



Budapest University of Technology and Economics



Brazilians at the BME  
2013/2014 academic year



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## A Message from the Rector

Dear Reader,

It is my great pleasure to present you this commemorative yearbook, as a keepsake for the 241 Brazilian guest students who have spent their past year at the Budapest University of Technology and Economics. Thanks to the efforts of the Hungarian Rectors' Conference, CAPES and BME, we were able to host more than half of all Brazilian guest students arriving in Hungary under the auspices of the Science Without Borders programme during the academic year 2013–2014. It has been a fruitful and memorable year for the students, as well as for my teaching colleagues.

The basic task of BME is to provide engineering education. However, we also offer high quality courses in various aspects of economics, natural sciences and humanities. Our courses were designed to meet the requirements of today's society, especially those of the economy, and are constantly upgraded with these concrete needs in mind.

We are aware of the expectation on us not only to produce graduates who can excel in their professional fields at an international level, but also to educate intellectual adults who have the talent, diligence, devotion and creativity to contribute to the future development of both their native countries or Hungary, and their chosen disciplines within the university.

We are working hard to meet these expectations and doing our utmost to ensure that – as a result of their knowledge and skills – our graduates are highly valued on the job market and can compete at the highest level in companies and institutions. To do this we strive to provide our students with the necessary conditions for learning and developing their human qualities and professional skills. Our goal is to allow students to realise their full professional and intellectual potential, to reach the highest level that their abilities and dedication permits, and to prepare them for both an intellectual existence and for the tasks which intellectuals face.

We realise that to meet these expectations the BME must continue to act as a key institute in the national and international scientific, technical and economical fields and maintain its close relations with the scientific, research and economic community, with professional organisations and with other players in higher education.

Our mission, which is inseparable from education, is to further knowledge, to conduct scientific research, initiate research and maintain the BME's status as a serious research centre. As a participant in international research programmes and as a leader in directing domestic research the activities of BME encompass the entire process of innovation, basic

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and applied research, technical and commercial product- and service development and complex quality management, while also striving to apply the results of this research.

The BME has a significant educational capacity which is well balanced among the under-graduate courses (providing a broad basic knowledge), graduate courses (ensuring deep theoretical and specialist knowledge) and doctoral courses. We can thus assure the vast majority of our students that if they are motivated and work hard enough they can accomplish both the first and the second levels, thus gaining knowledge and skills in excess of the former graduates. The best students among them can also be assured that they will be given every assistance in attaining their doctorates.

Dear Students,

This university has been your home for the past year. I sincerely hope you return home with fond memories of this ancient institution, which its alumni have cherished wherever their fortune had taken them. You have not only gained new insights into your own field of study, but you have also acquainted yourself with Budapest, with Hungary, and with Europe. At times you may have been homesick, but your new-found colleagues and friends helped you through it, and most of you have now found a new place where you feel right at home. You have experienced a part of the world and a culture that is very different to what you have so far known. I believe that such experiences make us better scientists, and better people.

During your stay here, you have made Budapest your second home, and you all hold fond memories of this beautiful city and this country. When you return to your homeland, you will become our ambassadors: your acquired knowledge will reflect our efforts, and your accounts of your experiences will entice the interest of others. Our university's doors are open to your colleagues too: please encourage them to become part of this experience, and tell them to come and study in Budapest too.

I also hope that you will come back to our university: perhaps for your continuing studies, as PhD students, as researchers or educators. You are all most welcome to come back, to visit or to stay, with your whole family.

I wish you great success in your professional career, and a happy and prosperous life hereon. It has been a pleasure to have you with us.

Yours,

*Dr. Gábor Péceli  
Rector*



## Peregrination – student mobility

*the act of going from one place to another*

The equivalent of ‘peregrination’, the Hungarian word ‘*peregrináció*’ was the term since the seventeenth century for the wandering students who spent a few years at foreign universities. This kind of learning was basically available only for noblemen. They often travelled through Western-Europe, studied at different universities from outstanding professors, gathered books for their libraries and tried to build up political connections with influential persons, too.

The modern era has brought about substantial changes also regarding wandering students. Peregrination today is called *student mobility*, available for many, state funding for it is quite easily accessible. Books published anywhere in the world can be purchased without problems. In addition, more and more knowledge can be downloaded simply from the internet. E-learning courses offer outstanding presentations with textbooks optimized for self-learning.

Does it make student mobility unnecessary? Not in the least! In 2012 more than 4 million students were involved in it all over the world. Their profit is not simply the knowledge they gain at foreign universities. They come to know other people with different habits, learn not only from the professors but also from fellow students. Some countries support it with high priority. Brazil is one of the most supportive countries.

You have spent one or two semesters with Budapest University of Technology and Economics. Our professors and staff did their best to transfer their knowledge to you. You were diligent enough to acquire the knowledge.

I am sure you have profited much more. You came to know another country; its people, its nature and its specialities. I do hope you have made new friends, too. Remember the good experiences and forget the nasty ones. We also learnt a lot from you. Your cheerfulness and optimism exceeds the Hungarian average. *Budapest University of Technology and Economics welcomes you for further cooperation in the field of education or research and development.*

Adeus, viszontlátásra!

Dr. Ákos Jobbág  
Vice-Rector for Education



Dear Brazilian Friends,

Steven Spielberg once said:

*You have many years ahead of you to create the dreams that we can't even imagine dreaming*

Why do I quote it to you? Just look around! The global economic crisis is flooding the whole World; environmental problems are threatening the life on the Globe; and so on...

So we need you. We need the dreams, expertise and activity of your generation, to solve those problems and prevent new ones! What seems to be impossible

today, will be “the present of the future”. Flying together with birds, swimming among the fish was impossible for centuries. These are everyday activities today.

You worked hard during this year, and you have to continue to do that at home, in Brazil also. You will see that your knowledge and your special experiences in a foreign country, like Hungary, have a very good value on the job market. You moved to Hungary and spent – I hope – one of the most important and interesting periods of your life here. That move was not just a challenge, risk and hard work, but – I am also convinced – it was a fantastic feeling, a lot of **fun** also. Remember us please, and come back as MSc or PhD students, or as a scientific partner later.

Finally, let me share with you an important message of Jack Welch, the chairman of the General Electric who said:

“Control your own destiny, or someone else will!”

László Dvorszki  
International and Scientific Director



## Welcome address by the Head of the Centre of Modern Languages

Dr. Judit Sárvári

*July 2<sup>nd</sup>, 2013*

“Good morning everybody!

On behalf of the staff of the Centre of Modern Languages, the language teaching unit of our university let me welcome you to the Budapest University of Technology and Economics.

The aim of the intensive language course is to brush up your English with special regard to the study and academic skills you need to be equipped with to be able to conduct your studies in the English medium instruction BSc training.

Along with your English studies you will get lessons in Hungarian culture and Hungarian language to help you function in our country while you are staying here. The social programmes, trips we are planning for you are aimed to fulfil this objective.

And now let me finish with some personal remark: I have been to Brazil several times as part of my family live there – I always stayed in São Paulo, but visited wonderful places like Ubatuba, Itamambuka, Parati, Embu. I loved your country and I hope by the time you leave Hungary, you will come to like my country at least as much as I did yours.

Finally let me wish you good luck with your studies and a nice stay in our capital, in our country.

When students begin their studies at our University, it is customary that they make a Solemn Declaration. As a student at BME, it is now your turn to make this Declaration.

### Text of the Solemn Declaration

‘I, [...], a student of the Budapest University of Technology and Economics, a foreign citizen residing in Hungary solemnly declare that I shall observe the statutory provisions obligatory for foreign citizens in Hungary and the relevant statutes of this University. I shall always display respect for the University. I shall refrain from participating in or organizing any activity, which would disturb normal functioning and the academic atmosphere of the University. I shall do my best to complete my studies to the best of my ability, to deepen my knowledge of the achievements of progressive science and to become an expert in my profession.’”



## A year just flew by...

We were very excited to hear that Brazilian students are coming to the BME. After your arrival we realized that you are very enthusiastic, open-minded and interested in different programs. It was an amazing experience to see more than 250 students wearing the uniform T-shirt of our university on the tram going to the first official ceremony in the city centre.

I am sure that you remember the performance in the „Erkel” theatre. Then I organized three trips. I prepared a booklet for you with the program of the day, the history and some other relevant information

about the place that we visited and on the last few pages you could find the text of popular Hungarian folk songs.

First we went to Eger where we saw the Cathedral and we could listen to an organ concert. The guide told us about its structure and style. In the restaurant next to the delicious Hungarian dishes on the table you could find the Brazilian flag as well proving the Hungarian hospitality: we like foreign visitors. Walking in the tiny streets we could see the „Fazola” gate then we reached the Minaret that was built in the times of the Turkish occupation, representing a different culture. Many of you climbed up (97 steps) to the 40 m tall tower to see the beautiful view. Soon we could taste marzipan and couldn't imagine that the furniture we saw was made from that tasty paste. In the Eger Castle we heard the history of the city and about the way the Hungarians defended the country and Europe against the overwhelming Turkish army. Since you are going to become engineers soon, you listened to the guide who explained the role of the drum and the peas in the catacomb. The soldiers used the drums as their mobile phone sending messages by that. No one can leave Eger without visiting the „Szépasszony völgy” and tasting wines. As you are very sociable we could sing Hungarian folk songs together. We all enjoyed that very much.

Next time we travelled by two busses to Jósvafo that is in the North-east of Hungary. Under the small old village there is an amazing drop stone cave. Our tour in the enormous cave took 100 minutes and we saw the wonderful products of many millions of years. Do you remember the short concert in the huge „theatre hall”? We listened to the lovely music in total darkness and drop stones appeared with a flash. During the lunch we shared our memories and sang again from our booklet. We enjoyed the sightseeing by the horse carriage in the traditional village where the houses were older than 150 years. The horses ran into the clean stream. The guide told us that scientists wanted to check its source so they poured red paint into the water and after a while the colored stream appeared outside in the village.

Our third trip was organized to Solt and we flew there by hydrofoil. It was very fast and comfortable. In 90 minutes from one of the most beautiful cities in the world we have arrived to the Hungarian plains, called „Puszta”. We felt that we went back in time about 100 years. We travelled by horse carriage to see the draw wells. The weather was sunny so we enjoyed our trip in nature. You recognized the flowers, plants and trees that you have at home as well. Maybe you felt homesick for one moment but you had no time to be sad. The welcome drink was „pálinka” or wine, and we ate „lángos” with sour cream and garlic. You will remember the taste of the food. The women wore traditional dresses with many skirts in the old peasant house that we visited. Some of you knew the animals very well in the hutch and on the field. A student told me, although our countries are very far from each other but the nature, the animals and the job of the peasants are very similar. He had to come to Hungary to realize that the people of the world were really the same. The lunch that we ate in the „Csárda” hearing old instruments called “citera” was tasty. In this traditional surrounding we sang again. A student shouted in to me and said: now we should sing „virágom, virágom”. It was a heart-warming experience. A boy from a younger generation, from the other part of the globe wanted to sing his favourite Hungarian folk song. That was the best moment and the best experience I had with the Brazilian students. In the next moment because of the Brazilian habits and customs his mates sang with him. The German visitors were surprised and listened to the Brazilian-Hungarian performance. Later we watched a horse show and you could ride a horse or a donkey. Our hosts organized olympic games for us where you played with enthusiasm and full of energy. We enjoyed that so much that we almost missed the hydrofoil therefore we had to say good-bye and the horses took us to the boat in time. On the way home some of the students slept already because of the tiring day or the wine. The others played guitar with friends, but everybody laughed a lot.

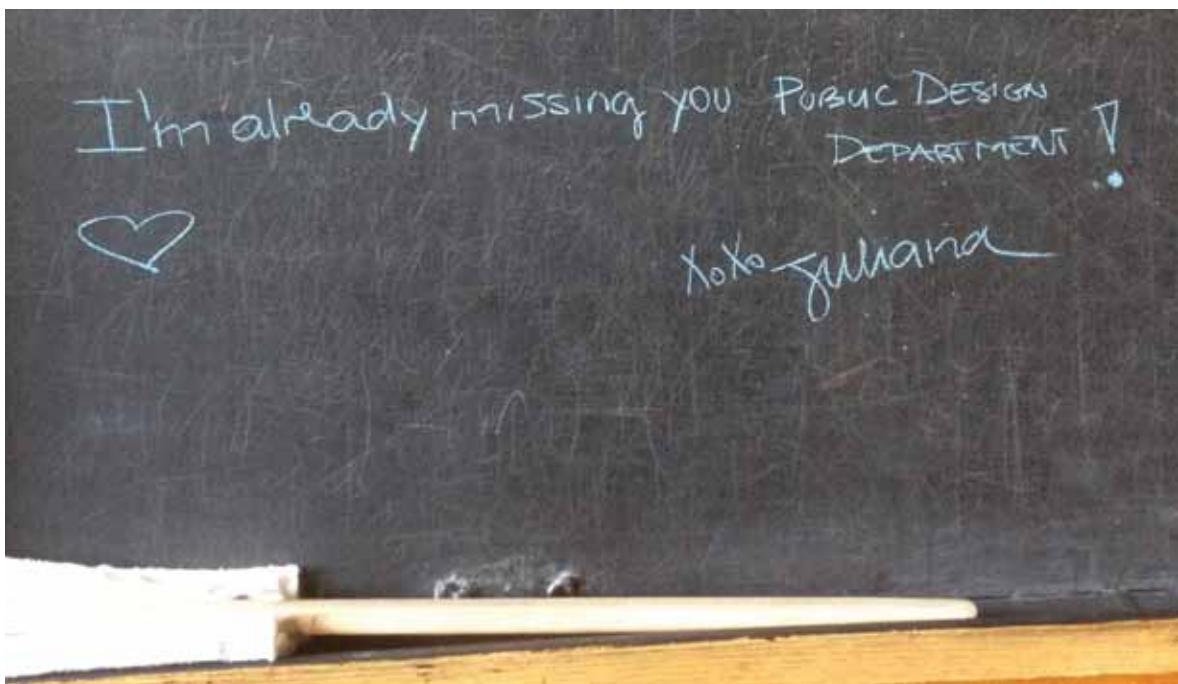
I am very glad that we met and I was able to show a tiny piece of our culture and country. I wish you success in your job, happiness in your private life and I hope you will come back to Hungary with your own family.

Viszontlátásra Magyarországon.

*Valery Balogh*  
International Referent



Can it be nicer appreciation for a teacher than finding a message on the blackboard after the last consultation of a long semester course - like this:



Our Brazilian students imported new element into the education: the true, clear emotion and this is beautiful.

*Dr. Zoltán Schrammel*  
Faculty of Architecture



„So far, the CsF program was an extraordinary experience to our faculty. My colleagues will cherish the memory of the first large group of Brazilian students who spent two semesters with us, attended lectures, participated on laboratory exercises and worked on projects. We learned a lot during this year and your open-mindedness and motivation did set high the expectations towards the next groups to come. Thank you for choosing BME and the Faculty of Electrical Engineering and Informatics.”

Üdvözettel,

*Dr. Bálint Kiss*  
Course Director  
Faculty of Electrical Engineering and Informatics



Hajrá Brazília!

*Dr. László Gergely Vigh*  
Course Director  
Faculty of Civil Engineering



In the 2013/2014 spring semester I was the supervisor of three Brazilian students in the Individual project course. I was very satisfied with their work. They were reliable, motivated and hard-working. We have achieved really nice research results, which we are going to publish in international journals soon. They have also benefited quite much, and were able to learn new methods in materials science, nanotechnology and analytical chemistry. They not only worked in our lab, but had opportunity to visit other departments and research institutes. We already have an international research group and everybody at us speaks English; thus, the students could fit in easily.

My postdoc and PhD students also supervised their work. Besides research, we had nice talks, lunches together, and they were invited to all lab and department programs. It was really nice to have them in our lab from the personal side as well. I wish them success in their future career. I think this Science without Borders program will bring huge success to the participating students, to Brazil itself, and also to the hosting institutes. I am very pleased with the program, and further students in the coming semesters are most welcome.

Best regards,

*Dr. Imre Miklós Szilágyi*  
Budapest University of Technology,  
Department of Inorganic and Analytical Chemistry



*Four students from Brazil in the Industrial Microbiology Laboratory*

After the first semester in Hungary, we began to work together. Everyone was experienced in local university life, so they could easily face the obstacles. They were very interested and motivated students. Gabriella, Janaína, Paula and Giovanni proved to be a good team as well. Along with the labs we prepared for the final challenges of our last day together, for their oral technical presentations. Everyone had to choose an important microbe, make a literature survey, and afterwards make a presentation on their chosen item. The students successfully completed the practical part, obtained useful knowledge, and we learned a lot from each other's culture. We remember these kind students as good representatives of their country. Thank you for the experience, it was a pleasure to meet you! I hope you feel the same, when you think about these memories.

Greetings and good luck at home!

*Brigitta Kónya, Alex Keresztfalvi and Dr. George Szakács*

*Faculty of Chemical Technology and Biotechnology*

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Dear Students,

Due to my job, in the beginning I only ‘met’ you, the Brazilian students through Excel sheets. However, in the following year, I could get to know more and more of you in person. My impression of the Brazilian students is that they are a vivacious people with an enormous heart. I am very happy that I could take part in this programme and I hope we will meet again.

*Viktor Eszterhai*  
International Coordinator



“The brazilian students, from the moment they arrived, were incredibly friendly, open-minded and excited. Everywhere we went together, we were in the center of attention, people were asking about the group. The attitude of brazilians was so positive and happy...”

*Balázs Ites*  
Head of Mentor Team



It was awesome to see how proud are the brazilian students of their nationality. They were always taking their Brazilian flag with themselves when they entered to a festival, or to any bigger parties or occasions. It is a custom: if anybody makes friendship, then they ask the person to sign or write some nice, memorable thing to the flag. I was pleased to sign some flags, and to be honest, it was a really lovely feeling to figure out that they do not consider me only as a mentor, but as a **friend**.

I was impressed by their approach to the life. I know that I will miss that big happiness, cheerfulness, calmness and passion that was transmitted through their eyes! During the semester many times I was in a big rush and full with worries and deadlines, but one of my Brazilian friend always knows what to say to me: **RELAX Zita!** He told me more than hundred times with the same calm voice. I will never forget it.

During the summer, when we were living in the dormitory, it was so nice to see how someone can really enjoy their life! Many of them can play the instruments, and dance of course. They have so many nice and good-sounding musics. If somebody starts to play the guitar, then you will not find a guy who does not join to sing and start to dance!

During those months living together, I was lucky to see how they treat each other: once i was taking a new guy from the SAS-Hotel to the Kármán dormitory, and i just introduced him to a group of guys who were cooking in the kitchen. They started a conversation just like they have already been friends since years. For me, to see this, it was something very new and surprising compared it to the Hungarian style.

Nowadays I just cut myself listening to Brazilian musics, reading articles about Brazil, or searching for the Brazilian colours because of the World Cup. I pick up my head when i hear some familiar Portuguese words such as *parabéns*, *bonita*, *saudade* during travelling the 4/6 tram. These time I always remember to my beautiful memories that I can absolutely thank to my friends. I am so happy that i could met each of them, and hope they enjoyed their one year here, in Budapest! ☺

Zita Csaba  
Member of Mentor Team

# Welcome speech on behalf of the Brazilian mentors at BME

## by Paula Chiachia Pasta

March 19<sup>th</sup>, 2014



"Good morning!

My compliments to the illustrious members of the table, dear friends and guests.

Ladies and gentlemen.

I know that your heart is beating out of your chest! I felt the same feeling last year on 4<sup>th</sup> of October and it was a memorable day for me.

Please let me introduce myself. My name is Paula Chiachia Pasta and I study at the faculty of Chemical Technology and Biotechnology.

I am glad for this opportunity of sharing with you part of my experience in this wonderful city. I would like to say thanks to Valery Balogh for the fellowship and dedication, and thanks to Hungarian and Brazilian mentors for working together.

There are several facts that would like to mention however that would take hours or days. So, I will highlight some important life experiences so far.

At the beginning I felt very welcomed by the Hungarian people, the rectorate, faculty staff and new friends. I confess that it took a few months to get used to the language, cuisine and weather in Budapest and Europe. The best of all this is that there is always something new to learn, exchange experiences and respect different cultures.

During the period of the English course, I had my first contact with the local population and I could get closer to Brazilians from different regions of the country. I will never forget the huge contribution of knowledge and citizenship of my teachers, with whom I still keep in touch.

My sincere thanks to Katalin Takács, Henriette Czenthéné, Viktória Tóth.

After some time, the classes at the university began. I could take part in many events, celebration days and job fairs. That is why it was possible to grow professionally and socially. Besides those subjects related to my chemical course, I also was interested in learning deeply about the Nobel Prizes conquered by the Hungarians and other Nobel Prizes in Physics, such as, the discovery of Vitamin C by Albert Szent-Györgyi, invention of holog-

raphy by Dénes Gábor, the soft contact lenses by István Győrffy, the computer by János Neumann, the safety match by János Irinyi , the magic cube by Ernő Rubik, and so on.

My sincere thanks to: György Ádám Horváth, Zsolt Papp

Like other friends, I fell in love with Hungarian language and culture. I'm still trying to learn every day, step by step. There is nothing more rewarding than seeing the smile of a Hungarian person, especially older people, when you try to speak a few words or phrases. Almost always I apologize because of my pronunciation that I need to improve.

My sincere thanks to: Katalin Bakonyiné Berényi, Györgyi Brandt.

And to all the other teachers, friends and colleagues in the laboratory.

I also had the pleasure of watching dance performances, opera, visiting fantastic restaurants and coffee shops, bungee jumping, see snow and play with the snow for the first time, among other entertainment.

What I said previously marked my story but there are a lot things to dream, work and still conquer. This semester I am developing an interesting project at the university about food technology.

So, if you have any doubts about how to answer the question, 'Why did you choose Hungary?', I am sure that during this program and until the end, you will have many arguments to tell your own story.

Before I say some words for my friends, I would like to quote a phrase of Albert Einstein:

"Try not to become a person of success, but rather a person of value."

To finish this speech, I would like to say some phrases in Hungarian as gratitude to all that I have lived here.

Jó napot kívánok! A nevem Paula. Nagyon örülök!

Huszonhárom éves vagyok és Brazíliából jöttem. A Budapesti Műszaki Egyetemen tanulok. Én nem magyar vagyok, de beszélek egy kicsit magyarul.

Büszke vagyok, hogy ezen az egyetemen tanulhatok és igazán nagyra értékelem, hogy ilyen nagynevű professzoroktól tanulhatok. Remélem, hogy a Brazília és Magyarország közötti kapcsolatot a jövőben is tovább ápoljuk.

Köszönöm a figyelmet! További szép napot!"



# About the Budapest University of Technology and Economics

The Budapest University of Technology and Economics (BME) is proud of its more than two-hundred-year tradition of excellence in engineering education. It has developed into the largest institutions of higher education in Hungary and is one of Central Europe's most important research centres. The university considers scientific research and development of equal importance not only to its educational activities, but also to economic and social development.

The university takes special pride in the contributions made to science, engineering and culture by its faculty, graduates and researchers. The “elite-research university” status and award was given to the BME by the Ministry of Education and Culture, on 16th April, 2010.

Several **Nobel Prize laureates** have been associated with the BME:

Dennis GÁBOR	(physics),
Eugene WIGNER	(physics),
György OLÁH	(chemistry)

Notable personalities have also studied or taught at the BME:

John von Neumann	inventor of the computer,
Edward Teller	nuclear physicist,
Leo Szilárd	known for his work on nuclear chain reactions,
Marcell Breuer	architect,
Theodor von Kármán	aerodynamic scientist,
Ernő Rubik	inventor of the famous “magic cube”
Donát Bánki	co-inventor of the carburetor
Károly Zipernowszky	one of the inventors of the transformer
Dénes Mihály	one of the inventors of television

Today, 77 departments and institutes operate within the structure of eight faculties. Seven knowledge centres have been established. About 1.100 lecturers, 400 researchers, other degree holders and numerous invited lecturers and practicing specialist experts participate in the education and research at the BME.

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Approximately 800 of the university's 24 000 students are from 50 different countries. The BME issues about 70% of Hungary's engineering degrees.

The Goal of the BME is to graduate professionals who are capable of high-level creative work, who can organize and supervise production and infrastructure, and who are qualified to perform scientific research, participate in technical development, solve engineering problems and implement solutions. In additions to educating engineers and economists the university provides continuing training through:

- undergraduate programs in engineering and in business and management
- graduate programs in engineering specialization and in business administration and management
- refresher courses to inform practicing professionals about new scientific developments which affect their works
- Ph.D programs, guidance and instruction for scientific research fellows.

# Faculty of Civil Engineering

The **Faculty of Civil Engineering** is the oldest Faculty of the Budapest University of Technology and Economics and can trace its history back to the University's predecessor, the *Institutum Geometricum*, founded by Emperor Joseph II in 1782. In the past 232 years, thousands of engineers have graduated from this Faculty to work worldwide as educators, international researchers and engineering project managers. The most essential service of the faculty - education linked closely to research and engineering work - is reflected in the scientific activities of nearly 140 engineers in 10 departments. They have contributed significantly to the scientific solution of diverse engineering problems. Out of the approximately 2300 students, who study at this Faculty, yearly 50-100 students from abroad participate in the English language program.

The BSc engineering program in English leads to a BSc degree in four years, in the Branch of Structural Engineering. The branch offers specific educational objectives: Graduates from the Branch of Structural Engineering create engineering structures by utilizing and designing structural materials. They are expected to design, construct and organize the investments of mechanically, structurally and technologically complex structures in cooperation with architects and transport and hydraulics specialists. Future structural engineers who graduate from this branch will be able to design and construct, among other things, flyovers and underground passages for traffic networks; power stations, cooling towers, crane ways, transmission line structures and TV towers; halls, storehouses, industrial plants, and multistory buildings as well as hydraulic engineering and water supply structures.

A new MSc course in Computational Structural Engineering was launched in September 2012. This MSc course provides advanced knowledge of structural analysis using modern computer techniques, including the theoretical background of the methods. This course might be useful not only for those who are interested in research and consider continuing doctoral studies, but for leading engineers of the future: practicing engineers facing special structural problems.

# Faculty of Mechanical Engineering

The Mechanical Engineering Programme at the Budapest University of Technology and Economics began in 1863, and the Faculty of Mechanical Engineering was established soon afterward, beginning official operations in the academic year 1871-1872. The Faculty is justly proud of its continuous, progressive and more than 140-year history and now offers undergraduate and graduate programs in both Hungarian and English.

For more than five years, the Faculty of Mechanical Engineering has offered a 7 semester undergraduate BSc degree program in English. The new two-year graduate program in English, leading to an MSc degree started in February 2009, and students can start their study

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either in the fall and in the spring semester. Individual postgraduate academic and research programs, which are usually completed in three to four years, are available for those who already have an MSc degree and wish to pursue a PhD degree.

The undergraduate BSc program of the Faculty of Mechanical Engineering is designed to continue a tradition of excellence by:

- providing well-grounded and broad knowledge that graduates of this Faculty can apply immediately in their work and also use as the basis for further studies; and
- graduating competent engineers who are not only masters of their profession, but also possess an ethical philosophy of engineering based on accuracy, punctuality and reliability as well as a respect for the human element.

## **The goals of our MSc and PhD Programmes are as follows:**

- to train creative, inventive mechanical engineers who can apply the engineering skills and the knowledge they have gained from the natural sciences on a state-of-the-art level; and
- to foster the development of leaders in engineering research and development.

The courses in the Mechanical Engineering Modelling MSc-programme deal with those time-dependent problems of mechanical engineering, which typically require the efficient modelling of tasks in order to access the continuously developing methods of computational engineering. As the joke says: 'One designed by a civil engineer starts moving that is bad, one designed by a mechanical engineer does NOT move that is bad, too.' Modern computational methods are very popular since they show their easy-to-use interface for engineers. This often causes misunderstanding and disappointment during the naive applications of engineering software. Computational methods are reliable if they are properly tested and the principles of their applied algorithms and procedures are understood. This is analogous to the modern cartoon industry: the 25 pictures of one second of a cartoon can be drawn by computers if the first and the last picture of that second are designed for them by the artist but the computers will totally fail if they have to draw the cartoon without any reference picture, or based on the first (or last) picture only.

The tasks of mechanical engineers that typically require the modelling of machines in motion and that of time-varying processes are based on solid and fluid mechanics, thermodynamics and electronics. Modelling means the understanding and active application of the related theories, which are supported by differential equations and numerical methods in mathematics. Modelling needs also experimental work during the research-development-innovation process in case engineers do not have enough information about the motions and processes they want to capture by a model. Finally, modelling is also affected by the engineers knowledge in design, technology, and informatics, since the model should not be so complex that the available software is unable to solve them within reasonable time and for reasonable cost.

The above principles affected the formation of this master course. After the brief summary

of the required fundamental courses (mathematics, mechanics, thermodynamics, electronics, control and informatics), the students have to choose a major and a minor specialization from the following list of modules:

1. Solid Mechanics
2. Fluid Mechanics
3. Thermal Engineering
4. Design and Technology

The possible combinations provide flexibility among more research oriented knowledge (combinations of the first 3 modules), and the development oriented one (major from modules 1-3 and module 4 as minor or vice versa).

This course is running in English only. It is based on the foundations provided by the long-standing positive traditions of some former successful courses of the Faculty of Mechanical Engineering at BME.

This course is also compatible to many master courses in mechanical engineering in the European Union (see, for example, U Bristol, U Bath, ENS Cachan, TU Karlsruhe, U Hanover, TU Munich).

Our Faculty offers its engineering education excellence rooted in, and being fully aware of its unique position of training decision makers, and technological leaders of tomorrow. Our aim in the course of the training is to qualify our graduates to perform as competent problem solvers, good communicators, excellent team workers, successful project leaders, and - above all - ethical participants of the world around them – both locally and globally.

## Faculty of Architecture

The **Faculty of Architecture** at the Budapest University of Technology and Economics focuses on training highly professional experts in architectural engineering who are aware of the social and cultural implications of their profession. Versatility is emphasised so that students will gain fundamental knowledge and abilities in every possible field of architecture and be able to find work in a highly competitive job market, and in any building- or design-related area of consulting, construction, and management. The 5-year programme in English leads directly to an MSc degree in Architecture and Architectural Engineering (Dipl. Ing. Arch.), but it is also possible to graduate as a Bachelor of Science in Architecture.

Graduates of the Faculty of Architecture are qualified for a broad spectrum of architectural occupations:

- Design, construction and maintenance of residential, public, industrial and agricultural buildings;
- Reconstruction and the preservation of historical monuments;
- Urban design and settlement planning; and
- Administration of all these activities.

## **Budapest University of Technology and Economics**

The curricula were organised on Swiss and German models. The Faculty has maintained these traditions for the last 40 years but provides additional European and international dimensions through guest lecturers from abroad, topical short courses, workshop seminars and exchange programmes.

The five year programme of the Faculty of Architecture taught in English is in full conformity with the five-year program provided in Hungarian, which after two years practice and experience is accepted for access to EUR-ING title.

### **Academic Program of the Faculty of Architecture: BSc/MSc Studies**

The two-level B.Sc, M.Sc training in the English speaking section of the Faculty of Architecture is realized in a split-up system, in full conformity with the Hungarian speaking section. For B.Sc degree students has to accumulate min 240 credit points, for M.Sc degree min 300 credit points by accomplishing the obligatory subjects and gathering the remaining credit points by accomplishing elective subjects too. B.Sc degree can be obtained in a minimum of four years, M.Sc degree in a minimum of five years of study.

Students, both international and Hungarian, who have a command of both languages can choose from either programme. The participation of Hungarian students in the programme given in English has obvious advantages. It eases the integration of international students into the society, which surrounds them during the years of their studies. It also attracts students from European, American and other universities world-wide to study in Budapest within the framework of the International Student Exchange Programme and other agreements.

Hungarian students likewise gain the opportunity to study at schools of architecture abroad. These exchanges will become a powerful factor in achieving real convertibility among educational systems world-wide and, eventually, mutual international recognition of degrees.

### **Master's Programme**

Students who have earned BSc degrees in other schools of architecture can join the Master's Programme. Programmes will be tailored to their previous education and special needs. In general they are admitted to the last two years of the five years program, and they have to collect minimum 120 credits. These studies encompass a wide range of complex design topics and elective subjects grouped in three directions:

- Structural Design - buildings and other structures.
- Architectural Design - buildings with different functions, their interiors and surroundings; the preservation of historical buildings.
- Town Planning - urban design, settlement planning and management.

# Faculty of Chemical Technology and Biotechnology

The education of chemical engineers and chemists has a long-standing tradition in Hungary. Hungary's earliest chemistry department was established in 1763 at the Selmecbánya Mining School, the first school to offer practical instruction in the chemical laboratory. In 1769, a common department for chemistry and botany was founded at the University of Nagyszombat, which was resettled to Buda in 1777, and later to Pest. In 1846, the Department of General and Technical Chemistry was founded at Joseph II Industrial School, one of the Budapest University of Technology and Economics's predecessor institutions. Education of chemical engineers, separate from that of mechanical and civil engineers, reaches back to the academic year 1863-1864.

The Royal Joseph Polytechnic became a technical university in 1871. The academic freedom granted by this university-level status allowed students to freely select the subjects they wished to study. However, the need for an interrelated, logical sequence of subjects soon became evident, so in 1892 a compulsory curriculum and timetable was introduced. From the foundation of the Faculty until 1948, only a four-year-term of studies, without specialisations, was offered. Following the educational reforms of 1948, the departments of Inorganic Chemical Technology, Organic Chemical Technology, and Agricultural and Food Chemistry were established. The Inorganic Chemical Technology Department is no longer a part of the Faculty because in 1952 its tasks were taken over by the University of Chemical Industry in Veszprém. Further reforms in the 1960s extended chemical engineering studies to the MSc level and introduced the range of specialised studies identified below. A PhD programme has also been established. Studies in English at the Faculty of Chemical Engineering began in the academic year 1985-1986.

Students in the BSc program receive a thorough introduction to areas basic to chemical engineering before they begin their specialisations in the fifth semester. Courses of the following branches are available to students depending on the number of applicants (at least 3 applicants) both at the BSc (7 semesters) and MSc (4 semesters) levels:

- Analytical and Structural Chemistry
- Chemical and Process Engineering
- Industrial Pharmaceutics
- Polymer Technology
- Textile Technology

The Faculty of Chemical Technology and Biotechnology aims for its students to acquire a profound theoretical knowledge in mathematics, physics and physical chemistry. It also aims to have its students experience, during their studies, all the types of tasks that chemi-

## Budapest University of Technology and Economics

cal engineers encounter in their practical everyday work.

Students will acquire up-to-date laboratory skills, get acquainted with the machines and apparatus used in the chemical industry, know the principles needed for their optimal operation, and develop expertise in a more specific technology within the chemical, food and light industries. Graduates of this Faculty will be versed in:

- The operations and personnel involved in chemical processes on an industrial scale,
- The development of the technology and products of industrial chemical processes,
- The design of industrial chemical processes,
- How a chemical product or application is introduced into the national economy, and
- The elaboration of new chemical processes, operations and technologies.

# Faculty of Transportation Engineering and Vehicle Engineering

The **Faculty of Transportation Engineering and Vehicle Engineering** (founded in 1951) has been training engineers in the fields of transportation, vehicle engineering and logistics. Actually, conforming to the linear, there are three basic specifications:

- BSc in Transportation Engineering,
- BSc in Vehicle Engineering,
- BSc in Logistics Engineering,

As the second stage of the linear training courses (BSc), there are three master training courses (MSc) in the same fields, i.e:

- Transportation Engineering master specialty,
- Vehicle Engineering master specialty,
- Logistics Engineering master specialty.

With adequate BSc qualification certified engineering qualification (MSc) can be obtained in 2 years at these master training specialties. All the fundamental and complementary educations continued at the Faculty are carried out in accordance with the rules of the ECTS (European Credit Transfer System). The quantity of students' labour necessary for attaining the knowledge material of an arbitrary subject is measured through credit-points. One credit-point means on average 30 hours of student's labour, one study semester contains a study material with the quantity of 30 credit-points.

# Faculty of Electrical Engineering and Informatics

The **Faculty of Electrical Engineering** founded in 1949 has been renowned for excellence in research and education throughout the years of changes in the scope of engineering. Over this period, the faculty has earned a wide-spread international reputation for its high academic standards and scientific achievements.

Spearheading the movement to establish a modern education system, it has offered a comprehensive English curriculum since 1984. In 1992 the name of the faculty was changed to **Faculty of Electrical Engineering and Informatics** in order to give recognition to the growing importance of computer science. The education programmes in English include a 3.5-year BSc, a 2-year MSc and a 3-year PhD programme in the fields of electrical engineering and engineering information technology.

The undergraduate **BSc Programme** (7 semesters) aims at providing a comprehensive knowledge with sound theoretical foundations in two areas: (1) Electrical Engineering including more specific studies in electronics, computer engineering and power engineering; and (2) Engineering Information Technology dedicated to the major domains of computer science. The major specializations in Electrical Engineering are infocommunication systems, embedded and controller systems and power engineering. Studies in Engineering Information Technology include specialization in infocommunication and software technology. Each specialization contains three courses focusing on the field of interest followed by a laboratory course and a project laboratory. In order to pursue studies in a given specialization the number of students must exceed a certain threshold, otherwise the interested students are kindly directed to another specialization.

The **MSc Programme** (4 semesters) advances the knowledge in the following fields: (1) Electrical Engineering, offering specializations in (i) embedded systems, (ii) infocommunication systems, and (iii) electrical machines and drives; (2) Engineering Information Technology, offering specializations in (i) applied computer science, and (ii) system development; and (3) Business Information Systems, offering specialization in (i) Analytical Business Intelligence.

The post-graduate **PhD Programme** is available in all domains offered in the MSc programme.

Since research and development requires innovative engineering expertise, one of the major concerns of the faculty is to endow students with high level mathematical skills in modeling complex engineering systems. This objective implies the use of system and algorithmic theory in addition to a thorough knowledge in physics. The search for optimal solutions in the highly complex architectures of electrical engineering and engineering information technology necessitates not only engineering but economical considerations,

## Budapest University of Technology and Economics

as well. As a result, the scope of the programme must include design, research and management expertise at the same time.

Several strategies have been designed to help students develop high level skills in mathematics, physics, and computation. Besides theoretical knowledge they need to carry out design and development activities in the field of communication, instrumentation, and power industries to further perfect their practical skills. The curriculum also includes solving tasks in the fields of production and operation.

Scientific groups are formed to encourage the students to do independent but supervised laboratory work. Project laboratory is one of the core parts of the studies which are dedicated to independent problem solving with the armoury of modern work stations and software packages. The expertise of handling these tools are inevitable in pursuing an engineering career.

In order to strengthen the transfer of knowledge and know-how between the university and industry, the faculty maintains close contact with well known multinational companies in the field of communication and computer industry. As a result, many industrial experts offer their experience and knowledge as part-time lecturers, project supervisors, members of examination committees.

# Faculty of Natural Sciences

The **Faculty of Natural Sciences**, one of the newest faculties at the Budapest University of Technology and Economics, was established in 1998 and now employs 196 full and part time faculty members. The Faculty provides classes in Physics, Mathematics and Cognitive Science and is designed to meet the needs of its own and other faculties.

Courses are offered on BSc and MSc degree levels. The Faculty provides post-graduate scientific training as well. Currently more than 65 PhD students are pursuing personal programs in different areas of sciences. The Faculty also offers short courses on specific topics of current interest. The Faculty of Natural Sciences administers its own BSc and MSc/MA programs in Physics, Mathematics, Applied Mathematics and Cognitive Science. A continuing educational program is also offered in Reactor Physics and Reactor Technology. For many years the "Eugene Wigner International Training Course for Reactor Physics Experiments" has also been organized on a yearly basis.

The BSc in Physics Programme, a traditional curriculum, leads to a BSc degree in 6 semesters (currently available only in Hungarian). The facilities and scientific-tutorial background of the Institute of Physics and the Institute of Nuclear Techniques offer unique opportunities in areas like low temperature physics, acousto-optics, holography or the nuclear training reactor. A further advantage of our Physics BSc Program is the engineering background provided by the Budapest University of Technology and Economics. Two specializations can be chosen: "Physicist" and "Applied Physics".

In another 4 semesters an MSc in Physics degree can be earned; courses are given also in English. This program provides comprehensive knowledge, built upon strong theoretical and experimental bases in four areas of specialization. Students who choose the specialization "Research Physicist" get acquainted with theoretical tools of modern physics and with state of the art experimental methods. Students in specialization "Applied Physics" study material testing techniques, material science, optics and R&D skills. Graduates from the specialization "Nuclear Techniques" may become professionals in energetics, radiation and environment protection. The specialization "Medical Physics" transfers knowledge of creative use and development of modern medical instruments. A post-graduate PhD programme in Physics is available in all domains offered in the MSc programme. The BSc in Mathematics Programme, a traditional curriculum, leads to a BSc degree in 6 semesters (currently available only in Hungarian). In the fourth semester students are offered two options: specialization "A" Theoretical Mathematics is recommended to those who are interested in a deeper understanding of some branches of mathematics and in doing theoretical research and are probably going to continue their studies in a Mathematics MSc Program. Specialization "B" Applied Mathematics is recommended to students who are eager to apply their knowledge in industry or finance. Therefore, we have prepared courses related to information technology, economical and financial mathematics, or technology. Graduated students from either specialization are allowed to continue their studies in one of our Mathematics Master programs.

In another 4 semesters an MSc in Mathematics or MSc in Applied Mathematics degree can be earned. A large variety of subjects are offered in the MSc in Mathematics Programme, covering the topics algebra and number theory, analysis, geometry, probability theory and statistics, discrete mathematics, operations research. There is a large flexibility in choosing subjects according to the personal interests of the student.

From the available subjects we also offer two specializations called Analysis and Optimization. Students of the MSc in Applied Mathematics Programme choosing the "Applied Analysis" specialization will meet applications of mathematical analysis in natural sciences, finance and industry. Graduates from the "Operations Research" specialization are able to create models for problems in controlling systems or optimization. Students who specialized in "Financial Mathematics" can analyse financial processes or insurance problems and are able to interpret the results. Graduates from the "Stochastics" specialization can recognize and study random laws in various phenomena. The language of courses of the specializations "Financial Mathematics" and "Stochastics" is English.

MSc in Cognitive Science aims to train researchers skilled in complex analysis of human cognition and knowledge relying on the methods of science. Students may complete courses in all major domains of cognitive science including cognitive psychology, neuroscience, linguistics and the philosophy of science. Students will be equipped with both theoretical knowledge and practical skills such as statistical analysis and research ethics. Graduates will be able to carry out research in various areas of cognitive science combining theoretical insights and methods of biological (neuroscience, experimental psychology, developmental studies), and formal (mathematics, logic, philosophy of science, linguistics) disciplines. Graduates' competences allow them to undertake doctoral studies, and to work in a variety of applied domains including medicine, biotechnology and education.

## Budapest University of Technology and Economics

Continuing Educational Programme in reactor physics and technology is a four semester program offered to professionals working in the nuclear industry. The subjects include reactor physics, thermohydraulics, radiation protection, radiochemistry, reactor technology, nuclear safety and laboratory experiments.

The Institute of Nuclear Techniques organises - or participates actively in the organisation of - several international courses as well. Worth mentioning are the HUVINETT (HUngrian Vietnamese Nuclear Engineering Train the Trainers) courses, where more than 150 Vietnamese educational professionals attended in 2013. Also the participants of the training courses offered by the international EERRI consortium (Eastern European Research Reactor Initiative) perform experiments in the Training Reactor of the BME INT. In this consortium institutes of 5 Eastern European countries cooperate, with the organisatory and financial aid of the International Atomic Energy Agency (IAEA).

Postgraduate programme in Operations Research in four semesters is recommended to professionals - with MSc - who often meet problems related to optimization (economists, engineers, etc.). The program includes theoretical classes (bases of discrete, continuous and stochastic optimization) and practice oriented classes as well (modelling, software packages, algorithm implementation, etc.). In the second and third semester students carry out individual projects which help them to obtain the required knowledge and practice for the future.

# Faculty of Economic and Social Sciences

Based on the long tradition of providing education in the fields of economics, management and social sciences, in 1998 the Budapest University of Technology and Economics established a new faculty, the '**Faculty of Economic and Social Sciences**' employing 300 instructors and researchers. Parallel to the traditional five-year university training, according to the Bologna model the two-cycle system (for BSc and MSc degrees) was introduced in 2006. The accredited full time degree programs in Economics, Engineering Management, Communication and Media Studies, Teachers Training in Vocational Fields are carried out according to the latest European standards. Besides its own training programs the Faculty co-operates closely with all the engineering faculties of the University providing courses in management, economics, social sciences, languages and physical education.

Additionally the Faculty offers different kinds of post-graduate programs and short-term courses of various types. Currently more than 100 PhD students are participating in different individual research programs in different areas of economic and social sciences.

The Faculty of Economic and Social Sciences pays special attention to the integration of theoretical and practical knowledge in its curricula and Faculty has established strong professional relationships with the participants of various economic fields (profit and non profit oriented institutions, banks etc.).

## **Education and Research Activities**

The total number of participants of different graduate-, postgraduate and distance learning forms of training launched by the faculty is about 6000. The number of full-time students of basic training of the faculty itself has been increasing. Research is conducted in 2 doctorate (PhD) schools.

## **Languages and International Studies**

Dutch, English, French, German, Italian, Spanish, Russian and Hungarian as a foreign language are taught at levels from A1 to C1 by 80 lecturers and language instructors at BME Centre of Modern Languages. Language instruction for Specific Purposes (LSP) as well as translator and interpreter training are also offered by the Centre. Students can sit for nationally and internationally accredited general and specific (LSP for Economics or Engineering) language exams at 3 different levels (B1, B2 and C1) at the BME Language Examination Centre.

The teaching staff of the Centre is actively involved in the Hungarian and Central European Studies programme (for detailed description see the section of Hungarian and Central European Studies).

## **Physical Education**

The University offers a wide range of curricular and extra-curricular forms of physical education. The Department of Physical Education co-operates with the University Sports Club and other student sports organisations.



# Welcome Ceremony at BME

Ceremonial Hall, July 2<sup>nd</sup>, 2013



# Budapest University of Technology and Economics

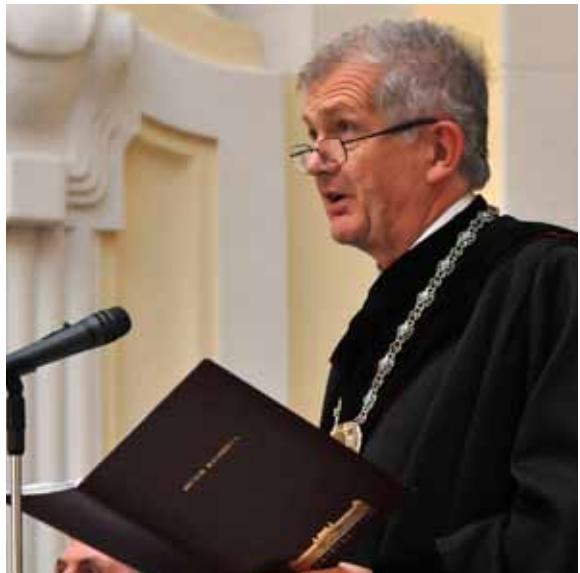


# Opening Ceremony

Aula of the Central Building, October 4<sup>th</sup>, 2013

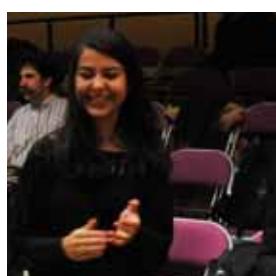
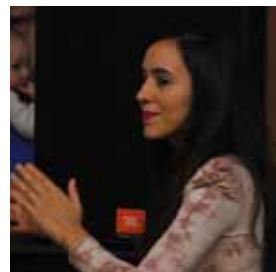


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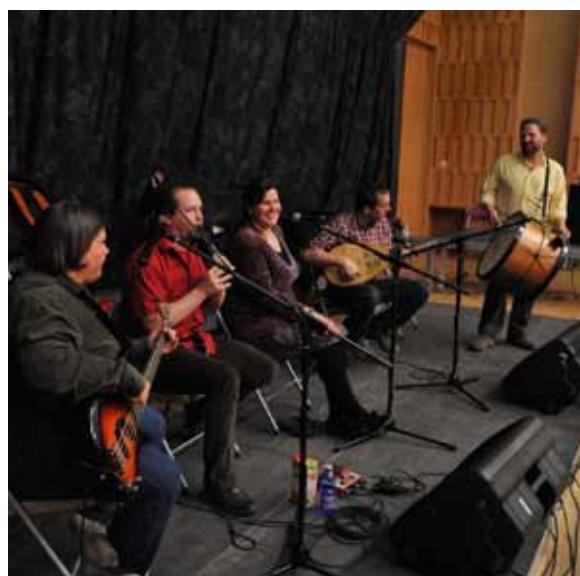


# Hungarian Dance House

January 10<sup>th</sup>, 2014



# Budapest University of Technology and Economics



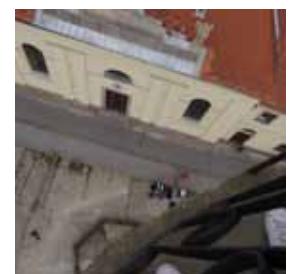
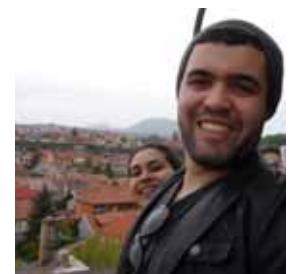
# Excursion to Eger

April 12<sup>th</sup>, 2014



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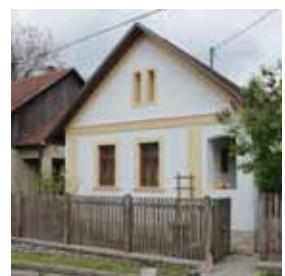


# Visit to the Baradla Cave System

April 12<sup>th</sup>, 2014







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# Hydrofoil trip to Solt-Révbérpuszta

April 12<sup>th</sup>, 2014



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# Tools and Methods of Competitive Engineering (TMCE)

10<sup>th</sup> Bi-annual Symposium, May 12<sup>th</sup> – 16<sup>th</sup>, 2014



# Internship at Graphisoft SE

Presentation of Certificates, May 7<sup>th</sup>, 2014



# Life with Mentors

Summer of 2013



# Some Songs We Sang

Folk and popular songs we sang together on trips and events

## Tavaszi szél vizet áraszt

Tavaszi szél vizet áraszt,  
virágom, virágom.  
Minden madár társat választ,  
virágom, virágom.

Hát én immár kit válasszak,  
virágom, virágom?  
Te engemet, én Tégedet  
virágom, virágom.

## Száz forintnak ötven a fele

Száz forintnak ötven a fele,  
Egye meg a fészkes fekete fene.  
Nem lehet az ember fából,  
Ki kell rúgni a hámfaból.

Még azt mondják részeges vagyok,  
Pedig csak a jó bort szeretem nagyon.  
Megverem a csizmám szárát,  
Csókolom a babám száját.

## Az a szép...

/: Az a szép, az a szép, akinek a szeme  
kék, akinek a szeme kék. :/  
Lám az enyém, lám az enyém sötétkék,  
Mégse vagyok a babámnak elég szép,  
Az a szép, az a szép, akinek a szeme  
kék, akinek a szeme kék.

## A jó lovas katonának

A jó lovas katonának de jól vagyon dolga:  
Eszik, iszik a sátorba, semmiré sincs gondja.  
Hej, élet, be gyöngy élet, ennél szébb  
sem lehet,  
Csak az jöjjön katonának, aki ilyet szeret.

Paripáját megforgatja, elmegyen dolgára.  
Csillog, villog a mezőben virágszál módjára.  
Hej, élet, be gyöngy élet, ennél szébb  
sem lehet,  
Csak az jöjjön katonának, aki ilyet szeret.

## Már minálunk babám...

Már minálunk babám, már minálunk babám az jött a szokásba,  
nem szedik a meggyet, nem szedik a meggyet fedeleles kosárba.  
Felmegy a legény a fára, a meggyfa tetejére,  
lerázza a meggyet, Te meg babám szedjed a rózsás kötényedbe!

Már minálunk babám, már minálunk babám az jött a szokásba,  
nem szedik a makkot, nem szedik a makkot fedeleles kosárba.  
Felmegy a legény a fára, a makkfa tetejére,  
lerázza a makkot, te meg babám kapkodd a rózsás kötényedbe!

Már minálunk babám, már minálunk babám az jött a szokásba,  
nem szedik a meggyet-makkot, nem szedik a meggyet-makkot fedeleles kosárba.  
Felmegy a legény a fára, a meggyfa-makkfa tetejére,  
lerázza a meggyet-makkot, Te meg babám szedjed-kapkodd, a rózsás kötényedbe!

Már minálunk babám, már minálunk babám, az jött a szokásba,  
nem szedik az ananászt, nem szedik az ananászt fedeleles kosárba.  
Felmegy a legény a fára, az ananászfa tetejére,  
lerázza az ananászt, te meg babám kaparászd a rózsás kötényedbe!

## Eger városa, barátok városa

Eger városa, barátok városa  
Barátok járnak fapapucsba'.  
/: csiszi-csiszi csíssz-csóssz in nomine patris,  
Reverenda alatt pálinkát visz. :/

Nem vagyok én barát, szeretem a piát,  
Odaadom érte a reverendát.  
/: Odaadom érte a csatos imakönyvet,  
Ölelem és csókolom a szeretőmet. :/

Buda városa, diákok városa  
Diákok járnak fapapucsba'  
/: kipi-kipli kipp-kopp in nomine patris,  
diáksapka alatt pálinkát visz. :/

Nem vagyok én diák, szeretem a piát,  
Odaadom érte a diáksapkát,  
/: Odaadom érte a rohadt matekkönyvet,  
Ölelem és csókolom a szeretőmet:/

# Our Year in Hungary

Students' quotes about their stay at BME

"Budapest: It was a place that I didn't know. Now, it's my home."

— Bruna Scarpa

"There are no words to describe how fantastic and amazing my experience in Budapest was! I attended many nice and difficult subjects from my Faculty, but I really worked hard to have good results in the end. I am very thankful to my professors who taught me a lot, they also shared nice experiences with us, these were not only about Engineering! Köszönöm!"

— Willian Rafael

What I most like in Budapest is my freedom about everything; studies, security... So "I like the freedom that I found in Budapest"

— Ana Carolina Ferreira

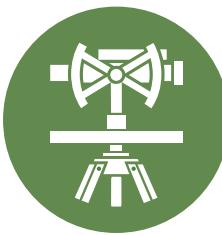
Again perfect Valéria! Az a szép, Az a szép, akinek a szeme kék, akinek a szeme kék! ☺

Can I write "Szeretlek Balogh Valéria?" in the year book? See you darling!

— Bernardo Alvarenga

I have just one phrase: it was just the *BEST* year of my life!

— Pedro Helou



# Faculty of Civil Engineering



Adriano Cesar  
Frotta de Holanda Neto



Alan Portugal  
Fernandes da Cunha



Augusto Fumagalli  
Bonifácio Pereira



Bianca  
Brito Pasini



Bruno  
Caram Muller



Camila  
Costa de Oliveira



Dénnyss  
Araújo Santos



Fernando  
Tuma de Moraes



Gustavo  
Coldebella



Isabella Garcis Castilho  
T Azevedo



Izabella  
Melo Kuchenbecker



João Víctor  
Silva Rangel

## Budapest University of Technology and Economics



Julia  
Beletatti de Almeida



Karen  
Machado Bastos



Karina  
Miki Ichiki



Laís  
Freire Nunes



Lorena Rayssa  
Cunha França



Luciana  
Souza Paes de Barros



Luiz Henrique  
Reis dos Santos



Luiz Felipe  
Gomes



Manoel Otavio  
Quaresma Salomão



Marcelo  
Terek dos Santos



Marco Antonio  
Peixer Miguel de Antonio



Matheus  
Lula Machado Nery



Monique  
de Neiva



Pedro  
Silva Humbert



Rafael  
Lopes Ferreira



Rafael  
Ribeiro Dardot



Raphael Henrique  
Costa



Tulio  
Silva Soares



Vinícius Louis  
Dadalto Paixao



William Yassuo  
Matsura

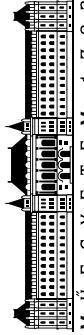


Yannick Marie  
Penicaut Perdigão

**Students of the  
Faculty of Civil Engineering  
2013–2014**

Adriano Cesar Frota de Holanda Neto  
Alan Portugal Fernandes da Cunha  
André Felipe Kretzer  
Arthur Fernandes Domingos  
Artur Vinícius Matias  
Augusto Fumagalli Bonifácio Pereira  
Bianca Brito Pasini  
Bruno Caram Muller  
Camila Costa de Oliveira  
Dennys Araújo Santos  
Diego da Silva Lourenço  
Felipe Daniel Carvalho Silva  
Fernando Tuma de Moraes  
Gabriel Steckelberg de Souza e Castro  
Guilherme Cheiram de Oliveira  
Gustavo Coldebella  
Isabella Garcis Castilho T Azevedo  
Izabella Melo Kuchenbecker  
Jaime Teixeira  
João Victor Silva Rangel  
José Mauricio Azevedo Ferreira  
Julia Beletatti de Almeida  
Karen Machado Bastos  
Karina Miki Ichiki  
Laís Freire Nunes

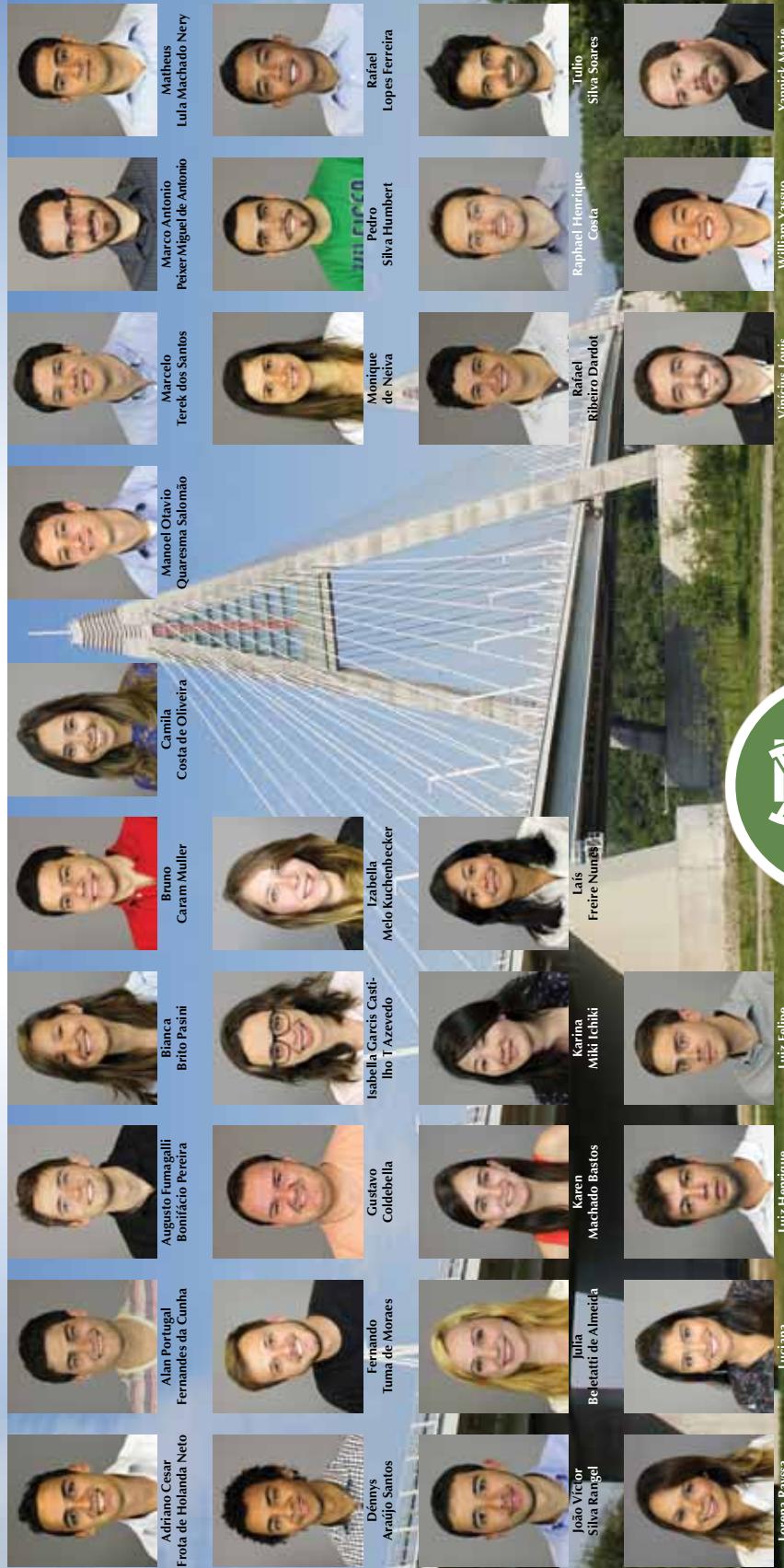
Lorena Rayssa Cunha França  
Luciana Souza Paes de Barros  
Luis Gustavo Lopes de Macedo  
Luiz Filipe Gomes  
Luiz Henrique Reis dos Santos  
Manoel Otavio Quaresma Salomao  
Marcelo Eduardo Fernandes de Oliveira  
Marcelo Terek dos Santos  
Marco Antonio Peixer Miguel de Antonio  
Marília Barbosa Lima e Silva  
Matheus Lula Machado Nery  
Monique de Neiva  
Pedro Albano Dantas  
Pedro Henrique Viana de Araujo Lopes  
Pedro Silva Humbert  
Rafael Lopes Ferreira  
Rafael Ribeiro Dardot  
Raphael Henrique Costa  
Taua Magalhaes Vital  
Tulio Silva Soares  
Vinícius Louis Dadalto Paixao  
Vitor Kunz Mazzochin  
William Schineider Rabelo  
William Yassuo Matsura  
Yannick Marie Penicaut Perdigao



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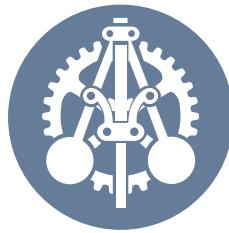
Budapest University of  
Technology and Economics

**Faculty of  
Civil Engineering**



2014

2013



# Faculty of Mechanical Engineering



Amanda Machado  
Carvalho Pires



Bruno  
Firmato Esteves e Francez



Caio  
Bisulli Sant'Ana



Carlos Felipe  
Said Pinheiro



Daniel  
Esteves Rosa



Daniela Cristina  
Pinzan



Daniella Fernanda  
Dos Santos Magalhaes



Danilo  
Lopes da Silveira



Érica  
Balbino Schuller



Felipe  
Campana Martini



Guilherme  
De Souza Fernandes



Israel  
Farias de Assis



João Paulo  
de Assis Cefali Almeida



Júlia Maria  
de Oliveira Camargo



Letícia  
Peixoto Abranches



Luana  
Accioly Ramos



Lucas  
Peixoto Teixeira



Mauro Luciano  
Dayrell Filho



Nayara Fernanda  
de Queiroz Ramos



Paula  
Pereira Janusonis



Paulo Henrique  
Andreani Aruajo



Taís  
Santos da Silva



Thiago  
Meireles Fonseca



Vinicius Teixeira  
de Gusmão Amorim



Walter  
Almeida Gentil

**Students of the  
Faculty of Mechanical Engineering  
2013–2014**

Aleizio Martins Guimaraes Júnior  
Amanda Machado Carvalho Pires  
Bruno Firmato Esteves e Francez  
Caio Bisulli Sant'Ana  
Carlos Felipe Said Pinheiro  
Carlos Raul Lima da Frota Araujo  
Daniel Esteves Rosa  
Daniela Cristina Pinzan  
Daniella Fernanda Dos Santos Magalhaes  
Danilo Lopes da Silveira  
Eric Ferreira Diniz  
Érica Balbino Schuller  
Erica Karla Guimaraes Medeiros de Oliveira  
Felipe Campana Martini  
Guilherme De Souza Fernandes  
Israel Farias de Assis

João Paulo de Assis Cefali Almeida  
Júlia Maria de Oliveira Camargo  
Letícia Peixoto Abranches  
Luana Accioly Ramos  
Lucas Leonardo Cepinho dos Santos  
Lucas Peixoto Teixeira  
Mauro Luciano Dayrell Filho  
Nayara Fernanda de Queiroz Ramos  
Paula Pereira Janusonis  
Paulo Henrique Andreani Araujo  
Rodrigo de Oliveira Belichar  
Saulo Ferreira Cendon Fonseca Silva  
Taísa Santos da Silva  
Thiago Meireles Fonseca  
Vinicius Teixeira de Gusmao Amorim  
Walter Almeida Gentil

# Budapest University of Technology and Economics



M Ú E G Y E T E M 1 7 8 2

# Faculty of Mechanical Engineering



2013



2014



# Faculty of Architecture



Adelia  
Guiomar da Silva



Alexandre  
Pajeú Moura



Amanda Luisa  
de Souza Derbis



Ana Carolina  
Ferreira Arcanjo



Anna Paula  
Ferraz Dias Vieira



Bruna  
Germano Scarpa



Caio  
Souza Sabbagh



Carolina  
Guimaraes Leite



Daniella  
Alves Dornas



Flávia  
Marcarine Arruda



Gabriel  
Avila Giannini



Izabela  
Brettas Baptista



Izabela  
França Diniz



Julia  
de Guapindaia Braga



Juliana  
Sampaio Ventura



Lucas  
Martins Cardoso



Luciano  
Pedreira de Avila Goulart



Luísa  
Tolentino Bento da Silva



Luiz Augusto  
Machado Freitas



Maíra  
Henriques Áspera



Maria Heloísa  
Alves de Oliveira



Michelle Cristina  
de Pádua Pedrosa



Monique  
Silva Ramos Nágila



Paula  
Costa Cançado Silva



Ramon Vianey  
Xavier Serique



Ricardo  
Prado Froes



Suzana  
Almeida Neves Renda



Tais  
Brandão Alves Neves



Tarcísio  
Araujo Silva



Vitor  
Marson Silva



Yuri Leandro  
Abas Frazão

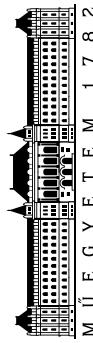
## **Students of the Faculty of Architecture**

**2013–2014**

Adelia Guiomar da Silva  
Alana Cafiero Garcia  
Alexandre Pajeú Moura  
Amanda Luisa de Souza Derbis  
Ana Carolina Ferreira Arcanjo  
Anna Paula Ferraz Dias Vieira  
Bruna Germano Scarpa  
Caio Souza Sabbagh  
Carolina Guimaraes Leite  
Daniella Alves Dornas  
Flávia Marcarine Arruda  
Florence Rezende Leite  
Gabriel Avila Giannini  
Izabela Brettas Baptista  
Izabela França Diniz  
Julia de Guapindaia Braga  
Juliana Sampaio Ventura  
Leonardo Baron Zenari  
Lamb Littieri Machado  
Lucas Martins Cardoso  
Luciano Pedreira de Avila Goulart

Luísa Tolentino Bento da Silva  
Luiz Augusto Machado Freitas  
Maíra Henriques Áspera  
Maria Heloísa Alves de Oliveira  
Mariane De Silva Paulino  
Michelle Cristina de Pádua Pedrosa  
Monique Silva Ramos Nágila  
Natália Lubiana  
Paula Costa Cançado Silva  
Pietro Falcao Zanella Ribeiro  
Ramon Vianey Xavier Serique  
Ricardo Prado Froes  
Silvia Scoralich de Carvalho  
Suzana Almeida Neves Renda  
Tais Branda Alves Neves  
Tarcísio Araujo Silva  
Thomas Delenga dos Santos  
Vitor Marson Silva  
Yara Fonseca Alves  
Yuri Leandro Abas Frazao

# Budapest University of Technology and Economics



M Ú E G Y E T E M 1 7 8 2

# Faculty of Architecture



Adelia  
Guimaraes da Silva  
Alexandre  
Pajeu Moura  
Ana Carolina  
Ferreira Arcano  
Amanda Luisa  
de Souza Derbis



2014



2013



# Faculty of Chemical Technology and Biotechnology



Ana Luisa  
Vieira Machado Ramos



André  
Minato Takeuchi



Andreiva Lauren  
Vital do Carmo



Braz Jose  
de Castro Filho



Bruno  
Manduca



Cassius Fabian  
Costa Souza



Daniela  
Yurie Nakasato



Fernanda  
Paiva Franguelli



Gabriela  
de Almeida



Gabriela  
Turra Lial



Janaína Carla  
da Silva



Juliana  
Sacramento Mota de Souza



Klebson  
da Cruz Silva



Larissa  
Martins Teixeira



Matheus  
Ferreira



Millena  
Ribeiro da Fonseca



Natália  
da Costa Luchiari



Nayara  
Alonso Cazo



Paula  
Chiachia Pasta



Rafael  
Tomazella Moraes



Rebecca  
Pinto da Silva Godoy



Tahirih  
Marcondes Formighieri



Vitor Arcoverde  
Cerveira da Silva



Yago  
Rodrigues Santos

**Students of the  
Faculty of Chemical Technology and Biotechnology  
2013–2014**

Ana Luisa Vieira Machado Ramos  
André Minato Takeuchi  
Andreiva Lauren Vital do Carmo  
Braz Jose de Castro Filho  
Bruno Manduca  
Cassius Fabian Costa Souza  
Daniela Yurie Nakasato  
Fernanda Paiva Franguelli  
Flavia Santos Antunes  
Gabriela de Almeida  
Gabriela Turra Lial  
Giovanni Razera  
Hercules Nunes da Silveira Júnior  
Janaína Carla da Silva  
Juliana Sacramento Mota de Souza

Klebson da Cruz Silva  
Lais Yuriko Morimoto  
Larissa Martins Teixeira  
Matheus Ferreira  
Millena Ribeiro da Fonseca  
Natália da Costa Luchiari  
Nayara Alonso Cazo  
Paula Chiachia Pasta  
Rafael Tomazella Moraes  
Raquel Maria de Campos  
Rebecca Pinto da Silva Godoy  
Tahirih Marcondes Formighieri  
Thales Fonseca Cosenney  
Vitor Arcoverde Cerveira da Silva  
Yago Rodrigues Santos

# Budapest University of Technology and Economics



M Ú E G Y E T E M 1 7 8 2

# Faculty of Chemical Technology and Biotechnology



Ana Luisa  
Vieira Machado Ramos



Andreia Lauren  
Vital do Carmo



Bruno  
Manduca



Braz Jose  
de Castro Filho



Daniela  
Yurie Nakatso



Fernanda  
Paiva Franguello



Janaina Carla  
da Silva



Juliana  
Sacramento MoladeSouza



Gabriela  
Tura Lial

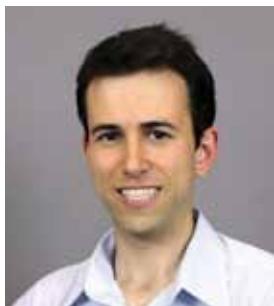


2014





# Faculty of Electrical Engineering and Informatics



Adriano  
Rech



Agno Guido  
de Oliveira Abilio



Alba Francine  
de Souza Caetano



Alexandre Alvarenga  
de Oliveira Monteiro



Alisson  
Irineu da Silva



Andre Luis  
Gomes Araujo



Antoniel  
Peixoto Guelber Gravina



Arthur  
Silva Pereira de Assis



Bernardo Alfonso  
Salomão Alvarenga Filho



Bruna  
Vieira Faria Silva



Bruno Aguilar  
dos Santos Cazarim



Bruno  
Valverde



Caio  
da Silva Lopes



Caique  
Neiva Pires Matos



Camilo  
Silva Candido Damasceno



Carlos Manuel  
Viriato Neto



Daniela  
da Silva Andrade



Djalma  
Simões Dos Santos



Everton Junior  
Da Silva Costa



Giovani  
Bocchese Pereira



Guilherme  
Magalhaes Monteiro



Guilherme Melo  
de Assis Corrêa Junior



Gustavo  
Jorge Silva



Heli Junior  
Gonçalves Rabelo



Iago  
De Moura Faria



Iago  
Moreira da Silva



Italo  
Gusmão Fernandes



Juliana  
Dos Santos Barbosa

## Budapest University of Technology and Economics



Leonardo  
Lacerda de Oliveira



Luan  
Blohem Lima



Lucas  
Freitas de Paiva



Lucas  
Meneghesso Faria



Lucas  
Rocha Santana Feu



Marcela  
Miasato Silva



Marco Aurélio  
de Oliveira Moreira



Mayko  
Araujo de Carvalho



Patricia  
Nunes Dourado



Rebecca Carolinne  
Freitas Alves



Renan  
Rossi Mango



Rogger  
Lacerda Gontijo



Stanley  
Cortes de Sousa



Stefânia  
Rodrigues de Souza Barra



Thaisa  
Ramos de Almeida



Thiago Henrique  
Silva Dos Santos



Vinicius  
De Oliveira Gomide



Willian Rafael  
Fernandes



Ygor  
Quadros de Aguiar

**Students of the  
Faculty of Electrical Engineering and Informatics  
2013–2014**

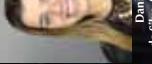
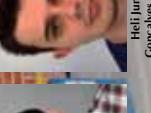
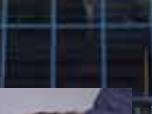
Adriano Rech	José Eduardo Pereira da Silva
Agno Guido de Oliveira Abilio	Juliana Dos Santos Barbosa
Alba Francine de Souza Caetano	Leandro Andrade Couto Fonseca
Alexandre Alvarenga de Oliveira Monteiro	Leonardo Lacerda de Oliveira
Alisson Irineu da Silva	Luan Blohem Lima
Andre Luis Gomes Araujo	Lucas Freitas de Paiva
Antoniol Peixoto Guelber Gravina	Lucas Meneghesso Faria
Arthur Gondim Rodrigues	Lucas Rocha Santana Feu
Arthur Silva Pereira de Assis	Luis Fernando da Silva Gonçalves
Bernardo Afonso Salomão Alvarenga Filho	Marcela Miasato Silva
Bruna Vieira Faria Silva	Marco Aurélio de Oliveira Moreira
Bruno Aguiar dos Santos Cazarim	Marina Harumi Oba Braga Torres
Bruno Valverde	Mayko Araujo de Carvalho
Caio da Silva Lopes	Murilo Lincoln Soares Melo
Caique Neiva Pires Matos	Pablo Henrique Antunes Silva
Camilo Silva Candido Damasceno	Patricia Nunes Dourado
Carlos Manuel Viriato Neto	Patrícia Silva Neves
Daniela da Silva Andrade	Pedro Issa Helou
Diogo Cosin Ayres de Oliveira	Pedro Paulo Martins dos Santos
Djalma Simoes Dos Santos	Pedro Murta Cimini
Eduardo Warick	Raí Beirao Augusto dos Santos
Everton Junior Da Silva Costa	Rebecca Carolinne Freitas Alves
Giovani Bocchese Pereira	Renan Rossi Mango
Guilherme Magalhaes Monteiro	Rogger Lacerda Gontijo
Guilherme Melo de Assis Correa Junior	Stanley Cortes de Sousa
Gustavo Jorge Silva	Stefânia Rodrigues de Souza Barra
Heli Junior Gonçalves Rabelo	Thaisa Ramos de Almeida
Iago De Moura Faria	Thiago Henrique Silva Dos Santos
Iago Moreira da Silva	Vinicius De Oliveira Gomide
Italo Gusmao Fernandes	Willian Rafael Fernandes
Jorge Raso Jamel Edim	Ygor Quadros de Aguiar

# Budapest University of Technology and Economics



M Ú E G Y E T E M 1 7 8 2

# Faculty of Electrical Engineering and Informatics





# Faculty of Transportation Engineering and Vehicle Engineering



Amanda  
De Paiva Silva



Amauri  
da Silva Junior



Gabriel  
Cantal Gonczarowska



Leonardo  
Almeida Rocha



Pedro Henrique  
Meireles Fonseca

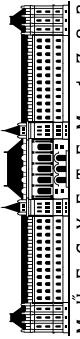
## Students of the Faculty of Transportation Engineering and Vehicle Engineering

2013–2014

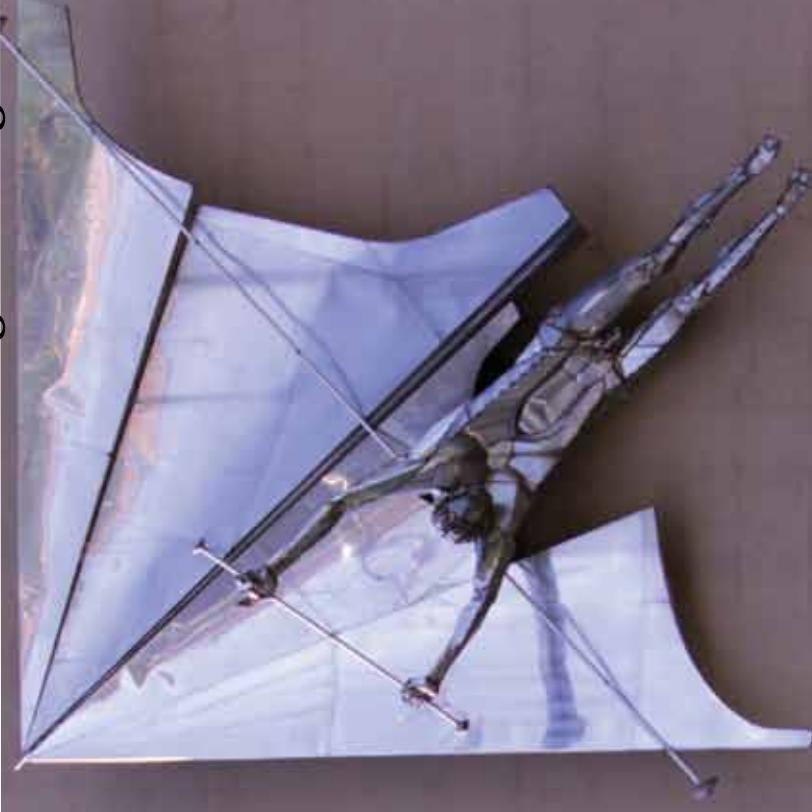
Adriano Nobuo Tsunematsu  
Amanda De Paiva Silva  
Amauri da Silva Junior  
Bruno Raphael Rocha  
Daniel Matoso Santos Julliardy

Gabriel Cantal Gonczarowska  
Leonardo Almeida Rocha  
Ludimila Cavalcante da Silva  
Pedro Henrique Meireles Fonseca

# Budapest University of Technology and Economics



# Faculty of Transportation Engineering and Vehicle Engineering



Gabriel  
Cantał Gonczarowska



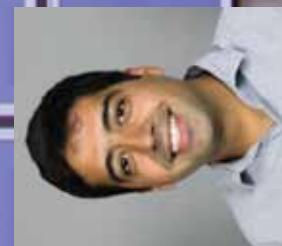
Amauri  
da Silva Junior



Amanda  
De Paiva Silva



Pedro Henrique  
Meireles Fonseca

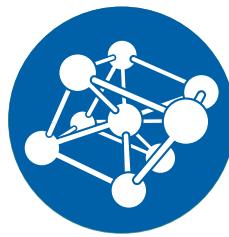


Leonardo  
Almeida Rocha



2013

2014



# Faculty of Natural Sciences



Ana Clara  
Faleiro Petrucelli



Allen Henri  
Dunice Van Els



Mariana  
Santos Mourao

Bruno  
Caminaga Maranho

Budapest University of  
Technology and Economics



Faculty of  
Natural Sciences



2013



2014



Ana Clara  
Faleiro Petrucelli



Allen Henri  
Dunice Van Els



Mariana  
Santos Mourao



# Faculty of Economic and Social Sciences



Augusto Nazário  
Soares da Costa



Carlos Raul  
Lima da Frota Araujo



Fernanda  
Barbosa de Almeida Dias



Gabriel  
Lugoboni Marinheiro



Gustavo  
Dal Pai Silva



Jose  
Saboya Neto



Junio Irineu  
Moretti



Lucas  
Soares De Faria



Marcel  
Cromberg



Pedro Henrique  
Cartaxo de Almeida



Polyanna  
Jacob Rocha



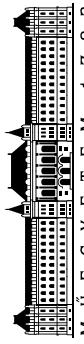
Sarah  
Araujo Lima

**Students of the  
Faculty of Economic and Social Sciences  
2013–2014**

Augusto Nazário Soares da Costa  
Camila Rodrigues da Silva  
Fernanda Barbosa de Almeida Dias  
Gabriel Lugoboni Marinheiro  
Gabriel Reis Santos  
Gustavo Dal Pai Silva  
Jose Saboya Neto  
Junio Irineu Moretti

Lucas Catellan Zandonadi  
Lucas Soares De Faria  
Marcel Cromberg  
Pedro Henrique Cartaxo de Almeida Santos  
Polyanna Jacob Rocha  
Sarah Araujo Lima  
Stéphanie Da Silva Alves  
Yuri Almeida Cunha

# Budapest University of Technology and Economics



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# Faculty of Economic and Social Sciences



Gustavo  
Da Paixão  
Silva



Carlos Raul  
Juma da Frotinha Araujo



Fernanda  
Barbosa de Almeida Dias



Gabriel  
Lugoboni Matheusso



Marcel  
Cromberg



Lucas  
Soares De Freitas



Júnio Irineu  
Moretti



Sarah  
Araújo Lima



Augusto Nazário  
Soares da Costa



José  
Saboya Neto



Polyanna  
Jacob Rocha



Pedro Henrique  
Cartaxo de Almeida

2014

2013





# Brazilians at the BME

## 2013/2014 academic year

In the academic year 2013-2014, more than 600 Brazilian students have been studying at the Budapest University of Technology and Economics. Now 241 students have completed their studies at the BME, and a year full of learning, experiences and memories will conclude.

During this year at this historic university they have settled in a foreign country, followed courses and conducted laboratory work in a foreign language. Some have even taken part in conferences or have undertaken research work to be presented at the Students' Scientific Conference. And also their lecturers think very highly of them: the visiting students have been very curious, creative and open-hearted. It has been a year worth remembering for all of us, and this book will help us do just that.



Hungarian Rectors Conference



**CIÊNCIA**  
SEM FRONTEIRAS