

Date: March 19, 2018
Editor: Thom van Gerwe
Telephone: +31 6 21 700578
E-Mail: alumni@femp.org
Subject: Newsletter Spring 2018



To: **Members FEMP; Alumni and students EMMEP programs**

FEMP NEWSLETTER SPRING 2018

Dear students, alumni, industry members, colleagues and guests,

Following you will find the first newsletter of 2018 with an update on the activities of FEMP and the EMMEP programs. Please contact info@femp.org or alumni@femp.org in case you have any questions or remarks.

UPCOMING ACTIVITIES

9th June 2018	Alumni Council Meeting (by invitation only)
9th June 2018	Alumni Event Düsseldorf
30st August 2018	FEMP and EMMEP Meeting (by invitation only)
31st August – 01st September 2018	Reunion

TABLE OF CONTENTS

UPCOMING ACTIVITIES	1
ANNOUNCEMENTS	2
TIE CEREMONY IN CAFÉ 'HET NOORDEN', DELFT	2
EIT	3
EDUCATIONAL UPDATE	4
INDUSTRIAL UPDATE: GHH - MINE MASTER	5
INDUSTRIAL UPDATE: TOMRA	5
FEMP REUNION	6
ALUMNI/STUDENT EXPERIENCES: EMEC, A YEAR THAT CHANGED MY LIFE.	7
PICTURES	9
FEMP UPDATE	10
SPONSORS	11
MISCELLANEOUS INFORMATION	12
CONTACT INFORMATION	12

ANNOUNCEMENTS

By Thom van Gerwe

ALUMNI EVENT

On the 9th of June we organize, together with Elbert Loois and Harmen Oterdoom, drinks with the 'Düsseldorfer Abteilung des Weltweiten Glückauf Stammtisches'. More information about the exact time and location will follow, but please contact alumni@femp.org to let us know if you are interested to join!

GHH-MINE MASTER AND TOMRA

FEMP is pleased to announce that GHH - Mine Master and TOMRA have joined FEMP as a member company (See page 5).

It is noticeable that the industry has started hiring again. The fact that the university Resource Engineering programs have declined, because of decreasing enrolment combined with the shrinking staff numbers in industry, is causing companies to take a more positive look at the future regarding hiring of graduates. Since December 2017 two companies are have joined the FEMP network and are now supporting FEMP as a member. Also, several companies are interested to join FEMP in the future.

TIE CEREMONY IN CAFÉ 'HET NOORDEN', DELFT

By Johannes Sieger



After a one-and-a-half-year long journey through Finland, Germany and the Netherlands, the EMC students gathered on the 27th of January for a final evening in the traditional mining café 'Het Noorden' before spreading out to different countries and universities to finish their studies and obtain their master's degree.

The evening started with tasty beer and traditional Dutch food. The students were playing cards and enjoyed some beer, while indulging in reminiscences of the past shared time. Later at that night it was time for the renowned tie ceremony. Groups of three to six EMC students were called to step on top of a wooden table and one after another, every student was taken for a ride, when one EMC Alumni told a funny story that happened to each of the students. After that, the students that were standing on the table had to prove that they truly deserve the FEMP tie, by jointly emptying a boot of beer. After that we stayed until midnight and greeted the new day by singing the 'Steigerlied'. The whole evening and the tie ceremony constituted a dignified and felicitous finish of the last one-and-a-half-year study period during the EMC, and we are already looking forward to seeing each other again at the next FEMP Reunion.



EIT

By Hans de Ruiter

EMC is looking to strengthen its program, which already excels at involving industry in its teaching activities, as well as entrepreneurship and innovation education. For example, in 2017 EMC obtained the EIT-Label, a quality seal awarded by EIT to Master and PhD programs which excel in shaping a new generation of students into game changers and innovators. Students of EIT Label programs learn how to combine their specialist knowledge with key innovation and entrepreneurship skills to develop solutions to pressing societal challenges. Obtaining the EIT-Label has paved the way for EMC to become involved in further KAVA initiatives (KIC Added Value Activities). In 2017 a call for KAVA proposals for 2019 was announced. Proposals had to be received by the EIT by 28 February 2018. [A summary of the proposal can be downloaded from the EMMEP website or can be requested by contacting Hans de Ruiter \(\[info@femp.org\]\(mailto:info@femp.org\)\).](#)

Obtaining the EIT-Label has paved the way for EMC to become involved in further KAVA initiatives.

The KAVA proposal made by the European Mining Course (EMC) aims at challenging the mining industry to outperform itself. The EMC realizes this by educating the future mining engineers to be critical thinkers, innovators who challenge the status quo from inside or outside a company.

Thus, building upon the experience of over 20 years, the EIT-Labelled EMC Master Program has initiated this EMC-GCP (Game Changer Project), to further strengthen the program to deliver mining engineers of the future to the International Industry. The project establishes a strong entrepreneurial focus in the program by incorporating business-oriented case studies provided by the industry, taught to both student and teacher. Interactive field trips provide practical insights for a multitude of case studies, enabling the students to contextualize the theory in the real world industrial setting. Furthermore, the project strengthens the recruitment process, by including an industry challenge to attract the future game changers via online media and international MSc program fairs. Finally, the project will bring together students from three EIT Label Master programs – EMerald, SiNREM and EMC – all addressing different raw materials disciplines, to collaborate on industrial case studies and further build the EIT Label student community.

The proposal considers four challenges faced by the EMC and linked to the overall objectives of EIT. For each challenge, a solution is proposed as part of a work package in this project. The aim of these work packages is:

- Attract future Game Changers by branding the EMC program and optimize the recruitment of new students. Both videos which are now at the FEMP website are part of this.
- Teach the teachers. The EMC instructors will be trained by industrial experts to solve business cases and learn how to integrate these into their courses.



- Develop a case study with the Industrial Partner, Sandvik in which the three EIT Label Program students from Emerald, SiNREM and EMC work together. Organize, record and share (guest) lectures from the three programs and industrial partners, as well as build an assignment around these shared lectures.
- Develop case studies with the industrial partners visited during the field trips (one week per semester) in three countries, as well as organize assignments around which the case studies should be built.
- The proposal is also used to allocate the AVSA scholarships

The total budget for the application is 1,74 million euro, which covers a three year period. 23% of this will be co-funded by the project partners, while the remainder is funded by EIT RawMaterials.

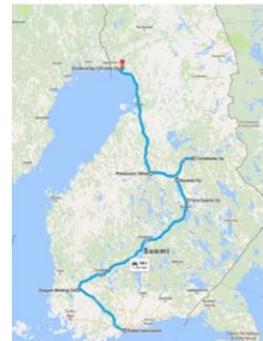
EDUCATIONAL UPDATE

By Marieke Bouman

EUROPEAN MINING COURSE (EMC)

The current EMC cohort started in September 2017 at Aalto University. Part of the program was the weeklong succesvisit to various Finnish mining and supply companies in November.

At this moment, in the months between their first semester in Aalto and their second semester in Aachen, many of the students are doing an internship in the Industry. They will soon finish and start their second semester at RWTH Aachen in April. After that, it is straight to TU Delft for the third semester. The students will spend their last semester working on their thesis under supervision of one of the three partner universities. Like the 20 EMC students who started in September 2016. Some of them are doing a thesis project at one of the universities, but there are also students doing thesis work at companies in e.g. Germany, Sweden and South Africa.



EXTENSION APPLICATION DEADLINE FOR THE EMC 2018-2020 UNTIL 1 APRIL 2018

The last few years, the application deadline for the European Mining Course (EMC) has been March 1st. Since we use the TU Delft application system and other MSc programmes at TU Delft have their application deadline on April 1st, this led to confusion. It has therefore been decided that the application deadline for the EMC will be changed to April 1st – effective immediately!

EUROPEAN MINERAL AND RECYCLING ENGINEERING COURSE (EMREC)

In September 2 students joined the EMREC option (European Mineral and Recycling Engineering Course) at TU Delft. After their first semester in Delft, the students started their second semester at Aalto University in January. These students will move back to TU Delft in September 2018 for the third semester and will be joined by three students who chose to do the EMREC option starting from Aalto. This is the first time Aalto based students are coming to Delft for EMREC; we hope a lot more will follow in future!



INDUSTRIAL UPDATE: GHH - MINE MASTER

By Hans de Ruiter



GHH Fahrzeuge GmbH is headquartered in Gelsenkirchen, Germany. Since 1964 GHH LHD's and dump trucks have been utilized around the world in mining and tunnelling. GHH Equipment is manufactured in Germany and is designed for maximum quality and durability resulting in minimum lifecycle cost.

GHH offers tailor-made "high-tech" or "proven technology" solutions including Full Service Packages in almost every region of the world. In addition to its dealer Network, GHH subsidiaries are located in Australia, Chile, China, Germany, Poland, Russia, North-America, India, Middle - East and South Africa (<http://www.ghh-fahrzeuge.de/>).

Mine Master Ltd. specializes in the production and supply of underground mining equipment for underground drilling - drill rigs and roof-bolting rigs together with mining tools and the supply of loaders and haulage machines produced by our German shareholder. This enables the company to offer their customers a full package of machines necessary for the performance of mining and tunnelling works (<http://www.minemaster.eu/>).

The representative of GHH - Mine master is: Mr. Harald Bornebroek, International Sales,
Phone: +49 176/16898808, E-Mail: harald.bornebroek@ghh-fahrzeuge.de

INDUSTRIAL UPDATE: TOMRA

By Hans de Ruiter



The **use of technology that can play a key role in reducing the industry's impact on the planet** in both the long and short term is therefore paramount, and TOMRA's range of [sorting technology](#) is playing a crucial role in this.

Sensor-based ore sorting has a **direct effect on reducing the downstream energy consumption** in relation to the amount of mass removed by the sorter. If a sorting machine removes 15 percent of waste by mass, then downstream processes will use approximately 15 percent less energy, and the same applies to water consumption.



However, processing a ton of sorted ore will consume the same amount of energy as unsorted material; the key factor being that you will be able to produce the same amount of final concentrate treating less material.

Role in resource revolution

- More efficient recovery
- Reduced water consumption
- Better utilization of existing deposits
- Reduced carbon footprint
- Reduced acid mine drainage
- Less pollution
- Greater yields

The representative of Tomra Sorting GmbH is: Dr. Christopher Robben, Phone: +49 15146154301
E-Mail: Christopher.Robben@tomra.com, Website: <https://www.tomra.com/en>

FEMP REUNION

By Antje Matthäus and Rutger van Limborgh

The program of the reunion and annual meeting is currently being established and the registration will start soon. The event takes place in Delft (The Netherlands) on Friday the 31st of August and Saturday the 1st of September. The reunion is coordinated by Antje Matthäus.

The Reunion will focus on the social interaction between the industry, the alumni of FEMP and current students. There will be several good possibilities for the industry to meet up with students and alumni. It will also be a great opportunity for alumni and students to get in touch with each other again and enjoy some time together in Delft, as one of the cities where everybody spent a semester during their courses. All program details, the registration form and a list of registered participants can be found soon on the website and updates will be announced in following newsletters.

The program for the 2018 reunion has slightly changed in respect to former reunions to get a clearer separation between the official activities and the social activities, and the highlights will look as follows.

Thursday 30th August

16:30 FEMP and EMMEP Meeting (by invitation only)
21:00 Informal possibility to meet in the center of Delft for drinks

Friday 31th August

10:30 Welcome Drinks
11:00 Traditional Sessions (Welcome, Update, Company Pitches)
12:30 Lunch
13:30 Thesis Presentations
14:30 Industry Meeting (by invitation only)



15:30 Company Interviews* (by invitation only)
 17:30 Company Meet&Greet
 19:30 Dinner and Drinks

Saturday 1st September

15:00 Canal Cruis through Delft City Centre
 16:00 Drinks at Café 'Het Noorden'
 19:00 Dinner at Café 'Het Noorden'

** More information about the company interviews will be given in the next newsletter.*

All locations will be within walking distance from Delft city center. There will be a possibility to sign up for either Friday or Saturday, or for both days. The participation fee will be as follows:

Day	Student Fee	Alumni Fee	Including
Friday	€20, -	€30, -	All drinks, lunch and dinner
Saturday	€20, -	€30, -	Boat cruise; All drinks and dinner

Registration can be done using the following form (<https://goo.gl/forms/vMVyUwAkaenMiWbU2>). The registration deadline is 1 August 2018. Applications made afterwards cannot be assured to be approved, and will have an additional administration fee of €20, -. Please keep in mind that Delft is very touristic during summer, so application will have to be done earlier this year than at former reunions.

ALUMNI/STUDENT EXPERIENCES: EMEC, A YEAR THAT CHANGED MY LIFE.

By Cristian Sandoval



Almost 20 years ago, August 1999, I started a challenge with big uncertainties and bigger hopes, not knowing how this would be. In a few words, I was starting one of the best years in my life...

At that time, I was a student in the 4th year of Metallurgical Engineering at the University of Concepción. The University from my home town. In Chile, an engineering degree required 6 years of studies. An opportunity to study in Europe was in an undergraduate program something uncommon. The world was quite different back then. Internet was only available for a few years, computers were different, with very limited capacity and laptops were extremely expensive. Mobile phone were something new, but extremely expensive too. No Facebook, Instagram, WhatsApp, or any of this communication forms. Only email was starting to appear. In summary, it was a different world that makes me feel old when I think about that.



I arrived in Delft with a classmate and good friend from Chile and met two Argentinians students that were also going to join the program. To prepare us for an English-speaking environment, we had an English course for 1 month, as we all had basic English, not on a good level at the time.

The European Mineral Engineering Course (EMEC) was an eye-opener for me. In Chile everything is about copper; copper resources, copper mining companies and copper usage development. As soon as I got to Delft and started the EMEC, I realized this was different. The first class of Minerals Economics gave me the opportunity to study Coal, Gold, Iron Ore and other resources that I never thought about, until then. Having the opportunity to exchange experiences with people from different cultures and be able to live and study for a few months in different countries was an awesome experience. Something that continued to reinforce the global view of the program.

The year was fun. I made some good friends that I still keep in touch with. Study was an important pillar of the EMEC program, but fun, experiences and friendship were another very important ones. The birthday parties, activities through Christmas period, the excursion to northern Finland and the weekly adventures at “Het Noorden” made the program far more than just studies. The multicultural exchanges by having Dutch, German, Chilean and Argentinean students combined with the host locations as we went to 3 other cities after Delft University of Technology; we went to RWTH in Aachen, in Germany; The University of Leeds, in England and Helsinki University of Technology, in Finland. We made some field trips; the best was the excursion to northern Finland in the “Santa Claus Express” night train that took us north to Kemi and then by bus we went up to Kiruna in Sweden.

The year went fast, as when you enjoy something, you are enjoying so much that you don't notice it has ended... I didn't know at the time, The EMEC has been such a difference maker in my career. Not only on the academic side, but on the cultural side and the appetite to explore the world.

Since then, I can't recall how many times I have explained the program to different people and they all say “wow, that sounds great.”

My working experience has been challenging and multicultural. I currently work for BHP, the biggest Mining company in the world, lived in Chile, Singapore and Australia. I have had bosses from 8 different countries and worked with many more. I recall having a dinner in Singapore with part of my team, we were 12 people from 12 different countries. The ability to deal and enjoy the international businesses from today is something I learnt by practice during the EMEC 99-00.



Cristian Sandoval, EMEC 1999 – 2000

PICTURES

By Wojciech Strycharski





FEMP UPDATE

By Hans de Ruiter

The annual meeting of the boards of FEMP and EMMEP and the advisory and alumni councils took place on 11 and 12 January in Amsterdam. The meeting started with a workshop on the first afternoon, by Catherine Bounsaythip (EIT Rawmaterials) in which teachers were taught how to teach (future) entrepreneurs. First the entrepreneurship concept was introduced by interacting with the audience about their own perception on Entrepreneurship. This was illustrated with several lectures of 5-10 minutes.

The following day the FEMP and EMMEP board meetings took place. The effects of the EIT RawMaterials label qualification gave rise to several issues, especially the EIT scholarships, which will be available for the students starting in September 2018. These 9,000-euro scholarships cannot be combined with other funds from Brussels, like the Erasmus + scholarships. The upcoming KAVA application was discussed (see section of this newsletter concerning EIT).

It became clear that after the changes in structure since 2014 and the EIT qualification it is now time to formulate/propose (ideas for) criteria for new programs and strategy, mission and vision for FEMP and EMMEP.

- Vision for the future in which subjects will be covered like:
- Does FEMP need more industries, additional programs and academic partners?
- What are the limits of growth and how could that be organized?
- On what does the board need advice and when?

It was discussed that it appeared that (part of the) FEMP grants will be replaced by EIT scholarships. This means that FEMP will have funds available to invest in further development of the teaching material (MOOC's, etc.) and for inviting guest lecturers to teach specific topics in the EMC.

SPONSORS

Current industrial partners

BOLIDEN **YARA** **Lhoist** **Shell** **nyrstar**
metso **IHC** **IHC HOLLAND**
Atlas Copco **AGNICO EAGLE**
Terrafame **Witteveen Bos** **AKZO NOBEL** **TATA**
SANDVIK **Outotec** **srk consulting** **euromines**
K+S **normet** **RESOURCE CAPITAL FUNDS** **CATERPILLAR**
BARRICK **KGHM Polska Miedz S.A.** **TOMRA** **NEWMONT**
GHH FAHRZEUGE **mine master** **RWE** **IAMGOLD CORPORATION**



MISCELLANEOUS INFORMATION

WEBSITES

FEMP	http://www.femp.org/
EMMEP	http://www.emmep.org/
Database	https://iidesk.com/femp/
LinkedIn	https://www.linkedin.com/groups/2533351
Facebook	https://www.facebook.com/groups/1699280916999792/?ref=bookmarks

IIDESK

The FEMP database contains a/o the e-mail addresses of the 780 alumni and students. It is very encouraging to see that only some 50 addresses are missing. Please make sure if you change jobs, or if you graduate to change your e-mail address in case it is still a company or university address.

CONTACT INFORMATION

FEMP/EMMEP

Coordinator FEMP	Hans de Ruiter (info@femp.org)
Coordinator EMMEP	Marieke Bouman (info@emmep.org)

ADMINISTRATING UNIVERSITY

Delft University of Technology	Stevinweg 1 2628 CN Delft The Netherlands
---------------------------------------	---

ALUMNI COUNCIL (ALUMNI@FEMP.ORG)

Coordinator	Thom van Gerwe
Reunion and Alumni Relations	Antje Matthäus
Database Management	Laura Tiainen
Commissioner	Lucas Weimer
Photography and Gallery Management	Wojtek Strycharski