CURRICULUM VITAE

PERSONAL INFORMATION

Name	**ROBERTO PETRUCCI**
Address	**VIA L. LIBERTINI 6, 05100 - TERNI (TR), ITALY**
Telephone	**+39 0744 441402 --- +39 320 0285967**
E-mail	**robpet73@gmail.com** roberto.petrucci@unipg.it
Nationality	Italian
Date of birth	10/10/1973
Mother tongue	Italian

CURRENT OCCUPATION

01/01/2014 – to date
PostDoc researcher at University of Perugia

OLDER ACADEMIC POSITIONS

01/05/2002 - 02/08/2002
Collaboration with University of Perugia - Engineering on Material Dept.
Subject: Production technologies development and optimisation for the production of natural fibres/UPR based composite laminates.
01/09/2002 - 31/12/2010
Collaboration with University of Perugia - Engineering on Material Dept.
Subject: Processing and Characterisation of Polymer, Composite and Nanacomposite materials
01/01/2011 - 31/10/2012 – Scholarship - University of Perugia (Civil and Environmental Dept.)
Subject: Rheological analysis and modelling of thermoplastic and thermosetting polymer based matrices nanocomposites
01/01/2013 - 31/10/2013 – University of Perugia (Civil and Environmental Dept.)
Subject: Development of thermosetting polyurethane resin based nanocomposites aimed to be employed in the automotive sector

Referred Publications/Journal Articles

1. Rodríguez, R. Petrucci, D. Puglia, J. M. Kenny, A. Vázquez. **Characterization of composites based on natural and glass fibre obtained by vacuum infusion**.-In: - *Journal of Composite Materials* (2005), 39, 265-281.
2. E. Rodriguez, V. A. Alvarez, J. Moran, S. Moreno, R. Petrucci, J. M. Kenny, A. Vazquez. **Mechanical Properties Evaluation of a Recycled Flax Fiber-reinforced Vinyl ester**. – In: *J-ournal of Composite Materials* (2006), 40, 245-256.
3. J. Moran, V. Alvarez, R. Petrucci, J. Kenny, A. Vazquez. **Mechanical properties of polypropylene composites based on natural fibers subjected to multiple extrusion cycles.** – In: - *Journal of Applied Polymer Science* (2007), 103, 228-237.
4. L. Torre, R. Petrucci, J. M. Kenny. **Development and characterisation of high performance fiber reinforced nanocomposites.** – In: - *ViaMare (BySea)* (2010), 5, 9-13.
5. M. Monti, M. Natali, R. Petrucci, J. M. Kenny, L. Torre. **Impact damage sensing in glass fiber reinforced composites based on carbon nanotubes by electrical resistance measurements**.- In: - Journal of Applied Polymer Science 122 (2011), 2829–2836
6. Marco Monti, Maurizio Natali, Roberto Petrucci, Josè M. Kenny, Luigi Torre. **Carbon Nanofibers for Strain and Impact Damage Sensing in Glass Fiber Reinforced Composites Based on an Unsaturated Polyester Resin**. – In: - Polymer Composites 32 (2011), 766–775.
7. R. Petrucci, C. Santulli, D. Puglia, F. Sarasini, L. Torre, J.M. Kenny, **Mechanical characterisation of hybrid composite laminates based on basalt fibres in combination with flax, hemp and glass fibres manufactured by vacuum infusion. -** In: - Materials and Design (2013),
8. M.D. Samper, R. Petrucci, L. Sánchez-Nacher, R. Balart, J.M. Kenny. **Effect of silane coupling agents on basalt fiber-epoxidized vegetable oil (EVO) composite materials by single fiber fragmentation techniques**. In: - Polymer Composites;

9 Debora Puglia, Roberto Petrucci, Elena Fortunati, Francesca Luzi, Jose Kenny, and Luigi Torre **Revalorization of Posidonia Oceanica as reinforcements in polyethylene/maleic anhydride grafted polyethylene composites**. (2014) – IN.: Journal of Renewable Materials 2(1) 66-76 doi: 10.7569/JRM.2013.634134

Chapters in Encyclopedias and Books

1 M. Monti, M. Natali, R. Petrucci, D. Puglia, A. Terenzi, L. Valentini, J.M. Kenny. **Advanced fiber reinforced composites based on nanocomposite matrices** - In: -. Encyclopedia of Composites. New York: Wiley, doi: 10.1002/9781118097298.weoc025

Conference Proceedings, Publications and Oral Contributions

1 D. Puglia, R. Petrucci, J. M. Kenny, G. Cantero, Iñaki Mondragon. **Influence of the Fibre/Matrix Chemical Compatibilisation Treatment on the Falx Fiber Thermal and Mechanical Properties.** – In - VI AIMAT Congress**:** Modena, 8-11 Sept. 2002 **(Poster).**

2 R. Petrucci, D. Puglia, A. Giorgini, J. M. Kenny. Investigation of Flax and Glass Fibers Permeability to Liquid Systems By Rtm: Effect of Processing Pressure and Fibre Volume. – In: - X National School of Materials Science INFM –INSTM **–** Sestri Levante Sept./Oct. 2004. **(Poster)**

3 R. Petrucci, L. Torre, S. Laurenzi. **Process Parameters Optimisation for the production, by mean of the RTM Technology, of Composite Materials for the Aeronautic Field**. – In: - AIM XVIII National Conference on Macromolecole Science and Technology **-** Catania, 16-20 Settembre 2007

4 L. Torre, R. Petrucci, J. M. Kenny. **Characterization and Process Optimization of High Performances Composites by Liquid Molding**. – In: - Comat 2007 - Rio de Janeiro **-** FOURTH INTERNATIONAL CONFERENCE ON SCIENCE AND TECHNOLOGY OF COMPOSITE MATERIALS" – 9-12 December 2007.

5 R. Petrucci, L. Torre, J. M. Kenny, S. Laurenzi. **Characterization and process optimization of high performances composites by liquid molding.** – In. - Trento Innovation Conference in Materials Engineering **–** *1ST Meeting, Advances in Polymers, Composites and Biomaterials in honour of the 60th birthday of Professor Caludio Migliaresi* – Trento 16-19/12/2007.

OTHER SCIENTIFIC INVOLVEMENTS

CONTRIBUTIONS ON EUROPEAN PROJECTS AS A RESEARCHER

1 **SME-2004-COLL Collective Research, INNOFOOT**: Innovative Treatment of Foot Disorders:
Role: Materials and samples processing;
Technology and Systems Life Cycle Analysis
FP6-NMP 515840 - Fullerene-based opportunities for robust engineering: making optimised surfaces for tribology
POCO - Carbon Nanotube Confinement Strategies to Develop Novel POlymer Matrix COmposites THEME NMP-2007-2.1-1 **- Nanostructured polymer-matrix composites**
COMPNANOCOMP - MULTISCALE COMPUTATIONAL APPROACH TO THE DESIGN OF POLYMER-MATRIX NANOCOMPOSITES THEME [NMP.2011.1.4-5] Multiscale Modelling as a Tool for Virtual Nanotechnology Experimentation (Coordinated call with Russia)
HIVOCOMP - Advanced materials enabling high-volume road transport applications of lightweight structural Composite parts - **Carbon fibre-based composite technologies for high-volume automotive applications.**
MULTIHYBRIDS - Innovative sensor-based processing technology of nanostructured multifunctional hybrids and composites.
Role: Materials and samples processing;
Technology and System Life Cycle Analysis

COOPERATIONS WITH INDUSTRIAL OR GOVERNATIVE INSTITUTIONS

Temporary cooperation with the CSM for the optimisation of composite panels process parameters, produced by mean of the RTM technology, for the aeronautical field.

Temporary cooperation with the enterprise AZ SYSTEM for the selection of appropriate materiasl and resins employed in the production of multifunctional automotive bodies by mean of the SCRIM technology
Temporary cooperation with the European Space Agency for the development of an high temperature adhesive for carbon/carbon composites: LET SME 2009 Contract Number 22875/09/NL/VS – Carbon Based Adhesive - ESA
FP7-NMP-SMALL 4 – Collaborative Project NEAT - Nanoparticle Embeded in Alloy Thermoelectrics
Role: Technology and Systems Life Cycle Analysis

EDUCATION AND TRAINING

• Dates (from – to) 15/01/2007 - 31/10/2009

• Name and type of organisation providing education and training	University of Perugia
• Title of qualification to be awarded	**PhD in "Industrial Engineering " - XXVIII Cycle. AY 2005**
• Title of the thesis	Study and Optimisation of Liquid Molding Process, Applied to Polymer Composites based on Thermosetting Matrices
• Principal subjects/occupational skills covered	My Ph.D. research dealt with the optimization of the processing stages for the production of composites based on flax and glass fibres. In particular, the employed resins have been characterized from a rehology point of view and the fibres permeability has been investigated and modeled. The infusion stage has been modeled by mean of a FEM analysis (software Comsol) aimed to the processing parameters optimization. Model and experimental data convergence has been verified.
• Dates (from – to)	1993 – 2002
• Name and type of organisation providing education and training	University of Perugia
• Title of qualification awarded	**Engineering on Materials** Title of thesis: "Development and Characterisation of UPR based Composites Reinforced with Natural Fibres for Automotive Application"
• Level in national classification	Final score: 100/110
• Dates (from – to)	1987 – 1991
• Name and type of organisation providing education and training	Liceo Scientifico Galileo Galilei (TR)
• Title of qualification awarded	**High school diploma** d.
• Level in national classification	Final score: 46/60
JOB EXPERIENCE	
• Dates (from – to)	***March 2003 to date*** -
• Name and address of employer	*MDP Materials Design & Processing" s.r.l (Academic Spin of) – Strada di Pentima, 6 – 05100 – Terni (Italy)*
• Type of business or sector	Engineering
• Occupation or position held	Associate and working as a Materials Processing Manager
• Dates (from – to)	**Academic Year 2005/2006**
• Name and address of employer	*European Network of Excellence Nanofun Poly*
• Type of business or sector	
• Occupation or position held	Temporary teacher (34 hrs) for the "European Master in Polymeric Materials Nanotechnologies.
• Dates (from – to)	***Academic Year 2006/2007***
• Name and address of employer	*University of Perugia (Civil and Environmental Dept.) – Strada di Pentima, 4 – 05100 - Terni*
• Type of business or sector	
• Occupation or position held	*Temporary teacher in "Polymer technology".*
• Dates (from – to)	05/01/2007 to 31/08/2008.
• Name and address of employer	*Proplast Consortium – Strada Savonesa, 9 – Rivalta Scrivia (AL)- Italy*
• Type of business or sector	
• Occupation or position held	*Collaboration inside the European project: FOREMOST (Fullerene-based opportunities for robust engineering: Making optimised surfaces for tribology).*
• Dates (from – to)	**2008**
• Name and address of employer	Confindustria Terni – Zona Fiori, 116 – 05100 – Terni (Italy)
• Type of business or sector	
• Occupation or position held	Temporary teacher on "Specialist on the Science and the Technology for the Polymer and Nanocomposites Materials"
• Dates (from – to)	***01/06/2009 - 31/10/2013***
• Name and address of employer	European centre for Nanostructured Polymers – Via G. Giusti, 9 – Firenze (Italy)
• Type of business or sector	
• Occupation or position held	Collaboration inside the European Projects POCO (Nanostructured polymer-matrix composites) and COMPNANOCOMP

• Dates (from – to)	***1/11/2013 to date***
• Name and address of employer	European centre for Nanostructured Polymers – Via G. Giusti, 9 – Firenze (Italy)
• Type of business or sector	
• Occupation or position held	Collaboration inside the European Project COMPNANOCOMP

PERSONAL SKILLS AND COMPETENCES

OTHER LANGUAGES	
	ENGLISH
• Reading skills	GOOD
• Writing skills	GOOD
• Verbal skills	GOOD

TECHNICAL SKILLS AND COMPETENCES

Knowledge of Windows XP, Microsoft Office (Word, Excel, Power Point) Photoshop, Photo Filter, Explorer.

Data analysis KaleidaGraph, Peak Fit.

Design software: Solid Works 2003/2004, Inventor.

FEM software: Magics

LCA Software: SimaPro 7.0

Apparatus and Technologies:

-TGA (Thermo Gravimetric Analisys), DSC (Differential Scanning Calorimeter), TMA (Thermo Mechanical Analisys);
-Electronic Dynamometers (Instron, LLoyd),
- Melt Flow Rate apparatus and Rotational Viscosity measurement apparatus (Brookfield)
- Single and double screw Extruder, Injection Molding) and Compression molding Machines<
- Resin Transfer Moulding (RTM), Vacuum infusion, Vacuum Assisted Resin Transfer Moulding (VARTM), RTM-Lite and related apparatus

DRIVING LICENCES B (cars)

HOBBIES Soccer, Swimming, Body Building and Kung Fu, other than any kind of lectures