound Therapeutic Hypotension, Hypercapnia, and Ventriculostomy Clamping: Efficacy and Short-Term Outcomes. American Society of Neuroradiology (ASNR), April 2001.
 47. Sattenberg RJ, **Mangla S**, Bagga R, Ryan D, Lawson R, Silverberg L, Pile-Spellman J. A Non-Invasive, and Readily Applicable Approach for Bladder and Rectal Sphincter Tone Evaluation During Spinal Interventional Procedures; The Bladder/Rectal Manometer. Joint Meeting of the AANS/CNS Section on Cerebrovascular Surgery and
-

the American Society of Interventional and Therapeutic Neuroradiology. February 2002.

48. Mocco J, Worku B, Lozier A, Kim GH, Reavey P, Coon A, **Mangla S**, Pile-Spellman J, Connolly ES. Nonionic Contrast Media Induces Chromosomal Damage. Joint Meeting of the AANS/CNS Section on Cerebrovascular Surgery and the American Society of Interventional and Therapeutic Neuroradiology. February 2002
 49. Feng L, **Mangla S**, Sattenberg R, Haskal Z, Pile-Spellman J. Rheolytic Thrombectomy of Acutely Thrombosed Vertebral Artery Stent with 4 French Angiojet Catheter. Joint Meeting of the AANS/CNS Section on Cerebrovascular Surgery and the American Society of Interventional and Therapeutic Neuroradiology. February 2002
 50. Lesley WS, Kraske S, Truhlar S, **Mangla S**, Chaloupka JC, Weigele JB, Nerad JA. Access of the Superior Ophthalmic Vein for Carotid-Cavernous Fistulae Embolization Using a Co-Axial Umbilical Vessel Catheter. Joint Meeting of the AANS/CNS Section on Cerebrovascular Surgery and the American Society of Interventional and Therapeutic Neuroradiology. February 2002
 51. Srinivasan A, Lee J, and **Mangla S***. Diffuse Idiopathic Skeletal Hyperostosis/Senile Ankylosing Hyperostosis. Presented as poster and abstract published at Annual Meeting of the Radiology Society of North America 2006, Chicago, IL. December 2006.
-

F. References

John Pile-Spellman, M.D.
Director of Interventional Neuroradiology
Columbia University
8-South Knuckle, MHB
177 Fort Washington Avenue
New York, NY 10032
(212)305-6515
(212)305-5476

John C. Chaloupka, M.D.
Director of Interventional Neuroradiology
38911 JPP
University of Iowa Hospital and Clinics
200 Hawkins Drive
Iowa City, IA 52242
(319)356-4329
(319)356-2220 (fax)

Stephen Onesti, MD
Professor and Chairman of Neurosurgery
SUNY Downstate Medical Center
450 Clarkson Ave
Brooklyn, NY 11203-2098
(718)270-2111
(718)270-3922 (fax)

Salvatore J.A. Sclafani, M.D.
Professor and Chairman of Radiology
Professor of Surgery and Emergency Medicine
SUNY Downstate College of Medicine
451 Clarkson Avenue
Brooklyn, New York 11203
Office: 718 245 4447
Fax: 718 773 6445

Chi Shing Zee, M.D.
Director of Neuroradiology
USC School of Medicine
3740A, 1200 North State St.
Los Angeles, CA 90033
(323) 442-8572
