



TOWARDS SMART AND ADVANCED REMANUFACTURING FOR A SUSTAINABLE FUTURE

Bridging the Gap between Science and Industry

The World Remanufacturing Summits are a series of events designed to **promote interaction** and **collaboration** between **scientific institutions** and **industrial players** on remanufacturing challenges and best practices.

Founded in 2012, the WRS is hosted in rotation among USA, Europe and Asia: this year, following the last edition in Rochester (New York, USA), the summit is held in Milan, for the first time ever in Italy.

12th-13th

MARCH 2024

DAY 1

Sala Marco Biagi,
Sala Solesin
Palazzo Lombardia

Entrance "N4", Via M. Gioia, 37

DAY 2

Aula Magna
"Carassa Dadda", BL28.22
Politecnico di Milano

Via R. Lambruschini, 4, Milano

Organized by:

In collaboration with:



POLITECNICO DI MILANO
Mechanical Engineering Department



March 12th 2024

PROGRAM

Sala Marco Biagi,
Sala Solesin

Entrance "N4", Via M. Gioia, 37

9:30

REGISTRATION

10:00

WRS2024 WELCOME AND INTRODUCTORY REMARKS

Prof. Marcello Colledani - Chairman

Prof. Rolf Steinhilper - WRS Founder

Mr. Alessandro Fermi - Lombardy Region Minister for University, Research and Innovation

HOW IS REMANUFACTURING CONTRIBUTING TO THE WORLD MEGA TRENDS AND CHALLENGES?

10:15 - 11:45

PLENARY SESSION 1

MODERATOR

Dr. Maurizio Melis - Radio 24

KEYNOTE SPEAKERS AND PANELISTS

Prof. Gisela Lanza - Karlsruhe Institute of Technology, KIT (Germany)

Prof. Tullio Tolio - Politecnico di Milano (Italy)

Prof. Nabil Nasr - Rochester Institute of Technology, REMADE Institute &
WRS Founder (USA)

Prof. Mitsutaka Matsumoto - National Institute of Advanced Industrial
Science and Technology, AIST (Japan)

Prof. Zhang Wei - Institute of Remanufacturing Industry Technology (China)

REMANUFACTURING AS A BOOSTER FOR COLLABORATION AMONG REGIONS TOWARDS SUSTAINABLE ECONOMIC GROWTH

11:45 - 12:30

PLENARY SESSION 2

MODERATOR

Dr. Pierre Padilla - N-Able

KEYNOTE SPEAKERS AND PANELISTS

Dr. Mikel Irujo - Regional Minister for Industry and Ecological and Digital Business
Transition Development, Minister of Economic and Business Development,
Government of Navarra

Mr. Raffaele Cattaneo - Undersecretary with responsibility for International
and European Relations, Lombardy Region

NETWORKING LUNCH

12:30

REMANUFACTURING BEST PRACTICES IN THE INDUSTRIAL CONTEXT

14:00 - 15:30

PLENARY SESSION 3

MODERATOR

Ing. Philippe Vanrie - Chair of the Horizon Europe Knowledge
Valorisation Experts Panel and University of Vaasa (Finland)

KEYNOTE SPEAKERS AND PANELISTS

Mrs. Francesca Politi - Over Machining Centers (Italy)

Mr. Jeffrey Stukenborg - ZF Group (USA)

Dr. Daniel C. F. Köhler - BPW Bergische Achsen (Germany),
chairman of APRA Europe

Mr. Peter Bartel - C-Eco (Germany), vice-chairman of APRA Europe

Dr. Tomohisa Kanazawa - Hitachi Construction Machinery (Japan)

Mrs. Melissa Hudson Russell - Caterpillar (USA)

15:30

COFFEE BREAK

SMART AND DIGITAL REMANUFACTURING - DIGIPRIME

16:00 - 17:30

TECHNICAL SESSION 1 - Sala Biagi

Mr. Abdelrahman Abdalla - Politecnico di Milano (Italy)

"The DigiPrime project: A novel digital platform for Circular Economy"

Dr. Luca Gentilini - COBAT (Italy)

"Digitalizing the remanufacturing process chain of e-mobility batteries"

Dr. Andreas Viehmann - EDAG (Germany)

"Development of a 2nd Life Battery Home Storage System"

Mr. Markus Wagner - C-ECO (Germany)

"Mobile Application for collection of cores and relevant vehicle data for reverse logistic optimization"

Dr. Andreas Wenda - Bosch Aftermarket (Germany)

"Automotive electronics refurbishment: Status and Challenges"

Mr. Philipp Engelman - Vitesco Technologies Aftermarket (Germany)

16:00 - 17:30

REMANUFACTURING IN THE E-MOBILITY

TECHNICAL SESSION 2 - Sala Solesin

Mr. Massimo Leonardo - PwC/Motus-e (Italy)

"Recycling battery packs electric vehicles @2050: evolutionary scenarios and technologies enabling"

Dr. Anton Sediako - Carl Zeiss AG (Germany)

"Transparent Remanufacturing: Inspection Innovation for Second Life Applications"

Mr. Leonardo Chieco - Masmec (Italy)

"Battery remanufacturing for circular economy: experience from the field"

Mr. Yann Lelong - GreenVision (France)

Mr. Lorenzo Gaspari - Borg Automotive Group (Belgium)

"Vehicle and product electrification: the future that is already here."

Prof. Marcello Colledani - Politecnico di Milano (Italy)

"Eco-CIRC: The Lombardy Region pilot infrastructure hub for supporting the transition to circular economy"

CULTURAL EVENT AT MUSEUM OF SCIENCE AND TECHNOLOGY WITH APRA HALL OF FAME AND GALA DINNER

from 19:00

March 13th 2024

PROGRAM

Aula Magna
“Carassa Dadda”, BL28.22
Via R. Lambruschini, 4, Milano

9:15

WELCOME AND OPENING OF THE DAY

“THE TECHNOLOGY IS THERE”: REALITY OR MYTH? TECHNOLOGICAL CHALLENGES AND OPPORTUNITIES IN REMANUFACTURING

9:30 - 10:30

PLENARY SESSION 4

MODERATOR

Dr. Alessandro Marini - Cluster Manager of AFIL -
Associazione Fabbrica Intelligente Lombardia (Italy)

KEYNOTE SPEAKERS AND PANELISTS

Dr. Bernd Kopacek - SAT (Austria)
Dr. Carolynn Bernier - CEA (France)
Mr. Lorenzo Gaspari - Borg Automotive Group (Belgium)
Dr. Tommaso D’Alessandro - CNH Industrial Italy (Italy)

10:30

COFFEE BREAK

PROVOQUIUM: IS REMAN “COOL”? REMANUFACTURING IN 2050

11:00 - 12:00

PLENARY SESSION 5

MODERATOR

Prof. Nabil Nasr - Rochester Institute of Technology, REMADE Institute &
WRS Founder (USA)

KEY NOTE SPEAKERS AND PANELISTS

Dr. Jan Koller - Fraunhofer IPA (Germany)
Prof. Paolo Pedrazzoli - Supsi (Switzerland)
Dr. Daniel C. F. Köhler - BPW Bergische Achsen (Germany), chairman of APRA Europe
Mr. Francesco Perotti, Mr. Alessandro Masetti Placci - MUSP/ AlphaTauri (Italy)

12:00

NETWORKING LUNCH

EMERGING REMANUFACTURING TECHNOLOGIES**13:30 - 15:00****TECHNICAL SESSION 3 - Aula Magna "Carassa Dadda"****Dr. Daniela Fontana** - Comau (Italy)*"Automation for End-of-Life Batteries"***Mr. Klaas Rozema** - Titomic (Netherlands)*"Cold Spray for remanufacturing"***Mr. Francesco Stortiero** - GFM S.p.A. (Italy)*"Hybrid additive technologies for Remanufacturing: Challenges and Business Models"***Prof. Yuchun Xu** - Aston University - (UK)*"Digitalization for Circular Manufacturing"***Mr. Markus Wagner** - C-ECO (Germany)*"AI-Powered Machine- Vision-System for core-identification"***Mr. Marcus Witt** - Metrom (Germany)*"Rapid Manufacturing and spare part production on site"***13:30 - 15:00****NEW REMANUFACTURING BUSINESS MODELS****TECHNICAL SESSION 4 - BL28.22****Mr. Guido Cuccadu** - Partseeker (Italy)*"Improving core collection and efficiency at dismantler level through digitalization and AI"***Mr. Paolo Galli** - HSD S.p.A. (Italy)*"How digitalization and IoT can improve EoL management of a complex device"***Prof. Erik Sundin** - Linköping University (Sweden)*"Design for Furniture Remanufacturing"***Prof. Giuseppe Pedeliento** - Università di Bergamo (Italy)*"Market challenges of Reman: Where are we heading?"***Prof. Aydin Nassehi** - University of Bristol (UK)*"Economic viability of remanufacturing: a numerical socio-technical model"***Dr. Markus Werner** - Fraunhofer IWU (Germany)*"reProd® - a new metallic cycle"***15:00****COFFEE BREAK****ELECTRONICS REMANUFACTURING****15:30 - 17:00****TECHNICAL SESSION 5 - Aula Magna "Carassa Dadda"****Mr. Massimo Lenzi** - CR&C (Italy)*"Remanufacturing Methods"***Mr. Maxime Furkel** - Lexmark (Germany)**Dr. Gábor Erdős** - Sztaki (Hungary)*"Visual servo based robotic application for PCB remanufacturing."***Ms. Livia Nastasi** - Politecnico di Torino (Italy)*"Remanufacturing of electronic control units for off-road vehicles: process analysis and environmental assessments"***Mr. Gianmarco Lanza** - FAE Technology (Italy)*"Electronic pervasiveness: an opportunity for a sustainable circular improvement"***Mr. Oscar Huarte** - Lizarte SA (Spain)*"Mechatronics reverse engineering for remanufacturing"*

15:30 - 17:00

INNOVATION PROJECTS

TECHNICAL SESSION 6 - BL28.22

Dr. Nikos Panopoulos - RENEE EIT Manufacturing (Greece)

"Flexible Remanufacturing Using AI and Advanced Robotics for Circular Value Chains"

Prof. Paolo Albertelli - REMANET Politecnico di Milano (Italy)

"RemaNet- Remanufacturing Network"

Mr. Francesco Marzullo - Circ-Uits Erion (Italy)

CIRC-UIITS – "Circular Integration of independent Reverse supply Chains for the smart reUse of Industrially relevant Semiconductors"

Prof. Gianmarco Griffini - RECREATE Politecnico di Milano (Italy)

RECREATE - "REcycling technologies for Circular REuse and remanufacturing of fiber-reinforced composite mATERials"

Dr. Itziar Ricondo - LEVEL-UP Ideko (Spain)

LEVEL – UP - "Protocols and Strategies for extending the useful Life of major capital investments and large industrial equipment"

Ms. Cinzia Rubattino - Circular TwAIIn Engineering (Italy)

Circular TwAIIn - "AI Platform for Integrated Sustainable and Circular Manufacturing"

Dr. Michal Krčál - DiCiM Masaryk University (Czech Republic)

"Digitalised Value Management for unlocking the potential of the Circular Manufacturing Systems with integrated digital solutions"

17:00

WRS2024 CLOSING CEREMONY

**Prof. Rolf Steinhilper, Dr. Nabil Nasr, Prof. Mitsutaka Matsumoto,
Prof. Marcello Colledani, Dr. Daniel Köhler, Mr. Peter Bartel**

