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<b>Professional Experience and Interests</b>	Innovative research and development in signal processing, computer vision, pattern recognition, data analysis and visualization, with applications to multimedia, biomedical systems, Life Sciences and business analytics. Background and hands-on experience in signal analysis, control theory, and system modeling techniques. Knowledge and interests in financial and business modeling. Over 40 peer-reviewed publications. Six patents/filings. Two Best Paper Awards. Principal investigator and team leader on several projects. Extensive interactions with business customers and investors.
<b>Education</b>	
09/02 – 03/03	<b>IBM MicroMBA</b> <i>Prof. Ian Giddy, Stern School of Business, New York University</i> <i>Prof. Sunil Gupta, Columbia University, Graduate School of Business</i> Six-month program focusing on the essential elements of marketing, accounting and finance.
07/97	<b>Ph.D., Electrical Engineering - University of Belgrade, Yugoslavia</b> Field of work: Signal & Image Processing, Computer Vision Dissertation title: Discrete wavelet transform in texture analysis. GPA 10.0/10.0.
06/94	<b>M.S., Electrical Engineering - University of Belgrade, Yugoslavia</b> Field of work: Discrete signal processing and control theory. GPA 10.0/10.0
10/92	<b>B.S. EE - University of Belgrade, Yugoslavia</b>
<b>Research and Development Experience</b>	
11/2003 – present	<b>Research Staff Member, Mathematical Sciences Department, IBM Research, Yorktown, NY.</b> Research and development in predictive modeling, forecasting and business analytics.
08/2002 – 11/2003	<b>Technical Staff, IBM Research.</b> One-year assignment.
02/00 – 07/2002	<b>Research Staff Member, Visual Analysis Group, IBM Research, Hawthorne, NY.</b> Research and development in image processing, data visualization & multimedia information retrieval. Development of image driven information retrieval algorithms, visual browsers and search engines.
02/98 – 02/00	<b>Member of Technical Staff, Bell Labs, Murray Hill, NJ.</b> Research and development in the area of human perception and electronic imaging. Developed an image search engine for e-commerce applications, and worked with Lucent's New Ventures Group on commercializing this technology. Project assignment in the Mathematical Sciences Center on image modeling and color quantization. Designed a new and improved digital filtering scheme for Lucent Digital Video, HDTV product line.
<b>Academic Experience</b>	
1996 – 1998	<b>Department of Electrical Engineering, University of Belgrade, Yugoslavia.</b> Faculty Member. Lectured, conducted problem sessions and lab for courses in Signal Analysis and Image Processing. Worked on the implementation of advanced computer vision models and pattern recognition algorithms for medical diagnostics.
<b>Honors, Awards and Recognitions</b>	<ul style="list-style-type: none"><li>§ Best Paper Award at the European Conference on Computer Vision, 2002.</li><li>§ IEEE Signal Processing Society Young Author Best Paper Award, 2001.</li><li>§ Associate Editor, IEEE Transactions on Image Processing.</li><li>§ Member of the IEEE Multimedia Signal Processing Technical committee</li><li>§ Organizer and the co-chair of the Special Session on Human Vision and Electronic Imaging, International Conference on Image Processing, 2001.</li></ul>
<b>Programming Skills</b>	C, C++, Visual Basic, Excel, Java, Matlab, Fortran, Windows, Unix.
<b>Other Skills and Interests</b>	Excellent presentation and communication skills. Strong interpersonal skills. Extremely motivated, grasps new concepts quickly.
<b>Publications</b>	Over 40 peer-reviewed publications and six patents/patent applications. Two Best Paper Awards.
<b>References</b>	Available upon request.

## Selected Publications and Patents

### Books and Book Chapters

- L. Balmelli and A. Mojsilovic, Wavelet domain features for texture description, classification and replicability analysis. In: *Wavelets in Signal and Image Analysis: From Theory to Practice*, editors. A. A. Petrosian and F. Meyer, Kluwer Academic Publishers, 2001.
- A. Mojsilovic, A. Neskovic, M. Popovic, A. Popovic, Computer-based myocardial tissue characterization using quantitative description of texture. In: *Analysis and assessment of myocardial infarction*, editors G. Drzwiecki and K. J. Li. New York: Springer-Verlag, 1997.
- M. Popovic, A. Mojsilovic, *Digital signal processing: Numerical exercises and simulations in Matlab*, Belgrade, Science 1996.

### Selected Journal Papers

- A. Mojsilovic, J. Gomes, and B. Rogowitz, "Semantic-friendly Indexing and Querying of Images Based on the Extraction of the Objective Semantic Cues", *International Journal of Computer Vision*, vol. 56, Jan.-Feb. 2004.
- A. Mojsilovic, J. Hu, and E. Soljanin, "Extraction of perceptually important colors and similarity measurement for image matching retrieval and analysis", *IEEE Trans. on Image Processing*, December 2002.
- A. Mojsilovic, and B. Rogowitz, "Semantic metric for image library exploration", *IEEE Transactions on Multimedia*, to appear.
- A. Mojsilovic, J. Gomes, B. Rogowitz, and T. Deisboeck, "Analysis, Reconstruction and Visualization of Malignant Brain Tumors: A Case Study in Data Synthesis", *Analytical and Quantitative Cytology and Histology*, vol. 24, pp. 125-133, 2002
- A. Mojsilovic, and E. Soljanin, "Color Quantization and Processing by Fibonacci Lattices," *IEEE Trans. on Image Processing*, vol. 10, no. 11, November 2001.
- A. Mojsilovic, J. Kovacevic, J. Hu, R. J. Safranek, K. Ganapathy, "Matching and retrieval based on the vocabulary and grammar of color patterns", *IEEE Trans. on Image Processing*, vol. 9, no. 1, pp. 38-54, January 2000. **(Best Paper Award)**
- A. Mojsilovic, J. Kovacevic, D. Kall, R. J. Safranek, K. Ganapathy, "Vocabulary and grammar of color patterns", *IEEE Trans. on Image Processing*, vol 9, no. 3, pp. 417-431, March 2000.
- A. Mojsilovic, D. Rackov, M. Popovic, "On the selection of an optimal wavelet basis for texture characterization", *IEEE Trans. on Image Processing*, vol. 9, no. 12, December 2000.
- A. Mojsilovic, M. Popovic, "Characterization of visually similar diffuse diseases from B-scan liver images using the nonseparable wavelet transform", *IEEE Trans. on Medical Imaging*, vol. 17, no. 4, August 1998.
- A. Mojsilovic, M. Popovic, A. Neskovic, A. Popovic, "Wavelet image extension for analysis and classification of infarcted myocardial tissue", *IEEE Trans. Biomedical Engineering*, vol. 44, no. 9, September 1997.
- A. Mojsilovic, M. Popovic, R. Babic, M. Ostojic, "Automatic segmentation of intravascular ultrasound images: A texture based approach", *Annals of Biomedical Engineering*, vol. 29, November 1997.

### Selected Conference Papers

- J. Chen, T. Pappas, A. Mojsilovic, B. Rogowitz, "Image segmentation by spatially adaptive color and texture features", *Proc. Int. Conf. Image Processing*, ICIP 2003, Barcelona, Spain, Sept. 2003.
- A. Mojsilovic, "Color image semantics for digital libraries", *SPIE & IST Human Vision and Electronic Imaging 2003*, Keynote, January 2003.
- A. Mojsilovic, "A method for color naming and description of color composition in images", *Proc. Int. Conf. Image Processing*, ICIP 2002, Rochester, New York, Sept. 2002.
- A. Mojsilovic, and J. Gomes, "Semantic based categorization, browsing and retrieval in medical image databases", *Proc. Int. Conf. Image Processing*, ICIP 2002, Rochester, New York, Sept. 2002.
- J. Chen, T. Pappas, A. Mojsilovic, and B. Rogowitz, "Adaptive image segmentation based on color and texture", *Proc. Int. Conf. Image Processing*, ICIP 2002, Rochester, New York, Sept. 2002.
- J. Gomes, and A. Mojsilovic, "A variational approach to recovering a manifold from sample points", *Proc. European Conf. Computer Vision*, ECCV 2002, Copenhagen, May 2002. **(Best Paper Award)**
- A. Mojsilovic, J. Gomes and B. Rogowitz, "ISee: Perceptual features for image library navigation", *Proc. 2002 SPIE Human Vision and Electronic Imaging*, San Jose, January 2002.
- A. Mojsilovic, and B. Rogowitz, "Capturing image semantics with low-level descriptors", *Proc. Int. Conference on Image Processing*, ICIP 2001, Thessaloniki, Greece, September 2001.
- A. Mojsilovic and J. Hu, "Optimal color composition matching of images", *Proc. IEEE International Conference on Pattern Recognition*, ICPR 2000, Barcelona, September 2000.
- A. Mojsilovic, J. Hu, R. J. Safranek, "Perceptually based color texture features and metrics for image database retrieval", *IEEE International Conference on Image Processing*, ICIP'99, Kobe, Japan, October 24-28, 1999.
- A. Mojsilovic, S. Markovic, M. Popovic, "Texture Analysis and Classification with the Nonseparable Wavelet Transform", *Proc. 1997 IEEE Int. Conf. on Image Processing*, vol. 3, pp. 182-185, Santa Barbara, October 1997.

### Patents & Patent Filings

- Mojsilovic, A., "Color naming, color categorization and describing color composition of images", US Patent, Sept. 2002, Filed.
- Mojsilovic, A., Rogowitz B., Gomes J., "System and method for measuring image similarity based on semantic meaning". US Patent #909.0044.U1, April 2002. Filed.
- Mojsilovic, A., Rogowitz B., "Perceptual method for browsing searching, querying and visualizing collections of digital images". US Patent #00306489.6-2202, January 2002. Filed.
- Mojsilovic, A., Soljanin E., "Method of color quantization in color images". European Patent #00306489.6-2202. Issued October 2000. US Patent Filed June 2000.
- Balmelli, L., Mojsilovic, A., "Method and apparatus for characterizing the replicability of a textural pattern", US Patent, March 16, 1999. Filed.
- Ganapathy, K., Hu, J., Kovacevic, J., Mojsilovic, A. and Safranek, R.J. "Retrieval and matching of color patterns based on a predetermined vocabulary and grammar," US Patent, 6411953, June 25, 2002.