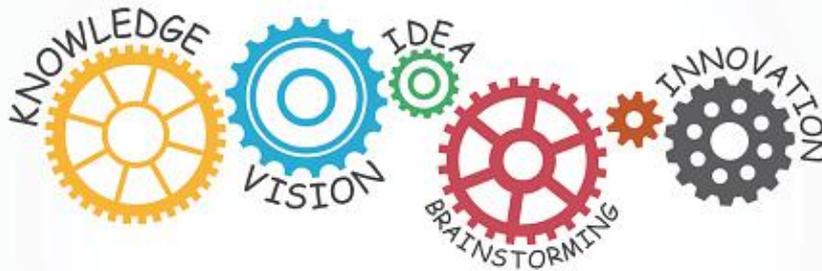


# up-cycle

Upgrading Recycled Tyre Materials.  
Products and Applications



**Innovation Workshop for Projects , Research and Co-operation Development**  
**9th November 2018 - from 9.30 am to 5.00 pm**  
**Venue : ANTEL, Palazzo Caccialupi, Vicolo Savelli 48, Rome**  
 (4 minutes walk from Piazza Navona)

ETRA, the European Tyre Recycling Association, in co-operation with ANTEL, IFME, University of Rome Torvergata, Lazio Innova, Politecnico of Turin, and ARGO, are pleased to invite you to:

## up- cycle - Upgrading Recycled Tyre Materials, Products and Applications

The workshop is designed to illustrate the many current and potential uses of Recycled Tyre Materials (RTMs) in various fields of application, highlighting the flexibility of use and high performance of the materials. Topics will include: thermal, vibration and noise insulation, flexible and reinforced concrete, rubber compounds and thermo-plastic elastomeric materials, rubberised asphalt, roads and rail products, sports applications. The goal is to stimulate discussions on new product development, research projects and cooperation.

The programme will bring together companies from tyre recycling and end-user sectors with researchers from Universities and experts from various fields.

## Program

9.30 Registration

9.45 **Welcome Speech**

**Ir. Fabrizio Mazzenga**, President ANTEL  
**Renato Cecilia Santa Maria**, Past President IFME

10.00 **Workshop Part 1 - Presentations**

**Dr. Valerie Shulman**, Secretary General, ETRA : About Tyre recycling  
**Ir. Fabrizio Quadrini**, University Tor Vergata, Rome : Disruptive technologies and innovative start-ups  
**Dr. Francesca Calenne**, Lazio Innova, Rome : Regional actions to support innovation and Circular Economy

**Ir. Paolo Di Scanno**, Siges Ingegneria, Rome : Rubberised asphalt to mitigate the noise in Rome  
**Ir. Marco Benso**, Torino Città Metropolitana : The choice of a Public Administration to use rubberised asphalt  
**Frank Lindner**, Evonik Resource Efficiency, VESTENAMER in GTR modified asphalt – Circular Economy, high performance, cost competitive  
**Geom. Bruno Marabotto**, Vice President, ETRA : End of life turf: various options to re-use or recycle the fields.

**Ir. Alessandro P. Fantilli**, Politecnico of Turin : The Sustainability of Structural Concrete Containing Recycled Tyre Materials

**Dr. Marco Valente, Ir. Abbas Sibai**, Università La Sapienza, Rome: 3D concrete printing aggregated with rubber tire powder material

**Andrea Gruppioni**, CMF GreenTech, Circular materials in a new industrial philosophy

**13.20** Closure of the Workshop

**13.30** Light Lunch

### **14.30** Workshop Part 2 - Discussion Groups

Round-tables discussions divided by groups to discuss in more detail about the morning presentations, with comments and suggestions. **The goal is to come up with new partnerships and projects for the upcoming EU Funding Calls for 2018-2020.** Four tables have been organised to come up with some ideas for product development, new projects, cooperation, etc. The **4 table** will be on:

- 1. Recycled and bio construction materials and applications, projects and other ways to expand the market**
2. Transport and mobility: rubber materials and technologies for asphalt, roads, rails and urban mobility
- 3. Innovative Materials for different uses markets: Compounds, Moulding, Binders, Absorbing and Drainage, etc.**
- 4. Sport Sector: New materials for/from Artificial Turf, how to recycle end of life turfs and new generation of infill materials**

In order to increase their opportunities Participants may enter their cooperation profile into the **ETRA Partner Registry**, and receive further assistance after the workshop. They will become part of a dynamic process that includes other opportunities.

**17.00** Closure of the meeting

### **Speakers**

**Valerie L. Shulman, Ph.D.**, served as Secretary General of ETRA for more than twenty years. She began to study tyre recycling in the EU in 1989 and developed the Tyre Recycling Project in 1992 which, after initial EU funding, became the nucleus of ETRA. A contributor to the preparation and presentation of the Basel Convention Guidelines on used tyres, she participated in the EU Recycling Forum representing Tyre Recycling. In 2006 she presented at the Waste Policy hearings in Parliament and again in 2008 on the needs of recyclers in a recycling society. She represents European tyre recycling at EU and international conferences. She has published more than 100 articles in EU and international journals, and written or edited more than ten books on the subject. She has been a delegate in both UNEP and UNOPS on-site missions.

**Dr. Fabrizio Quadrini** Fabrizio Quadrini was born in Pozzuoli (Naples, Italy) on 23rd June 1974 and graduated with honors in 1997 in Material Engineering at the University of Naples "Federico II". He took a PhD in Material Engineering at the University of Rome "Tor Vergata". Since 2010 he is associate professor in the same University of Rome where he holds courses on "Manufacturing technology". During his career, he has collaborated with several industrial partners to design and optimize new processes and products. He is author of about 150 papers accepted in international journals and conferences. He also collaborates with some internal journals to help as a referee in the paper review or joining editorial boards. He was invited to present his own studies in international conferences like Polymer Foam and Thermec by ASME. He participated in Scientific Committee of international conferences above all dealing with technology and manufacturing systems. He is a member of the Scientific Committee of the PhD in Material Engineering of the University of Rome "Tor Vergata" and he was also a member of the Executive Committee of the Italian Association of Mechanical Technology. He held courses for PhD students, in seminars and for masters, particularly dealing with the bulk processes of plastics and metals. His main scientific interests deal with laser processing of metals and plastics, forming and machining of metals, plastics and polymer matrix composites, and shape memory polymers. He proposed an innovation for thermosetting material recycling which has been used for the SMART project (Sustainable Molding of Articles from Recycling of Tires) where ETRA was the coordinator.

**Francesca Calenne** works, since 1998, in the Regional Agencies Network, before in BIC Lazio and since January 2018 in Lazio Innova. Regional Network supports the development and the empowerment of innovative startups and enterprises, the implementation plans of local and sustainable growth, the initiatives of diffusion and empowerment towards the Regional Community about the EU Programming to increase projects and co-design experiences. She is coordinator of Colleferro Office (Rome) that belongs of Open Innovation Hubs of Lazio Innova, promotes and orientates the local innovation actions according to the regional and EU programming, supports and diffuses businesses networking projects and sustainable local growth projects.

**Ing. Paolo Di Scanno**, graduated from the University La Sapienza of Rome, in the faculty of Civil Engineering – Structures, as a civil engineer. For a number of years he has been a Teaching Assistant to Prof. Ing. Dolara began his professional career in the field of structural, geotechnical and road construction design. In 2001 he founded the engineering firm of SIGES INGEGNERIA SRL, and since 2011 is the Technical Director. The company operates mainly in civil engineering with particular regard to the sector of structures, geotechnics, and roads.

**Ing. Marco Benso** graduated in Civil Engineering with a geotechnical specialisation from the Politecnico di Torino. He began his career as an independent professional in the field of civil engineering and is a consultant in the geo-technical sector and rock mechanics, tunnel design and slope stabilisation. Since 2001 he has been the engineer for the Turin Metropolitan City (former Province of Turin), in charge of the Design and Work Execution Service, focused mainly on design, Work Direction, public work safety, etc. with particular attention on infrastructure viability. He participates in the Technical Committee of the TyRec4Life project coordinated by Turin funded under the EU.

**Frank Lindner.** He started in company's Sales Office in the city of Hannover, where he also finished his studies at Leibniz Academy with a Bachelor in Business Administration. In various positions in the company he could explore different industries with different challenges, like automotive, rubber, asphalt and others. Today he is looking on 30 years in Marketing and Sales and is responsible for Business Development in their Team "Specialties" in Evoniks High Performance Polymers. His special task is the market development of VESTENAMER in asphalt applications worldwide.

**Geom. Bruno Marabotto** has worked since 1982 in the Sports Plant branch of the Turino Town Council. Today, he is responsible for the design and construction of sports fields. From 2001 to 2003 he took care of the maintenance of city stadium (delle alpi). In 2002 he developed a plan to transform 30 clay sports surfaces with artificial turf. He recently transformed the Winter Olympic Stadium into a football stadium for the two local clubs: Turin and Juventus. The municipality has been Awarded as the European Capital of Sports for 2015. He initiated a municipality-wide programme to revise and renew older sports fields to meet update requirements and standards.

**Alessandro P. Fantilli** is Associate Professor in the Department of Structural, Building and Geotechnical Engineering of Politecnico di Torino, Italy. He received his MS and PhD from Politecnico di Torino. He is a member of ACI committee 544 - Fiber-reinforced concrete - and 555 - Concrete with Recycled Materials. His research interests include nonlinear analysis of reinforced concrete structures and structural application of high performance fiber-reinforced cementitious concrete.

**Dr. Marco Valente.** Graduated in Rome (La Sapienza) on 25/02/1992 in Chemical and materials Engineering with 110-110 e lode. In April 1992 got the "engineering licence" with graduation of 110. In 1995 into the role of University researcher. From 1999 at today Full researcher in the Dep. of chemical, material and ambient. (s.s.d 09D1 Industrial Engineering). Tenured of several courses in past years: material science, materials for biomedical application, polymeric materials; Now tenured of polymeric and composites materials. Member of doctoral school of Sapienza EMNE (Elettrotecnica, Material and Nanotechnology Engineering). Member Academic and material National association: INSTM, AIMAT, ASSOCOMPOSITI. Responsible of laboratory of mechanical and technological (static and dynamical) testing on materials and polymers.

**Ir. Abbas Sibai** is a second year Ph.D. student in Material Engineering at Sapienza University of Rome, working under the authority of Prof. Marco Valente. He graduated from La Sapienza University of Rome with a Master of Science Degree in Product Design, Faculty of Architecture. In addition to that, he holds a Bachelor of Art in Interior Architecture from The Lebanese International University in Beirut. Moreover, in the first year doctorate study he did a publication in Journal of Applied Biomaterials & Functional Materials - Manuscript ID JABFM-18-0013 titled: "Rubber/Crete: Mechanical properties from scraps to reuse. Tires derived rubber in concrete: a review".

**Andrea Gruppioni** is an entrepreneur from Bologna Italy. After completing his studies, he began his career as Sales Manager in the consumer electronics sector, which left to undertake a path of innovation in key sectors such as food, renewable energy, environment and health care, which led him to acquire specific skills, and a view to diversity inclusion. After collaborating with 8 professors of the Universities of Bologna, Turin and Camerino, and activated 3 start-ups, today he is Sales and Marketing Director of Cmf Greentech, and holds the position of President of Aquasol and Innovaplants.

**Dott. Ettore Musacchi** has been involved in tyre recycling for over 20 years, during which time he set up and developed many industrial projects. He is a member of the CEN Committee on Tyre Recycling and of the Ministry of Health Commission on Artificial Turf. He has been Managing Director of AD.RI.A. Abruzzo s.r.l., an SME in the centre of Italy, dealing with the recycling of used tyres. Before that, he worked banking for 9 years, where he assumed different tasks in various departments, including 4 years in the foreign exchange department, after which he worked as a Certified Accountant. Further, he developed considerable technical skill and experience because he managed the development and production of several new products. He is the President of the Consortium ARGO, the Italian Association of tyre recyclers, which represents its members with the public administration, promoting relevant issues impacting tyre recycling. In 2005 he became the President of ETRA (European Tyre Recycling Association).

## In Cooperation with:



POLITECNICO  
DI TORINO



This workshop is part of a programme with various European Universities, coordinated by ETRA, that will continue throughout 2019 in the frame of ETRA 26th Conference. The program will cover all the main issues related to tyre recycling, and will analyse the state of the art, the problems, the technology and market potential.

The next scheduled event will be on **20-22 March 2019**, in **Brussels** at the **26th ETRA Annual Conference**:

## ***Responding to Market demands of the Circular Economy :***



**There will be, among the other:**

- A one day NCP workshop, for a limited group of 15-20 attendees to define the key elements for 1-2 projects
- Two days Conference
- Company matchmaking Discussion Groups
- Networking moments (Cocktails and coffee breaks., Gala Dinner, Lunches)



***See you in Brussels !***