Name: **Vladimir Vukovic**

Nationality: Serbian, F-1 US visa status

Date of birth: February 28, 1978

Office address: 104 Engineering Unit A

University Park, PA 16802, USA

Phone: Cell: +1 (814) 441 8572; Office: +1 (814) 863 6786

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Objective:

Full-time position related to computer modeling and applied computational methods in engineering in order to apply research knowledge, enhance leadership skills and contribute to state-of-the-art engineering practice.

Education:

The Pennsylvania State University, USA, 2004 – Dec 2008:

Ph. D. candidate, Department of **Architectural Engineering, Mechanical option** major, **Computational Science** graduate minor

- Ph.D. thesis proposal: "Predicting Health Impacts of Building Indoor Environments"
- Current GPA 3.89

M. S. in Architectural Engineering, December 2005

- M. S. thesis: "Real-time Determination of Indoor Pollutant Source Location"
- GPA 3.91

University of Belgrade, Serbia, 1997 – 2004:

B. S. in Mechanical Engineering, November 2003

- Diploma thesis: "Simulation of Fluid Flow and Heat Exchange Processes"
- GPA 9.29/10.00
- specialization: Aeronautics, 1999 – 2003

Enrolled in Graduate studies in Fluid Mechanics, Department of Mathematics, December 2003

Honors and awards:

Air Quality Research Scholarship, Air and Waste Management Association (A&WMA), June 2008 ($2,500)
ASHRAE Transactions Technical Paper Award, American Society of Heating, Refrigeration and Air-conditioning Engineers (ASHRAE), February 2008 ($1,000)
Graduate Fellowship Incentive Award, Pennsylvania State University, February 2008 ($500)
Laurel Outstanding Service Award, Pennsylvania State University, April 2007
Student Leadership Award, Pennsylvania State University, January 2007 ($1,000)
ASHRAE graduate Grant-in-Aid scholarship, Pennsylvania State University, February 2006 ($10,000)
First place in Mechanical Engineering Students' National contest, University of Belgrade, May 2003 and 2002
Government of Serbia award for educational results, University of Belgrade, March 2002
Faculty award for educational results, University of Belgrade, December 2000 and October 1998
Best student award, University of Belgrade, October 1999

Experience:

Research assistant, working with Dr. Jelena Srebric, Department of Architectural Engineering, Pennsylvania State University, USA, August 2004 – present
International Student Orientation Leader Coordinator, Pennsylvania State University, USA, August 2007 and 2006
Intern at National Assembly of Serbia, sponsored by Organization for Security and Cooperation in Europe (OSCE), Belgrade, Serbia, October 2003 – June 2004
Intern at JAT – Yugoslav Airlines, Engineering Department, Belgrade, Serbia, July – August 2002
Teaching Assistant /Demonstrator in Engineering Graphics course, Department of Technology and Metallurgy, University of Belgrade, Serbia, October 2001 – January 2002
International student exchange coordinator and interpreter for Students' Center, Belgrade, Serbia, July – August 2001
Intern at Moscow Aviation Institute (MAI), Moscow, Russia, September – October 2000

Research publications:

Vukovic, V., Srebric, J., and Tabares-Velasco, P. C., "Real-Time Identification of Indoor Pollutant Source Positions Based on Neural Network Locator of Contaminant Sources (LOCS) and Optimized Sensor Networks", submitted to Atmospheric Environment, 2008

Vukovic, V., Srebric, J., Qian, Z. and Lehman, E. B., "Respiratory Health Responses to Indoor Environmental Odors, Biological Contaminants, and Humidity as Measured in the BASE Study", accepted to The 11th International Conference on Indoor Air Quality and Climate, Copenhagen, Denmark, August 17-22, 2008

Vukovic, V. and Srebric, J, "Neural Network Model Improvements for Identification of Contaminant Source Position inside of Buildings", accepted to The First International Conference on Building Energy and Environment, Dalian, China, July 13-16, 2008

Srebric, J., Vukovic, V., He, G. and Yang, X., "CFD boundary conditions for contaminant dispersion, heat transfer and airflow simulations around human occupants in indoor environments", Building and Environment 43(3), pp. 294-303, 2008

Vukovic, V. and Srebric, J., "Application of Neural Networks Trained with Multi-Zone Models for Fast Detection of Contaminant Source Position in Buildings", ASHRAE Transactions, Vol. 113, Pt. 2, LB-07-017, pp. 154-162, 2007

Vukovic, V., "Real-time Determination of Indoor Pollutant Source Location", CERS, Penn State, USA, 2006

Filipovic, M., Vukovic, V. and Jovanovic, A., "Correctness of Inference Proofs", ETRAN, 2004

Graduate coursework:

Heating Ventilation and Air Conditioning, Building Thermal Systems Optimization, Air Quality in Buildings, Building Control Systems, Data Mining, Parallel/Vector Programming, Artificial Neural Networks, Numerical Analysis, Computer Science Tools, Fluid Mechanics, Computational Fluid Dynamics

Workshops, conferences and invited presentations:

ASHRAE winter meeting conference, New York, NY, January 19-23, 2008

Invention 2 Venture workshop, Penn State, November 10, 2007

Department of Energy (DOE) Day of Science, Knoxville, TN, October 29, 2007

ASHRAE summer meeting conference, Long Beach, CA, June 23-27, 2007

Graduate School Exhibition, Penn State, March 25, 2007

- presented poster: "Diagnosing a "Sick" Building"

ASHRAE winter meeting conference, Dallas, TX, January 27-31, 2007

Invited Lecture in AE310 Fundamentals of HVAC course, Pennsylvania State University, 2006 & 2005

2nd Annual Computation Day, Pennsylvania State University, March 25, 2006

- presented poster: "Applications of Neural Networks in Buildings under Extraordinary Incidents"

College of Engineering Research Symposium (CERS), Pennsylvania State University, March 18, 2006

Electronics, Telecommunications, Computer science, Automation and Nuclear Technology (ETRAN) international conference, Cacak, Serbia, June 8-11, 2004

Two international seminars in applied numerical methods in engineering, "Parallel numerical simulation", organized by University of Erlangen-Nürnberg (Germany), University of Stuttgart (Germany) and University of Belgrade (Serbia), Belgrade, Serbia, September 10-15, 2003 and February 25-March 2, 2002

Two international Summer academies, organized by University of Erlangen-Nürnberg (Germany) and University of Stuttgart (Germany), held in Dubrovnik, Croatia, Sept. 9-21, 2001 and Ohrid, Macedonia, Sept. 2-13, 2000

- presented papers: "Solutions of Partial Differential Equations of Engineering Sciences" and "Parallel Computing"

Computer skills:

- AutoCAD, CONTAM, EES, EIKON, Fluent, Gambit, HAP, LaTeX, MATLAB, Microsoft Office, Origin, PHOENICS; Linux, Windows
- Programming: Basic, C++, Fortran, MATLAB

Languages:

Bosnian/Croatian/Serbian (mother tongue), English (fluent), Russian (good)

Professional organizations; Community service:

ASHRAE (since 2005), Union of Engineers and Technicians of Serbia (since 2007), A&WMA (since 2008); University Park Allocation Committee (2007-2008), Vice-President of Penn State Graduate Student Association (2006), Pennsylvania Junior Academy of Science judge (2006), EuroClub (since 2004), MENSA (1998)