

www.icm.ch

# 19<sup>th</sup> International Electronics Recycling Congress IERC 2020

January 21 – 24, 2020 Salzburg, Austria









#### Patronage:

- APPLIA Home Appliance Europe
- Austrian Federal Ministry for Sustainability and Tourism
- DIGITALEUROPE
- European Association of Metals (Eurometaux)
- European Electronics Recyclers Association (EERA)
- European Recycling Industries' Confederation (EuRIC)
- Japan Electronics and Information Technology Industries Association (JEITA)
- PlasticsEurope
- StEP Initiative
- Verband Deutscher Metallhändler e.V. (VDM)
- WEEE Forum































# FOREWORD

#### **JEAN COX-KEARNS** Chairman of the Steering Committee IFRC

Getting ready for 2020 and the IERC in January? Well, once again it is a pleasure to announce that the congress will be held in Mozart's city, Salzburg, Austria and it will take place from January 21<sup>st</sup> – 24<sup>th</sup>. To our returning guests, as always, a big welcome. To those who are considerina comina to this congress for the first time please note that this is a alobal forum for discussions on Electrical and Electronics Recycling but also incorporating the Circular Economy, Circularity, Mobility and other related topics. This congress offers a platform for sharing information, having discussions and doing business. While we cannot guarantee snow in Salzbura City we are very close to the ski slopes of Austria!

The Congress Centre in Salzburg is located just beside the Salzach river and just a short stroll from the historic city, which is overlooked by the Hohensalzburg Castle.

IERC 2020 will be our 19th congress and our 13th time to locate in Salzburg. On behalf of the Steering Committee who are already working hard behind the scenes, and, the conference organizers you are all wished a big welcome to Salzburg.

Last year we had just under 500 delegates from 40 countries and we expect a similar turnout for 2020. The delegates we expect to see will be representing Electronics Recycling, Equipment Manufacturers, Electronics Recyclers and ITAD Companies, Associations, Standards Bodies and NGO's. We also expect to have representatives from governments and regulatory bodies.

The aoal of the congress is to provide a space where participants can come together, learn from each other, forge alliances and partnerships, explore solutions for problems and identify aaps in their oraanisations or processes and make improvements either through something shared at the conaress or through successful meetinas or purchases made during the congress.

IFRC facilitates the leading voices of organizations in the recycling industry alobally comina together once a year. It promotes quality presentations and panel sessions in addition to providing an expansive meeting space and lots of exhibitors. It allows attendees to gain maximum efficiency in discussions and decisions.

The gaenda for the IERC 2020 congress will focus on the following topics: E-Mobility

- What is the Recycling Solution for Electric Cars and Bikes?
- The Circular Economy Impact on Business
- Schemes, Quotas and Challenges Faced by OEMs
- Business Opportunities and Models in Emeraing Markets
- Recycling Technology Innovation
- Safe Transportation
- Reuse and Refurbish-
- ment the Influence of GDPR and Data Securitv?
- Internet Trade of Devices, Parts, Materials and Plastics
- Environmental Management of Hazardous Lithium batteries
- Standards Relating to the Management and Treatment of End of Life Electronics whether for Re-use or Recycling.

The program will also include interesting keynote speakers and two round table discussions, and the presentation of an industrv barometer.

There will also be a workshop on Tuesday afternoon, 21st on the "PolyCE Worldwide Take-back – Plastics Recycling" and two on Friday 24th in the morning, one on "Batteries - Power Density vs. Safety" and one on the new "Reauirements of the R2v3 Standard".

> In addition to the congress program the conference also provides a large exhibition hall with over 80 exhibitors.

If you are working as an environmental engineer, a product designer, a policy maker, or involved in environmental sustainability or as an environmental Components such as change agent this congress should be on your agenda for 2020.

> Llook forward to an informative conference and to seeing you there.

# INTERNATIONAL STEERING COMMITTEE



JEAN COX-KEARNS Chairman of the Steering Committee OTE Sustainability Care Ireland



**ROGER BURRI** Metal Depot Zurich AG CEO Switzerland

**DR SVEN GRIEGER** 

Manager WEEE Services

EARN Elektroaltgeräte

Service GmbH

Germany



JONATHAN PERRY Vice Chairman of the Steering Committee Dell Environmental Affairs EMEA

United Kingdom



**STEPHANE BURBAN** Chairman of the Lecture Group Glencore International AG Switzerland



STEPHAN KRAFZIK Online-Magazin 320° Publisher & Chief Editor Germany

Sofies UK Consulting Limited

**DR FEDERICO** 

Managing Director

United Kingdom

MAGALINI



MARC AFFÜPPER Sims Recycling Solutions EMEA Director Germany



DR MARCO BULETTI Federal Office for the Environment (FOEN), Waste Management and Resources Division, Deputy Head of Division, Switzerland



VENKATESHA MURTHY Vans Chemistry Pte. Ltd. Managing Director Singapore





STEPHAN SCHWARZ ALBA International Recycling GmbH CEO Germany

MARTIJN REINTJES

Recycling International

Chief Editor

Netherlands





EERA (European Electronics



THIERRY VAN KERCKHOVEN Umicore Precious Metals Refining Head of Supply Recyclables Belgium



SCOTT VENHAUS Quantum Corp Vice President Global Supply Chain USA



JAN VLAK WEEE Forum President Belgium





ANDRITZ's Universal Cross-Flow Shredder QZ breaks down composite materials quickly and gently with rotating chains so that the individual fractions are exposed. Parts containing

hazardous substances are left intact, while potentially harmful gases are collected in compliance with WEEELABEX/CENELEC requirements. This single-stage process is conducted in a fully

encapsulated system warranting high throughput and rapid access to extremely clean fractions while reducing costs for energy consumption and maintenance. recycling@andritz.com

**ENGINEERED SUCCESS** ANDRITZ MeWa GmbH / Herdweg 4 / 75391 Gechingen / Germany / andritz.com/recycling



Watch the video:



**ARE YOU GETTING THE MOST OUT OF YOUR E-SCRAP YIELD?** 



YOU WILL.

SUPPIXX<sup>®</sup> technology



Contact us: TOMRA Sorting GmbH // +49 2630 9652 0 // recycling-sorting@tomra.com // www.tomra.com/recycling



#### DIFFERENT TREATMENT CONCEPTS FOR:

> FRIDGES AND AC > TONER CARTRIDGES > WEEE PLASTICS

> PRINTED CIRCUIT BOARDS **>** SMALL DOMESTIC APPLIANCES AND IT **> BIG DOMESTIC APPLIANCES** 



# Curious about the buzz?

Imagine a lamp processor that you can feed with both CFL, TL and LED and still get the cleanest and most profitable fractions on the market. Stay tuned... world news awaits at IERC 2020.

Let us also show you efficient and safe flat panel dismantling, our FPP60 is better than ever.



MRT System has been business leader and driver of develop ment in Mercury Recovery Technology over four decades With more than 300 successful installations worldwide, MRT System is present on all continents +46 455 30 28 70 | info@mrtsystem.com | mrtsystem.com

# EQUIPMENT FOR PROFITABLE E-WASTE RECYCLING

We offer you equipment and recycling solutions for processing of e.g. tyres, cable, electronics (WEEE) and industrial waste.



# We are the No.1 Supplier of Profitable Recycling Solutions Worldwide

Meet us at the IERC 22-24 January 2020 in Salzburg, Austria





# One tiny device can reduce the cost of recycling refrigerators by 7.5% and we bet you didn't know it.



The fact is, the recycling industry is not the most transparent in the world. We complicated and costly. are not so good at sharing what we know. If one technique is developed in. say, Indonesia, chances are that it won't be implemented in Bulgaria for another ten years.

There are many reasons for this. The main one is that jurisdictional laws governing the recycling industry vary from country to country. Also, because waste treatment technologies are big and cumbersome, it's



assumed that transferring knowledge is too

But what is really costing us is not sharing our knowledge. Not sharing best practices or the challenges we are facing and not engaging in networking and open communication with each other. If other industries behaved like ours we'd still be using rotary phones and driving Ford T.

We are E-Reciklaza, a recycling company that



specializes in electronic waste management. We are based in Serbia and have strong regional contacts, but our aspirations are global.

Through years of experience, we have developed efficient and environmentally sound ways of recycling WEEE, PET and sorting communal waste, and think we have valuable experiences to share. The controller shown here is one of them.



We'd love to hear from you. Perhaps it will lead to a successful partnership, joint venture or consulting engagement. I am Ninoslav Milenković, CEO, and would be interested to personally speak with you. You can reach me on +381631085231 (including Wapp) or at ninoslav@ereciklaza.com.

**E**•**RECI**k Reciklaža električnog i elektronskog otna



#### THE CONGRESS OF



The 19<sup>th</sup> International Electronics Recycling Congress IERC 2020 will be held at the:

Salzburg Congress Auerspergstrasse 6 5020 Salzburg, Austria

Phone +43 662 889870 +43 662 88987210 Fax www.salzburgcongress.at



Salzburg Congress is located in the centre of Mozart's city. Only 15 minutes from Salzburg Airport and 10 minutes from train station by taxi or bus. Direct trains available from Munich Airport (www.bahn.de) and Vienna Airport (www.oebb.at).

#### Salzburg – The city of Mozart

UNESCO nominated Salzburg's city centre is part of the world's cultural and natural heritage. Now the city officially ranks among the most beautiful cities in the world, certainly one deserving a high degree of protection.

# www.salzburg.info

We have been alerted that unofficial housing providers are trying to contact IERC delegates and exhibitors claiming to be associated to ICM and can secure hotel rooms at designated IERC hotels in Salzburg. These companies are not authorized to represent ICM nor IERC. Please note that we have no affiliation with any housing coordinator. If you have any concerns, contact us at info@icm.ch.

# HOTEL ACCOMMODATION



























Hotel Sheraton Grand Salzburg \*\*\*\*\* Phone +43 662 889990 www.sheratongrandsalzburg.com Next to Salzburg Congress

Hotel Bristol Salzburg \*\*\*\*\* Phone +43 662 873557 www.bristol-salzburg.at 5 minutes' walking distance to Salzburg Congress

IMLAUER HOTEL PITTER Salzburg \*\*\*\* (formerly Crowne Plaza – The Pitter) Phone +43 662 889780 www.imlauer.com/hotels/hotel-pitter-salzburg/ 2 minutes' walking distance to Salzburg Congress

Hotel IMLAUER & Bräu Salzburg \*\*\*\* (non smoking hotel) (formerly Best Western Hotel Imlauer) Phone +43 662 877694 www.imlauer.com//hotels/hotel-imlauer-salzburg 5 minutes' walking distance to Salzburg Congress

Hotel ACHAT Plaza Zum Hirschen Salzburg \*\*\*\*

Phone +43 662 889030 www.zumhirschen.at 5 minutes' walking distance to Salzburg Congress

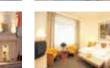
Austria Trend Hotel Europa Salzburg \*\*\*\* Phone +43 662 889930 www.austria-trend.at 10 minutes' walking distance to Salzburg Congress

Motel One Salzburg-Mirabell \*\*\* Phone +43 662 885200 www.motel-one.com 10 minutes' walking distance to Salzburg Congress

Star Inn Hotel Premium Salzburg Gablerbräu \*\*\* Phone +43 662 879662 www.starinnhotels.com 5 minutes' walking distance to Salzburg Congress







# WORKSHOP





Organizer	PolyCE Project – Post-Consumer Recycled Plastics for a Circular Economy
Moderators	Gergana Dimitrova, Fraunhofer IZM, Germany Franziska Maisel, Technische Universität Berlin, Germany
Date	Tuesday, January 21, 2020
Time	14.00 – 17.00
Location	Hotel Sheraton, Salzburg
Price	EUR 150 per person EUR 190 per person after November 30, 2019 (incl. coffee break)

Who should attend the workshop?

- WEEE Pre-Processors
- WEEE Recyclers
- Plastic Recyclers
- EEE Manufacturers
- Policy Makers
- Compounders

#### Why should you attend?

European industry partners have recently committed themselves to increase the use of recycled plastics in an effort to reduce plastic waste in the future. Estimations indicate that due to this new industry approach at least 10 million tons of recycled plastics could be supplied by 2025. Due to the increasing share of plastic in EEE, rising collection targets and the remaining challenges to achieve higher quality of the recycled plastics, improved plastics recycling is necessary. While there are established solutions for recovering the metal fractions, the recycling of mixed plastics into clean, recyclable high-quality plastic flakes remains a major challenge.

The goal of this workshop is to elaborate together with pre-processors, recyclers and manufacturers how to improve recycling steps to produce high-quality polymers which can be reused in electronic applications. Insights from the European project PolyCE (www.polyceproject.eu/) will be presented considering different steps along the value chain such as optimized clustering, recommendations on preprocessing, examples how to use recycled plastics in new electronic applications and considerations on design for recycling.

End-of-life actors like pre-processors, plastic recyclers or moulders can contribute to the discussion for producing high-quality polymers to be used in electronic applications.

#### Participants will receive a certificate of attendance.

The workshop will be held with a minimum of 8 participants.

# **CONGRESS SCHEDULE**

Time	Room "Europe" (2 <sup>nd</sup> floor)	Room "Mozart" (ground floor)	Exhibition
	Tuesday, Janua	ıry 21, 2020	
13.00 - 14.00	Registration in the exhibition hall		
	Workshop		Hotel
14.00 - 17.00	How to Optimize Plastics Recycling t Polymers for Circular Electronics?	o Obtain High Quality	Sheraton
17.00 - 19.00	Registration in the exhibition hall		

	Wednesday, Jan	uary 22, 2020	
08.00 - 09.30	Registration and welcome coffee in t	he exhibition hall	
09.30 - 10.00	Welcome and Introduction		
10.00 - 10.45	KEYNOTE SPEAKER		
10.45 - 11.30	KEYNOTE SPEAKER		~
11.30 - 11.45	Presenting of the "IERC HONORARY AWARD"		l (1ª floor Center
11.45 - 12.15	KEYNOTE SPEAKER		E B
12.15 - 14.00	Lunch in the exhibition hall		Hal
14.00 - 15.00	ROUND TABLE: "Shifting Markets China Ban 2 Years On"		Exhibition Hall (1 <sup>st</sup> floor) Congress Center
15.00 - 15.30	Coffee break in the exhibition hall		i X
15.30 - 17.00	Plastics – Smart Recycling Solutions 1	Standards	-
from 17.00	Cocktail reception in the exhibition h	all sponsored by big	
from 19.00	Networking dinner "Country Night"		

Thursday, January 23, 2020			
08.00 - 09.00	Welcome coffee in the exhibition hal	l	
09.00 - 10.30	Plastics – Smart Recycling Solutions 2	Innovation 1	
10.30 - 11.00	Coffee break in the exhibition hall		~
11.00 - 12.30	Country Reports Innovation 2		i oor
12.30 - 14.00	Lunch in the exhibition hall		hte
14.00 - 15.00	Circular Economy	E-Scrap Challenges	Hall (1ª floor) sss Center
15.00 - 15.30	Coffee break in the exhibition hall		
15.30 - 16.30	ROUND TABLE: "Collection Targets! – Achievability & Accountability"		Exhibition Congre
16.30 - 16.45	WRAP UP / CLOSING REMARKS		i Xhi
from 16.45	Cocktail reception in the exhibition h	all sponsored by box	ш

#### Friday, January 24, 2020

	Plant tours	by bus
08.00 - 17.15	Müller-Guttenbrunn Group, Amstetten/Kematen	from Hotel
08.15 - 14.45	Montanwerke Brixlegg AG, Brixlegg	Sheraton
	Workshops	
09.00 - 12.00	Requirements of the R2v3 Standard	Hotel Sheraton
09.30 - 12.30	Batteries – Power Density vs. Safety	Jileiulon



Source: Picture by Philips, Plasti material by MGG Polymers

"We will show best practices for closing the plastic loop, share experiences and provide hands on solutions with the integration of recycled plastics in new EEE."

Gergana Dimitrova, Fraunhofer IZM

# WHO SHOULD ATTEND?





- Original electronic equipment manufacturers (OEMs)
- Reuse & refurbishment organizations
- Schemes and take back companies
- Ferrous & non-ferrous metal traders
- Collection and transportation companies
- Recycling and dismantling companies
- Shredding companies
- Plastics industry
- Battery industry and recyclers
- Non-ferrous metal industry
- Ferrous and stainless steel industry
- Eco-designers and engineers
- Environmental authorities
- Universities and research institutes

ROBERT C. TER KUILE Amazon USA

**Robert ter Kuile** is the Global Director of Environmental Affairs at Amazon where his teams actively develop, implement, and operationalize Amazon's global programs and policies on environmental affairs. His teams are responsible for developing, maintaining, and collaborating with internal and external stakeholders, managing Amazon's environmental risks globally, through innovative technology solutions and cross-functional collaborations.

"European Green Deal: Boosting Recycling in the Single Market"

**KEYNOTE SPEAKER** 

Prior to joining Amazon, Robert served as

PepsiCo's Senior Director of Environmental Sustainability in the Global Public Policy group, where he was responsible for the global public policy on environmental sustainability initiatives. Robert also served as the Director of Energy and Climate Change for PepsiCo's Global Operations developing and implementing energy and carbon reduction strategies.

Prior to joining PepsiCo, Robert served in various governmental roles for what is now the Texas Commission of Environmental Quality, and has held several environmental and sustainability consulting roles.





# **KEYNOTE SPEAKER**



PROF. DR EGBERT LOX Umicore Belgium

Egbert Lox earned his MSc (1982) and PhD (1987) in Chemical Engineering at the University of Ghent, Belgium.

"The Complexity of Sustainable Mobility"

He joined the central research laboratories of Degussa AG (Germany) in 1987, where he built up the R&D group for automotive emission control catalysts and assumed consecutive management levels in that area till 2006. From 2006 to 2012 he took care of the management of the corporate R&D team of Umicore, which deploys its activi-

ties in Belgium and in Germany. Since 2013 he has assumed the position of Senior Vice President Government Affairs, based in Umicore's headquarters in Brussels, Belgium.

He represents Umicore on the Board or Executive Committee of several industry associations in Belgium, France, Germany and the EU.

He lectures on automotive emission control catalysts amongst others at the Department of Mechanical Engineering of the Karlsruhe Institute of Technology (KIT) in Germany. In 2015 he was granted the honorary professorship at this university.

He is a permanent member of the Royal Flemish Academy of Belgium for Sciences and Arts (KVAB) and elected member of the Academia Scientiarum et Artium Europaea (EASA, Salzburg, Austria).

#### SURENDRA BORAD PATAWARI **Chairman Gemini Corporation NV** Belgium

Surendra Borad Patawari is Founder and Chairman of Gemini Corporation, one of the world's largest circular economy market makers. Since 1989 Gemini has been engaged in worldwide sourcing & distribution of recyclable & reusable plastics, paper, metal and rubber. Gemini collects 400'000 tons of reusable and recyclable plastics from over 400 locations in 24 countries for reprocessing at over 150 plants in 35 countries. With a stronaly committed team of 300 people, Gemini manages annually 1,7 million MT of recyclable materials.

As a keynote speaker at many major recycling conferences across the globe, he continuously carries out his mission of giving second life to materials which otherwise may be discarded. Surendra Patawari is a Board Member of The Global Alliance to End Plastic Waste and is a Winner of several awards, i.e. the US President's "E" Award, Global Business Leader Award (Institute of Chartered Accountants of India), Global Recycler of the Year (MRAI).

To fulfill his passion of "sharing", he has adopted and takes care of 11 villages in India for their medical needs, has built and operates two schools for 400 students, and supports the plantation & maintenance of a green forest in the desert in India with 100'000 trees.

His most recent social project of creating and providing waste management infrastructures in India might become the most prestigious one, because it will uplift the lives of thousands of street waste pickers in India.

"Worldwide Scenario on **Plastics Recycling**"



**KEYNOTE SPEAKER** 



# CONGRESS PROGRAM

#### TUESDAY, JANUARY 21, 2020

13.00 – 14.00 Registration in the exhibition hall

#### 14.00 – 17.00 Workshop

How to Optimize Plastics Recycling to Obtain High Quality Polymers for Circular Electronics?

17.00 – 19.00 Registration in the exhibition hall

#### WEDNESDAY, JANUARY 22, 2020

- 08.00 09.30 Registration and welcome coffee in the exhibition hall
- 09.30 10.00 <u>Welcome and Introduction</u> Jean Cox-Kearns, Chairman of the Steering Committee

<u>Results of the Industry Barometer</u> Stephane Burban, Glencore International AG, Switzerland

#### 10.00 - 10.45 KEYNOTE SPEAKER

"European Green Deal: Boosting Recycling in the Single Market" Robert C. ter Kuile, Amazon, USA Moderator: Jean Cox-Kearns, Chairman of the Steering Committee

#### 10.45 – 11.30 KEYNOTE SPEAKER

"The Complexity of Sustainable Mobility" Prof. Dr Egbert Lox, Umicore, Belgium Moderator: Stephane Burban, Glencore International AG, Switzerland

#### 11.30 - 11.45 PRESENTING OF THE "IERC HONORARY AWARD"

11.45 – 12.15 KEYNOTE SPEAKER

"Worldwide Scenario on Plastics Recycling" Surendra Borad Patawari, Gemini Corporation NV, Belgium

Moderator: Jean Cox-Kearns, Chairman of the Steering Committee

#### 14.00 - 15.00 ROUND TABLE: "Shifting Markets China Ban 2 Years On"

Introduction & Presentation: Weiwei Luo, Beveridge & Diamond, P.C., USA

Moderators: Stephane Burban, Glencore International AG, Switzerland Martijn Reintjes, Recycling International, Netherlands

#### Participants:

Olivier François, Group GALLOO, Belgium Weiwei Luo, Beveridge & Diamond, P.C., USA Surendra Borad Patawari, Gemini Corporation NV, Belgium Stephan Schwarz, ALBA International Recycling GmbH, Germany Craig Thompson, Semper Augustus Consulting, Latvia

15.00 - 15.30 Coffee break in the exhibition hall

<u>Plastics – Smart Recycling Solutions 1</u> Session Chairman: Dr Sven Grieger, EARN Elektroaltgeräte Service GmbH, Germany		<u>Standards</u> Session Chairman: Jan Vlak, WEEE Forum, Belgium	
15.30 - 16.00	"Black Plastic Sorting with MWIR" <b>Remi Gerriet, Pellenc ST, France</b>	15.30 – 15.50	"R2v3: Exploring Changes in the Next R2 Standard" <b>Corey Dehmey, SERI, USA</b>
16.00 - 16.30	"Fit for the Requirements of Circular Economy" Clemens Kitzberger, EREMA Group GmbH, Austria	15.50 – 16.10	"CEWASTE Voluntary Certifica- tion Scheme for Improving CRM Recovery from WEEE and Waste Batteries", <b>Dr Mathias Schluep</b> , <b>World Resources Forum</b>
16.30 - 17.00	"Plastic Sorting Solution for		Association, Switzerland
	Japan'' Jelle Saint-Germain, AD REM N.V., Belgium	16.10 – 16.30	"Quality Standards for the Treatment of WEEE-Ongoing Commission Study and Further Considerations" Bettina Lorz, European Commission, Belgium
		16.30 – 16.50	"The Case for Legally Binding WEEE Standards", <b>Pascal Leroy,</b> WEEE Forum, Belgium & Lida Stengs, EERA, Netherlands
		16.50 – 17.00	Q & A
from 17.00	Cocktail reception in the exhibi	tion hall spons	ored by blu

from 19.00 Networking dinner "Country Night"



# CONGRESS PROGRAM

#### THURSDAY, JANUARY 23, 2020

08.00 - 09.00 Welcome coffee in the exhibition hall

<u>Plastics – Smart Recycling Solutions 2</u> Session Chairman: Venkatesha Murthy, Vans Chemistry Pte. Ltd., Singapore			man: Marc Affüpper, Sims lutions EMEA, Germany
09.00 - 09.30	"Chemical Recycling – Buzz- word, Dead-End or Solution" Christian Haupts, RECENSO GmbH, Germany	09.00 – 09.30	"AR Europe R&D Center – Research and Development for WEEE Processing" Patrick Sauer, AR EUROPE s.r.o., Czech Republic
09.30 - 10.00	"Plastics Containing Flame Retardants: Part of a Circular Economy Thanks to Innovative Technologies" Lein Tange, ICL-IP, Netherlands "Chemical Recycling of WEEE	09.30 – 10.00	"Minimization of Fire Risks in Electronic Recycling Industries: Applications of a New Innovative Infrared Detection Technology" Mark Müller, ORGLMEISTER Infrarot-Systeme GmbH & Co. KG,
	Plastics: Key Step for New High- Quality Plastics'' Alexander Hofmann, Fraunhofer UMSICHT, Germany	10.00 – 10.30	Germany "Hazardous Waste + Artificial Intelligence = Profit" Paudy O'Brien, FPD Recycling, Ireland
10.00 11.00	0		

10.30 - 11.00 Coffee break in the exhibition hall

<u>Country Reports</u> Session Chairman: Scott Venhaus, Quantum Corp, USA			man: Thierry Van Kerckhoven, ious Metals Refining, Belgium	ALKS
11.00 – 11.30	"Public Private Partnership for Sustainable E-Waste Mana- gement in Rwanda, Africa" <b>Olivier Mbera, EnviroServe</b> <b>Rwanda, Rwanda</b>	11.00 – 11.30	"Exploring Image Recognition Applications in the E-Waste Sector: A Belgian Use Case" Hederik Tijs, Recupel vzw, Belgium	
11.30 - 12.00	"Update on E-Waste Regulations for Australia and New Zealand" Alvin Piadasa, TES Group, Australia	11.30 – 12.00	"DISPLAY – Upscale of Material Recovery from Display Applica- tions and Printed Circuit Boards" Dr Katrin Bokelmann, Fraunhofer	,
12.00 - 12.30	"Updates on WEEE recycling in Brazil" <b>Danilo Mella, Lorene Importação e Exportação Ltda., Brazil</b>		IWKS, Germany	

14.00 – 14.30	"BFRS, WEEE Plastics and the Circular Economy" Dr Kevin Bradley, BSEF – The International Bromine Council, Belgium	14.00 – 14.30	"Impact of Plastronics & IoT, Internet of Things, on EEE Com- position & WEEE Management" Olivier François, EuRIC – European Recycling Industries Confederation, Belgium
14.30 – 15.00	"Cloud Circular Economy" Paul Clark, Microsoff, USA	14.30 – 15.00	"Solving the E-Waste Problem (StEP) Initiative: Enabling Global Multi-Stakeholder Cooperation" Elisabeth Smith, StEP Initiative, Germany
15.00 - 15.30	Coffee break in the exhibition h	all	
15.30 – 16.30	<u>ROUND TABLE:</u> "Collection Ta Moderator: Jonathan Perry, Dell		
	Participants: Kevin J. Dillon, ERI – Electronic R Korrina Hegarty, APPLIA – Home Bettina Lorz, European Commiss Dr Federico Magalini, Sofies UK Alvin Piadasa, TES Group, Austro	Appliance Eusion, Belgium Consulting Lim	rope, Belgium
16.30 - 16.45	WRAP UP / Closing Remarks		_
from 16.45	Cocktail reception in the exhibi	tion hall spons	ored by
FRIDAY, J	ANUARY 24, 2020		
08.00 – 17.15 08.15 – 14.45	<u>Plant tours</u> Müller-Guttenbrunn Group, Ams Montanwerke Brixlegg AG, Brixl		en
	Workshops		
09.00 - 12.00 09.30 - 12.30	Requirements of the R2v3 Stand Batteries – Power Density vs. Saf		

<u>Circular Economy</u> Session Chairman: Stephan Krafzik, Online-

Magazin 320°, Germany

TALKS

E-Scrap Challenges Session Chairman: Dr Marco Buletti, Federal

Office for the Environment (FOEN), Switzerland



# **SIDE EVENTS**

TUESDAY, JANUARY 21, 2020

Workshop (in the Hotel Sheraton)

14.00 - 17.00How to Optimize Plastics Recycling to Obtain High **Quality Polymers for Circular Electronics?** Moderators: Gergana Dimitrova, Fraunhofer IZM, Germany

Franziska Maisel, Technische Universität Berlin, Germany

ப

#### WEDNESDAY, JANUARY 22, 2020

Networking dinner (in the Salzburg Congress)

COUNTRY NIGHT from 19.00



FRIDAY, JANUARY 24, 2020

Plant tours (buses are leaving from in front of the Hotel Sheraton)

Müller-Guttenbrunn Group, Amstetten/Kematen 08.00 - 17.15

08.15 - 14.45 Montanwerke Brixlegg AG, Brixlegg MONTANWERKE

Workshops (in the Hotel Sheraton)

09.00 - 12.00 **Requirements of the R2v3 Standard** Moderator: Corey Dehmey, SERI, USA

09.30 - 12.30 Batteries – Power Density vs. Safety Moderator: Dr Claude Chanson, RECHARGE, Belaium





RE CHARGE



PUT ON YOUR BOOTS, GRAB YOUR HAT AND JOIN US FOR THE EXCITING **COUNTRY NIGHT NETWORKING DINNER!** 

JANUARY

DON'T MISS IT AND

**REGISTER TODAY** 

SAVE THE DATE

# WORKSHOP









# Requirements of the R2v3 Standard

Organizer	SERI – Sustainable Electronics Recycling International
Moderator	Corey Dehmey
Date	Friday, January 24, 2020
Time	09.00 – 12.00
Location	Hotel Sheraton, Salzburg
Price	EUR 150 per person EUR 190 per person after November 30, 2019 (incl. coffee break)

R2 Certification is the most globally respected standard for responsible reuse and recycling of used electronics. More than 900 facilities in 34 countries are certified to the best practices required by the R2 Standard for data security, testing and repair, environmental protection, resource preservation, and the health and safety of workers and communities.

This workshop is for anyone who wants to learn more about how R2 Certification reduces risks in the reuse-recycling chain for used electronics. The session will include an overview of the requirements in the next version of the R2 Standard (R2v3), and will benefit ITAD service providers, electronics repair-recycling companies, users of ITAD and recycling services, and government agencies and oversight bodies.

At the end of the session will be a brief discussion about the steps to achieve R2 Certification, the associated costs, and why a growing number of industries and government agencies require R2 certification for ITAD and recycling vendors.





Photo credit: RECHARGE ©

# WORKSHOP

# Batteries – Power Density vs. Safety

Organizer	RECHARGE – The European Advanced Rechargeable & Lithium Batteries Association
Moderator	Dr Claude Chanson
Date	Friday, January 24, 2020
Time	9.30 – 12.30
Location	Hotel Sheraton, Salzburg
Price	EUR 150 per person EUR 190 per person after November 30, 2019 (incl. coffee break)

### Who should attend the workshop?

- WEEE Recyclers
- Producer Responsibility Organizations
- Waste Transporters
- Collection Schemes

## Why should you attend?

Batteries play a pivotal role in an increasingly electrified world. Advanced rechargeable batteries are a main enabler for the transition towards zero-emission mobility and decarbonized energy generation. They power an endless number of everyday applications, from smartphones, tablets and power tools to robots, wheelchairs and bikes.

Significant efforts in cost reduction and technological improvements in life duration and power density continue to enable the creation and deployment of new battery-powered EEE.

This workshop will provide insights in market trends and will discuss what more power-dense, higher energy batteries mean for the WEEE sector, as well as the safety recommendations.

Elaborate with our experts from industry and legislation:

- Which new waste streams containing batteries will hit the WEEE industry in the coming years
- What impact an increasingly battery-powered EEE market has on packaging, transport and waste treatment
- What waste storage, handling and transport measures apply to ensure safety of products powered by power-dense, highenergy batteries.

Participants will receive a certificate of attendance.

The workshop will be held with a minimum of 8 participants.

Participants will receive a certificate of attendance. The workshop will be held with a minimum of 8 participants.

# www.mgg-recycling.com



# **Unprecedented recycling depth**

Patented smasher de-pollution technology

Latest shredding and separation technologies

Highly innovative post-shredder technologies

Presence in central and south eastern europe





# **Responsibility starts with the raw material**





WEEE plastic recycling — RoHS and REACH compliant PCR plastics

> ABS, HIPS, PP and PC/ABS

Long experience in

Raw material for new high-tech equipment

MGG GROUP MGG METREC MGG METRAN MGG POLYMERS

 T +43 7472 / 64 181

 T +43 7472 / 64 181

 T +43 7476 / 77 507

 T +43 7476 / 77 488

office@mgg-recycling.com office@mgg-recycling.com metran@mgg-recycling.com office@mgg-polymers.com

# **PLANT TOUR**

FRIDAY, JANUARY 24, 2020

# MÜLLER-GUTTENBRUNN GROUP, AMSTETTEN/KEMATEN



08.00	Departure by bus to Müller-Guttenbrunn Group
10.30	Arrival at Müller-Guttenbrunn Group
10.30 - 15.00	Visit to the shredder plant of MGG Metrec
	Visit to the post-shredder treatment plant of MGG Metran
	Visit to the plastic recycling plant of MGG Polymers
17.00*	Arrival at Salzburg Airport
17.15	Arrival at Hotel Sheraton

The **Müller-Guttenbrunn Group** is the largest e-waste processor in Central and South Eastern Europe with an unprecedented recycling depth.

The **MGG Metrec** facility in Amstetten de-pollutes the e-waste with the patented Smasher<sup>™</sup>. After the de-pollution step a new and specialized shredder with a design capacity of 80,000 MT recovers a high quality ferrous metal scrap with very little loss of copper and other non-ferrous metals in the ferrous fraction. The shredder residues are transported to MGG Metran.

**MGG Metran** combines a large number of innovative separation technologies to further process these electronic shredder residues into a range of non-ferrous metal concentrates as well as printed circuit boards. Even metals <1 mm can thus be extracted from these residues to be re-introduced into the material cycle. In these processes a valuable plastics fraction is created, which is delivered to MGG Polymers for further processing.

**MGG Polymers** recovers a high quality post-consumer ABS, HIPS, PP and even PC-ABS resins for use in demanding applications. Premium grades are UL-HB recognized, impact modified and/or available in different colours – replacing virgin plastics and closing the circle for tech-plastics from WEEE. These 100% Post-Consumer Recycled (PCR) plastics reduce energy consumption by over 80–90% and protect the environment by reducing up to four tonnes of CO<sub>2</sub> emissions per tonne of plastics produced, compared to the production of one tonne of "virgin" plastics from petrochemicals. The MGG Polymers plastics recycling facility covers approximately 20,000 m<sup>2</sup> and has a processing capacity of well over 50,000 tonnes per annum with a workforce of over 100 employees.

www.mgg-recycling.com, www.mgg-polymers.com

\* No guarantee of arrival time due to traffic conditions. The plant tour will only take place with a minimum of 8 participants.

# **PLANT TOUR**

FRIDAY, JANUARY 24, 2020

# MONTANWERKE BRIXLEGG AG, BRIXLEGG



08.15**	Departure by bus to Montanwerke Brixlegg AG
10.15	Arrival at Montanwerke Brixlegg AG
10.15 – 12.30	Visit to the refinery and foundry
14.30*	Arrival at Salzburg Airport
14.45	Arrival at Hotel Sheraton

**Montanwerke Brixlegg AG** is Austria's leading copper processor. With 556 years of experience in upcycling copper today the organization is one of the leading copper refining works.

Copper and precious metals as well are the main part of the value chain. The annual output of Grade-A cathodes and cast billets in various specifications is more than 150,000 tonnes.



# APPROVED QUALITY AND EXCELLENT SERVICE FOR CUSTOMERS ALL OVER THE WORLD





Find more: www.montanwerke-brixlegg.com





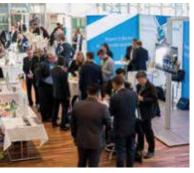
UPCYCLING

\*\* Border crossing, your passport is required.
 \* No guarantee of arrival time due to traffic conditions.
 The plant tour will only take place with a minimum of 8 participants.

Montanwerke Brixlegg AG Werkstraße 1 · 6230 Brixlegg · Austria Tel: +43 5337 6151 · Fax +43 5337 6151 102 office@montanwerke-brixlegg.com

# EXHIBITING AND ADVERTISING

# LAYOUT EXHIBITION AS PER SEPTEMBER 30, 2019







Reach key industry decision-makers and promote
your products to all congress attendees.

The fees are:

Booth 6 m <sup>2</sup> (2 m x 3 m) Booth 12 m <sup>2</sup> (3 m x 4 m)		3'690 4'990
<b>Display board</b> (1 m x 2 m)	EUR	690
<b>Poster presentation</b> (wall rental)	EUR	390









# EXHIBITORS AS PER SEPTEMBER 30, 2019





# ORGANIZER



**JEANETTE** DUTTLINGER Congress Organizer



SUSANN SCHMID Congress Assistant

ICM AG

International

Schwaderhof 7

+41 62 785 10 00

info@icm.ch

www.icm.ch

SANDRA

MANNHART

Congress & Marketing

5708 Birrwil, Switzerland

+41 79 124 08 50 (Japanese)

+86 182 176 28 910 (Chinese)



YING LIU REICHENBACH Congress Assistant



Congress Assistant



**ANNA ROSA** BAUMANN Congress Assistant

MICHAL

FREI



HIKARU BHEND Congress Assistant



LAURA ZEHNDER Congress Assistant





Congress Assistant

Participants registering and paying before November 30, 2019 will benefit from a reduced registration fee. The registration fee includes congress, entrance to the exhibition, proceedings and luncheons.

# **REGISTRATION FEES**

Congress registration fee (Jan. 22 & 23)	before Nov. 30, 2019		after Nov. 30, 2019	
Fee for participants Fee for speakers Fee for students	EUR EUR EUR	1'690 1'090 690		1'790 1'190 790
Networking dinner (Jan. 22) Networking dinner spouse (Jan. 22)	EUR EUR	100 120	EUR EUR	130 150
<b>Workshops</b> PolyCE – Plastics Recycling (Jan. 21) Batteries – Power Density vs. Safety (Jan. 24) Requirements of the R2v3 Standard (Jan. 24)	EUR EUR EUR	150 150 150	EUR EUR EUR	190 190 190
<b>Plant tours</b> (Jan. 24) Montanwerke Brixlegg Müller-Guttenbrunn Group	EUR EUR	50 50	EUR EUR	70 70

Prices do not include 20% Austrian VAT.

Congress registration on site EUR 100 surcharge

# **Online registration**

You may also register online at: https://ierc.icm.ch

## Proceedings

If you cannot attend the congress, you may purchase the complete proceedings at EUR 350. Participants will get the proceedings free of charge.

# Payment

Payment should be made in EUR by bank transfer or by credit card.

Congress Assistant





# IERC HONORARY AWARD **WINNERS**

January 2019 EERA – European Electronics Recyclers Association, Netherlands

HONORARY AWARD

WINNERS

Norbert receives this award in recognition of his long-lasting leadership within EERA, for his tireless commitment to the e-waste agenda, recycling and contributions to the WEEE Directive dialogue and development over many years. He also receives the award for the support he has given to our congress, his contributions to the lecture group, his chairing of panel sessions and discussions and his overall support for the congress for many years.



#### MANFRED FAHRNER ALBA Electronics Recycling GmbH, Germany

NORBERT ZONNEVELD

Manfred receives this award in recognition of his lifetime contribution and personal commitment to developing the recycling industry and especially the WEEE recycling business. He was one of the founding fathers of the European Electronics Recyclers Association – EERA.

# CHRISTIAN MÜLLER-GUTTENBRUNN January 2017 CEO of Müller-Guttenbrunn Group, Austria

Christian receives this award in recognition of his work developing new recycling processes and founding new Cleantech companies in Austria and Eastern Europe in various sectors such as plastics recycling and metal sorting.

(Sec.
350
SI

#### STEVE SKURNAC Global President of Sims Recycling Solutions, USA

January 2016

January 2015

January 2018

Steve receives this award for his achievements, support and dedication to the e-waste industry. With a career spanning more than a quarter of a century, working in markets around the globe Steve has become a figurehead of an industry which historically managed waste but is now known as resource recovery or urban mining.



#### RON GARAN Impact CoLab, Retired NASA Astronaut, USA

Ron receives this award in recognition of his humanitarian spirit and work to improve our planet fostering collaborative efforts across global humanitarian organisations. He lived and worked in space for 178 days and has a unique perspective of our impact on the earth from space.

### DR BERTRAND PICCARD Initiator and Chairman of the Solar Impulse Project, Switzerland

January 2014

Bertrand receives this award in recognition of his pioneering spirit to go beyond today's human and technical limits to fly around the world without fuel and without pollution. His remarkable commitments to save energy, to demonstrate the importance of clean technologies and to place dreams and emtions.

#### JIM PUCKETT **Basel Action Network, USA**

January 2013

Jim receives this award in recognition of his pioneering and breathless work to prevent the globalization of toxic wastes. The Steering Committee of IERC also honours his dedication to contributing comprehensive strategies for the proper treatment of e-waste across the alobe.

### DR MIKE BIDDLE Founder of MBA Polymers, Inc., USA

#### January 2012

Today, MBA recycles 1 million pounds of plastics waste a day! Mike receives this award in recognition of his powerful spirit and lifetime work to develop a genius, very low energy-consuming process to recycle plastics waste in order to drive industry and society towards a better, cleaner and fairer world.



#### MANFRED BECK **Recycling International, Netherlands**

#### January 2011

Manfred receives this award in recognition of his lifetime work and editorial skills in promoting sustainability, inspiring entrepreneurs to invest in environmental technologies and businesses, in order to drive industry and society towards a better and cleaner world.

#### **KARL-HEINZ FLORENZ** the Father of the WEEE Directive, European Parliament

#### January 2010

Karl-Heinz receives this award in recognition of his outstanding commitment, leadership and fighting for a sustainable world, which resulted in the creation of the most important regulation regarding Electronics Waste Recycling on the European continent.



# DR MARCO BULETTI Federal Office for the Environment, Switzerland

January 2009



#### Marco receives this award in recognition of his outstanding commitment and leadership which resulted in the creation of the Mobile Phone Partnership Initiative (MPPI).

# PROF. DR IR. AB STEVELS Philips Consumer Electronics, Netherlands

January 2008

Ab receives this award in recognition of his outstanding commitment to preserving our environment by developing and promoting efficient recycling technologies.



# **Upcoming ICM Events:**

20<sup>th</sup> International Automobile Recycling Congress IARC 2020



E-Mobility & Circular Economy



**EMCE 2020** 



June 29 – July 1, 2020 Tokyo, Japan

25<sup>th</sup> International Congress for Battery Recycling ICBR 2020



September 16 – 18, 2020 Salzburg, Austria



20<sup>th</sup> International Electronics Recycling Congress IERC 2021



BOLIDEN

umicore





**SPONSORS** 





MONTANWERKE



**MGG** POLYMERS













# Johanna wants to save lives. She couldn't without metals.

vital role in the development of modern society. Much of this development is dependent on metals, which are used in medical equipment, hygiene solutions and protection against radiation. Johanna is ready to do her



# **FireBox** SECURE YOUR LOGISTICS FOR LITHIUM **BATTERIES AND ELECTRIC VEHICLES**

# **STORAGE**



20- or 40-foot-container



# LOGISTICS



Integrated FirePro fire alarm and Aerosol extinguishing system



#### **BASIC EQUIPMENT**

- 20- or 40-foot-container
- Fire alarm and Aerosol
- Light
- extinguishing system



of oxygen

- SYSTEM • For fire classes A/B/C and F
- FirePro technology extinguishes fires at a molecular level by interrupting the chemical chain reaction in the source of the fire without depriving it

#### **OPTIONS**

- Sprinkler system with Storz
- connection Collection tray for liquids
- Battery power supply
- Sliding platform
- Winch
- Hook system for use as roll-off
- container
- Side doors
- Fire extinguishers

FireBox protects you and your business. Do not run the risk of a lithium battery setting your business on fire.



**BLUBOX Trading AG** Schwaderhof 7, 5708 Birrwil, Switzerland P +41 62 785 1003, M +41 79 208 93 09 info@blubox.ch



# PEOPLE

# ECONOMY

# ENVIRONMENT

What does sustainability mean to us?

**PARTNERS WHO GIVE SOMETHING BACK.** And, together with Aurubis, create a traceable, uninterrupted material cycle. One of our goals is to use a higher volume of complex secondary raw materials in addition to copper raw materials and to recover a number of additional metals. This is just one example of our Sustainability Strategy.

Find out more at www.aurubis.com/sustainabilitystrategy

Responsibly transforming raw materials into value to provide metals for an innovative world

