

Gianluca Puliti

Curriculum Vitae

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Objective

Desire to lay a foundation for the understanding of the properties of nanofluids: starting from molecular dynamics simulations to eventually reach a continuum constitutive theory.

Education

University of Notre Dame – Notre Dame, IN

- Philosophiae Doctor (Ph.D.) – Aerospace and Mechanical Engineering – Expected graduation May 2012

University of Notre Dame – Notre Dame, IN

- Master of Science – Mechanical Engineering – May 2010

Embry-Riddle Aeronautical University – (ERAU) – Daytona Beach, FL

- Bachelor of Science, Aerospace Engineering (Concentration in Aeronautics) – Summa Cum Laude – GPA 3.93/4.00 – May 2006
- Bachelor of Science, Engineering Physics – Summa Cum Laude – GPA 3.93/4.00 – May 2006
- Minor in Mathematics – May 2006

Liceo Scientifico “Marie Curie” – Giulianova, Italy

- Diploma di maturità scientifica, graduated with honors (100/100) – July 2001

Work Experience

April 2003
to May 2006

Embry-Riddle Aeronautical University – Daytona Beach, FL

- Research Assistant – Engineering Physics Department
- Supervisor: Dr. Chris Vuille
 - *Quantum Fields in General Relativity: Perturbative Solution of the Einstein-Klein-Gordon Equation*

June 2003
to August 2003

University of Notre Dame – Notre Dame, IN

- Research Assistant – Aerospace and Mechanical Engineering Department
- Supervisors: Dr. Samuel Paolucci and Dr. Joseph Powers
 - *Analytical and Computational Analysis of the Dynamics of Combustion*

July 2004
and May 2005

Società Dante Alighieri – Siena, Italy

- ERAU Study Abroad Programs – Program Coordinator and Teacher Assistant in Italy

August 2005
to December 2005

Embry-Riddle Aeronautical University – Daytona Beach, FL

- Aerospace Engineering – Senior Design Project – Advisor: Prof. Charles Eastlake
- International MAV Competition
 - *Micro Air Vehicle (MAV) Design*
 - *Aerodynamics, Stability and Control Analysis*

August 2005
to May 2006

Embry-Riddle Aeronautical University – Daytona Beach, FL

- Engineering Physics – Senior Design Project – Advisor: Dr. Syed Azeem
- Revolutionary Aerospace Systems Concepts – Academic Linkage (RASC-AL) – NASA, USRA
 - *TIGGER: Tiger-Stripes Investigation and Geological Guidance with an Exploration Vehicle*
 - *Thermal Control Subsystem Design*
 - *Electrodynamic and Momentum Exchange Tether Design*

Work Experience (cont'd)

January 2006
to May 2006

Gulfstream / Embry-Riddle Aeronautical University – Daytona Beach, FL

- Aerospace Engineering – Senior Design Project – Advisor: Prof. James Ladesic
- Worked for Gulfstream under a Non-Disclosure Agreement (NDA)
 - *Quiet Supersonic Jet (Q SJ)*
 - *Detailed Design of the Variable Sweep Wing for the Q SJ*
 - *Responsible for Aerodynamic and Aircraft Stability*

June 2005
to May 2007

University of Notre Dame – Notre Dame, IN

- Research Assistant – Aerospace and Mechanical Engineering Department
- Supervisors: Dr. Samuel Paolucci and Dr. Mihir Sen
 - *Thermodynamic Properties of Ionic Liquids with Application to an Absorption Refrigeration Cycle*
 - *Possible Thermal Enhancement of Ionic Liquids with Nanoparticles*

May 2007
to Present

University of Notre Dame – Notre Dame, IN

- Research Assistant – Aerospace and Mechanical Engineering Department
- Supervisors: Dr. Samuel Paolucci, Dr. Mihir Sen and Dr. Daniel Gezelter
 - *Molecular Dynamics Simulation of Properties of Nanofluids*

Skills and Awards

- Fluent in Italian and English and good understanding of Spanish and French
- Trinity College Certificate – 2001 – London, UK
- ERAU Dean's List every semester and nominated to the National Dean's List every year
- Co-founder and Vice-President of the Tau Beta Rho Society (future Tau Beta Pi Engineering Honor Society)
- Member of Sigma Gamma Tau – National Honor Society in Aerospace Engineering
- Member of Sigma Pi Sigma – Physics National Honor Society
- Member of Omicron Delta Kappa – National Leadership Honor Society
- Member of the Order of the Engineer – ERAU – Since February 2005
- Flight and Simulator time while training as test flight engineer – ERAU – Spring 2005
- First recipient of "The Dalal Memorial Scholarship" – ERAU – April 22, 2004
- "Rosa d'Oro" for outstanding scholarship – August 2001 – Roseto Degli Abruzzi – Italy
- Who's Who Among Students in American Universities and Colleges – 2005
- "Outstanding Academic Achievement and Leadership Award" – Student Activities – ERAU – Spring 2005
- Co-founder & Vice-President of the Tau Beta Rho Society (future Tau Beta Pi Engineering Honor Society) - 2006
- Center of Applied Mathematics Summer Fellowship – University of Notre Dame – Summer 2007
- Winner of the 2008 AIAA Foundation Graduate Award
- Center of Applied Mathematics Graduate Fellowship – University of Notre Dame – Academic Year 2009-10

Computer Skills

- *Software:* Microstation, Lotus 1-2-3, MS Word, MS Excel, MS Access, AutoCAD, Pro-E, CATIA, MSC NASTRAN, NE NASTRAN, Corel Draw, Illustrator, Photoshop, Dreamweaver, VMD, Windows, Linux.
- *Hardware:* IBM PC, Macintosh, Sun Microsystems.
- *Languages:* UNIX, Pascal, Basic, C, C++, HTML, CSS, IDL, MFX, DL-POLY, OpenMD, LaTeX, Maple, Matlab, Simulink, Mathematica, Code V, FORTRAN 77/90.

Activities

- Vice President of the Study Abroad Honor Society – 2006
- President of the Mathematical Association of America – ERAU chapter – 2003
- Webmaster of the National Space Society student chapter at ERAU – 2002
- Member of the American Institute of Aeronautics and Astronautics since Fall 2001
- Member of the Mars Society at ERAU since Fall 2002
- Member of the Society of Physics Students since Fall 2003
- Member of the American Physical Society since Fall 2004
- Member of the Society of Automotive Engineers since Spring 2004
- Member of the Graduate Christians Fellowship – University of Notre Dame – 2003
- Founder Member of the World Academy of Young Scientists – Budapest, Hungary
- Member of the "Albert Einstein Gesellschaft" – Bern, Switzerland
- Player for the Tennis Intramural Team – ERAU – Spring 2002

Conferences

- 1st Annual MAA Undergraduate Mathematics Conference** – March 27, 2004 – ERAU – Daytona Beach, FL
- *Analytical and Computational Analysis of the Time Dependent Dynamics of Combustion*
- 2nd Annual MAA Undergraduate Mathematics Conference** – April 9, 2005 – ERAU – Daytona Beach, FL
- *Perturbative Solutions of the Einstein Klein-Gordon Equations*
- 72nd Annual Meeting of the Southeastern Section of the APS** – November 10, 2005 – University of Florida, Gainesville, FL
- *Perturbative Solutions of the Einstein Klein-Gordon Equations*
- 3rd Annual MAA Undergraduate Mathematics Conference** – April 15, 2006 – ERAU – Daytona Beach, FL
- *Thermodynamic Properties of Ionic Liquids for a Possible Application to an Absorption Refrigeration Cycle*
- 2008 ASME International Mechanical Engineering Congress & Exposition** – November, 4, 2008 – Boston, MA
- *Transport Properties of Nanofluids*
- 61st Annual Meeting of the APS Division of Fluid Dynamics** – November 25, 2008 – San Antonio, TX
- *The Study of Solvation Effects on Thermodynamic Properties of Nanofluids Using Molecular Dynamics*
- 47th AIAA Aerospace Sciences Meeting** – January 25, 2009 – Orlando, FL
- *Transport Properties of Nanofluids*
- 10th US Congress on Computational Mechanics** – July 16, 2009 – Columbus, OH
- *A Molecular Dynamic Study of Properties of Nanofluids*
- 2009 ASME International Mechanical Engineering Congress & Exposition** – November 19, 2009 – Lake Buena Vista, FL
- *A Molecular Dynamic Study of Properties of Nanofluids*
- 62nd Annual Meeting of the APS Division of Fluid Dynamics** – November 23, 2009 – Minneapolis, MN
- *A Molecular Dynamic Study of Properties of Nanofluids*
- ASME-ATI-UIT 2010 Conference on Thermal and Environmental Issues in Energy Systems International** – May 18, 2010 – Sorrento, Italy
- *A Molecular Dynamic Study of Properties of Nanofluids*
- 2010 Midwest Thermodynamics and Statistical Mechanics Conference** – June 2, 2010 – Notre Dame, IN
- *Molecular Dynamic Study of Nanofluids*