BIOGRAPHICAL SKETCH

NAME	POSITION TITLE
Dominik Fleischmann M.D.	Professor of Radiology

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
University of Vienna, AUSTRIA	M.D.	1982-1989	Medicine
General Hospital of Allentsteig, AUSTRIA		1990-1991	Internship
University of Vienna, AUSTRIA		1991-1997	Radiology Residency
Stanford University Medical Center, Stanford, CA		1998-1999	Research Fellowship

A. Personal Statement

My clinical and research interest include imaging technology in general – notably Computed Tomography and MRI – technique optimization and application for noninvasive cardiovascular imaging, and image-based diagnosis and treatment planning for cardiovascular diseases specifically. I have used a bedside-to-bench approach when developing visualization tools for vascular imaging aiming at solving practical problems we were fortunate enough to have, due to the tremendous advances in imaging technology, and new treatment options that have evolved in the last two decades. At the same time I have been using new technologies to visualize previously 'invisible' processes – such as complex aortic diseases – in a clinical setting for diagnosis and treatment planning.

B. Positions and Honors

Positions/Employment:

2000	Staff Physician (Radiology), University of Vienna, AUSTRIA
2000-2002	Associate Professor of Radiology, University of Vienna, AUSTRIA
2002	Vice Section Head, Interventional Radiology, University of Vienna, AUSTRIA
2003-2006	Assistant Professor of Radiology
2006-date	Associate Professor of Radiology, Stanford University School of Medicine, Stanford, CA
2008-date	Director of Computed Tomography, Stanford Hospital and Clinics
2011-date	Professor of Radiology, Stanford University School of Medicine, Stanford, CA
2011	Chief of Cardiovascular Imaging, Department of Radiology, Stanford University

Other Experience and Professional Memberships

1991-	Member, European Congress of Radiology
1993-	Member, American Roentgen Ray Society
1993-	Member, Radiological Society of North America
1994-	Member, European Society of Thoracic Imaging
1998-	Named to Editorial Board, *European Radiology*
2006-	Fellow, Society of Computed Body Tomography and MR
2007-	Member, American Heart Association
2007-	Named associate editor, *Radiology*
2011-	Member, NASCI

Honors and Awards:

1993	Joseph T. Ferrucci Award, International Society of Biliary Radiology
1995	Gerot Award, Austrian Roentgen Society
1998	Schroedinger Stipend, Austrian Science Foundation
1999	Schroedinger Stipend, Austrian Science Foundation
1999	Cum Laude Award, Society of Computed Body Tomography
1999	Research Trainee Award, Radiological Society of North America
1999	First Poster Award, Austrian Roentgen Society
2002	Best Case Study Award, IEEE Computer Society
2004	Junior Faculty of the Year Teaching Award, Stanford Radiology

2004 Editor's recognition award, 'Radiology' for Reviewing
2005 Best Medical Application (3rd rank), Eur. Soc. of Computergraphics
2005 Editor's recognition award, '*Radiology*' for Reviewing
2006 Editor's recognition award, '*Radiology*' for Reviewing
2006 Hounsfield Award, Society for Computed Body Tomography and MR
2007 Moncada In-Training Award (David Tran), SCBT/MR
2008 Certificate of Merit: Educational Poster:(P Sedati) RSNA 2008
2011 Wyle J. Dodds Research Award, The Society of Gastrointestinal Radiologists (A. Kamaya)
2011 Senior Faculty of the Year Teaching Award, Stanford Radiology

C. Selected Peer-reviewed publications (selected from total 84 published)

1. Fleischmann D, Hittmair K. Mathematical analysis of arterial enhancement and optimization of bolus geometry for CT angiography using the discrete fourier transform. *J Comput Assist Tomogr* 1999;23:474-84.
2. Rubin GD, Shiau MC, Schmidt AJ, Fleischmann D, Logan L, Leung AN, Jeffrey RB, Napel S. Computed tomographic angiography: historical perspective and new state- of-the-art using multi detector-row helical computed tomography *J Comput Assist Tomogr* 1999;23 Suppl 1:S83-90.
3. Fleischmann D, Rubin GD, Bankier AA, Hittmair K. Improved uniformity of aortic enhancement with customized contrast medium injection protocols at CT angiography. *Radiology* 2000;214:363-71.
4. Fleischmann D, Rubin GD, Paik DS, Yen SY, Hilfiker PR, Beaulieu CF, Napel S. Stair-step artifacts with single versus multiple detector-row helical CT. *Radiology* 2000;216:185-96.
5. Hilfiker PR, Herfkens RJ, Heiss SG, Alley MT, Fleischmann D, Pelc NJ. Partial fat-saturated contrast-enhanced three-dimensional MR angiography compared with non-fat-saturated and conventional fat- saturated MR angiography. Radiology 2000;216:298-303.
6. Fleischmann D, Hastie TJ, Dannegger FC, Paik DS, Tillich M, Zarins CK, Rubin GD. Quantitative determination of age-related geometric changes in the normal abdominal aorta. *J Vasc Surg* 2001;33:97-105.
7. Tillich M, Bell RE, Paik DS, Fleischmann D, Sofilos MC, Logan LJ, et al. Iliac arterial injuries after endovascular repair of abdominal aortic aneurysms: correlation with iliac curvature and diameter. Radiology 2001;219:129-36.
8. Bonderman D, Fleischmann D, Prokop M, Klepetko W, Lang IM. Images in cardiovascular medicine. Left main coronary artery compression by the pulmonary trunk in pulmonary hypertension. Circulation 2002;105:265.
9. Kanitsar A, Wegenkittl R, Fleischmann D, Groeller E. Advanced curved planar reformation: flattening of vascular structures. In:IEEE Visualization 2003. Seattle: IEEE Computer Society, 2003; 43-50.
10. La Cruz A, Straka M, Koechl A, Sramek M, Groeller E, Fleischmann D. Non-linear model fitting to parameterize diseased blood vessels. In: Rushmeier H, Turk G, van Wijk JJ, eds. IEEE Visualization 2004. Houston: IEEE Computer Society, 2004; 393-400.
11. Fleischmann D, Rubin GD. Quantification of intravenously administered contrast medium transit through the peripheral arteries: implications for CT angiography. Radiology 2005; 236, 1076-1082.
12. Fazel SS, Mallidi HR, Lee RS, Sheehan MP, Liang D, Fleischmann D, Herfkens R, Mitchell RS, Miller DC "The aortopathy of bicuspid aortic valve disease has distinctive patterns and usually involves the transverse aortic arch." J Thorac Cardiovasc Surg 2008; 135: 4: 901-7, 907
13. Gupta A, Fleischmann D, Murphy DJ, Wu JC "Surgically palliated double-inlet left ventricle with transposition of the great arteries mistaken for aortic aneurysm with dissection." Int J Cardiol. 2008 (Case Report)
14. *Tran DN, Straka M, Roos JE, Napel S, Fleischmann D*: Dual-energy CT discrimination of iodine and calcium: experimental results and implications for lower extremity CT angiography. Acad Radiol 16:160-171, 2009.
15. *Roos JE, Rakshe T, Tran DN, Rosenberg J, Straka M, El-Helw T, Sofilos MC, Napel S, Fleischmann D. Lower extremity CT angiography (CTA): initial evaluation of a knowledge-based centerline estimation algorithm for femoro-popliteal artery (FPA) occlusions. Acad Radiol 16:646-653, 2009 (see also Editorial by Berliner L: Lower extremity CT angiography the combination of digital image processing and knowledge-based patient-specific modeling. Acad Radiol 16:643-645). Boas FE, Fleischmann D. Evaluation of two new iterative techniques for reducing metal artifacts in computed tomography. Radiology 2011 Jun; 259(3):894-902.

16. Huo JL, Choi JC, Deluna A, Lee D, Fleischmann D, Berry GJ, Deuse T, Haddad F. Cardiac paraganglioma: Diagnostic and Surgical challenges. J Card Surg. 2012 Mar;27(2):178-182

D. Research Support:

Ongoing Research Projects:

Source: Austrian Science Fund - Translational Research Grant (TRP 67-N23)
PI: Milos Sramek, PhD
Title: KASI – Knowledge Assisted Sparse Interaction for Peripheral CT (AngioVis III)
Role: International Collaborator and Initiator
Period: 9/2010-08/2013
Goal: to develop a new data centric approach to interaction with visualization tools, which would open to the user the ever growing plethora of visualization techniques and data types in an intuitive and predictable way. We call this new interaction paradigm knowledge assisted sparse interaction (KASI). This approach would be an antipole to the traditional tool-oriented interaction, where an application offers a set of tools for processing and interaction and lets the user decide, which are the appropriate ones and in which order they should be applied.

Source: National Institutes of Health (R01 EB006837)
PI: Norbert Pelc, ScD
Title: Inverse Geometry CT for Dose-efficient Volumetric Imaging
Role: Other Investigator
Period: 9/2006-8/2012
Goal: The goal of this research is the development of a novel CT system, based on multiple x-ray sources arranged on a wide array and a small detector system. Such a system can overcome geometric limitation of current CT cone- beam systems.

Source: National Institute of Health (Duke Clinical Research Institute) – subcontract (NCT01174550)
Title: The PROMISE Trial - PROspective Multicenter Imaging Study for Evaluation of Chest Pain
Role: Site Co-PI (with M.V. McConnell, Cardiology)
Period: 2011 (two year enrollment)
Goal: The purpose of this multicenter study is to determine whether an initial non-invasive anatomic imaging strategy with coronary CT angiography (CTA) will improve clinical outcomes in subjects with symptoms concerning for coronary artery disease relative to an initial functional testing strategy (usual care)

Completed Research:

Source: American Recovery and Reinvestment Act of 2009 (1 RC1 EB011443-01) (NIBIB 05-EB-105)
PI: Zarins, CK
Title: Resistance to Aortic Endograft Migration: Comparative Effectiveness of FDA Approved Devices
Role: Coinvestigator
Period: 2010-2011
Goal: The goal of this study is to compare the effectiveness of the FDA approved endovascular devices to resist displacement by hemodynamic forces in a wide range of aneurysm geometries and under varying hemodynamic conditions. Each of the 5 approved AAA devices and 3 approved thoracic devices will be tested and compared under similar conditions. Toward this end, we will combine 3D imaging, segmentation, Computational Fluid Dynamics (CFD) and Computational Solid Mechanics techniques to perform an analysis of the in vivo loading conditions experienced by the endografts, perform longitudinal studies describing the forces experienced by the devices over time, and estimate their likelihood of migration. The specific aims of this study are to develop and use novel computational tools (specific aims 1-3) and then use these tools to perform a number of clinical studies (specific aims 4-6).

Source: Austrian Science Fund - Translational Research Grant (L-291)
PI: Milos Sramek, PhD
Title: Clinical Visualization Tools for Peripheral CT-Angiography (AngioVis II)

Role: International Collaborator and Initiator
Period: 1/2006-08/2009
Goal: to extend, improve and integrate previous basic-research developments into a clinically applicable set of new interactive and user friendly tools - the AngioVis Toolbox - for fast routine processing of peripheral CT angiograms in patients with peripheral arterial occlusive disease.