

Jade University Wilhelmshaven/Oldenburg/Elsfleth
Department: Management, Information and Technologie



Excursionreport:

International Projekt to Budapest and Prague from 14th till the 21st of April 2024



Participants:

Organizer: P. Beckmann

Supervisor: Prof. Dr. J. Timmerberg

Students: D. Abram, V. Cvetkova, J. Genz, S. Heinrich, P. Herrwerth,
E. Jasarovic, F. Kurbjuweit, E. Von Seggern, L. Weinert, E. Westerkamp

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14.04.2024: Wilhelmshaven to Budapest

The excursion to Budapest and Prague had begun. With enthusiasm and a sense of adventure, we embarked from Wilhelmshaven at 6 AM in two 9-person vans, ready for the 13-hour drive to Budapest. To spare some participants from Oldenburg a journey to Wilhelmshaven, we had picked them up in Oldenburg, granting them the benefit of an extra half-hour of sleep. After about an hour and a half, we made our first stop at a rest area behind Bremen, allowing all participants to greet each other for the first time. Since everyone was well-equipped with food and drinks, there was no need to purchase anything at an expensive rest area. After a short break, we continued our journey. The car had a USB connection, meaning music could be played according to everyone's preferences, making the journey more enjoyable as we drove for many hours. Do not worry, we also made enough stops for toilets. During the journey, there were some beautiful landscapes to see, which are not commonly found in Northern Germany, because there are almost no mountains or hills.



Journey to Budapest

After several hours, we crossed the border into the Czech Republic and barely noticed our departure from Germany due to the good roads. Since the vignettes had been purchased in advance, there was no need to buy them on-site. Around 1 PM, we reached Prague, and the view of the city already filled us with anticipation. However, since we were visiting Budapest first, we only drove through Prague and had to wait until Friday to explore it. When we reached the border with Slovakia, it was the first time we realized we were in a foreign country, as the roads were very bumpy, causing some laughter, and also there were no buildings in sight. However, since the part through Slovakia was rather short, we soon reached Hungary (Magyarország in Hungarian), where more buildings and intact roads were visible. When we first drove into Budapest, we saw familiar stores like Aldi, Lidl, dm, JYSK and Obi. By 7 PM, we had reached the hotel in Budapest, and the 13-hour journey had come to an end.

15.04.2024: Obuda University and Sightseeing in Budapest

Obuda University

Óbuda University in Budapest, Hungary, is an educational institution with a long history and a wide range of study programmes. Óbuda University was founded in 1879 as Budapest University of Technology. In the decades that followed, it played a major role in training engineers and technicians for the country's emerging and rapidly growing industries. Over the years, the university has evolved and today offers a wide range of different specialisations, including engineering, economics, computer science and humanities. The electrical engineering, computer science and business informatics degree programmes are particularly noteworthy. These degree programmes enjoy a very good international reputation, which is maintained thanks to highly qualified lecturers and modern teaching methods. The university attaches great importance to providing its students with practical skills and therefore offers close links and partnerships with industry. Another speciality of Óbuda University is its international orientation. It maintains close relationships with many partner universities worldwide and offers a variety of exchange programmes. These programmes enable students to gain international experience and broaden their intercultural understanding. The university places great emphasis on research and development to promote innovative projects and solutions. This not only creates opportunities for students, but also contributes to the academic excellence of the university. Overall, Óbuda University is a highly regarded educational institution known for its academic excellence, practical training and international orientation.



Obuda University



Lecture about Projectmanagement

Sightseeing in Budapest

Our excursion through Budapest, the pearl of the Danube, was an unforgettable experience that immersed us in the history and magnificent architecture of this fascinating city. Our first destination was the Chain Bridge, one of the capital's most popular free sights. Built between 1839 and 1849, the bridge is a 19th century masterpiece and was the first bridge of its kind to connect Buda and Pest. Under the guidance of our tour guide, we learnt that the Chain Bridge is not only an architectural jewel, but also symbolises the unification of Buda and Pest to form the metropolis of Budapest in 1872. The bridge was named in honour of its initiator, the Hungarian Count István Széchenyi, and from the bridge we had a breathtaking view of the majestic Budapest Castle, the Matthias Church, which we also visited, and the imposing parliament building on the banks of the Danube. The Chain Bridge connects Istvan Szechenyi Square, which forms the end of the city centre of Budapest, with Adam Clark Square in front of Ofn Castle Hill, now Buda Castle Hill. The structure is supported by two huge pillars in the shape of a triumphal arch, through which the iron chains of the 375 metre long bridge pass, hence the name "Chain Bridge". The pier gates have a passage width of 6.50 metres and the weight of the iron construction is estimated at 2000 tonnes. Before the chain bridge was built, a pontoon bridge was occasionally laid across the Danube in the 16th/17th century. From 1776, this bridge was regularly built in spring from 46 rafts and connected the then still independent cities of Buda and Pest. As it had to be dismantled before winter, there could be no fixed connection between the two cities during the winter months, which restricted the free movement of people and trade goods.



Chain Bridge

Next, we visited the Hungarian Academy of Sciences on the Pest side, a centre of intellectual excellence, where we admired the statue of István Széchenyi. Széchenyi was one of the most important Hungarian politicians and visionaries of the 19th century and played a decisive role in the modernisation of Hungary. The Academy itself is a testament to Hungary's important intellectual tradition and a place that epitomises the country's scholarship and progress.



Hungarian Academy of Science



Statue of Istvan Szechenyi

Szabadság tér (Freedom Square) is located in the V district in the centre of Pest. The square was built on the site of a former barracks at the end of the 19th century. The name, Szabadság tér, goes back to the liberation of Hungary from the Russians in 1945 after the country was occupied by the Nazis in 1944 and Budapest was largely destroyed. A monument was erected in the centre of the square to thank the Russian liberators. Also on the square is a memorial to Harry Hill, the controversial memorial to the victims of the Nazi occupation in the Second World War, and a statue of Ronald Reagan. The stock exchange and banking centre and the American embassy are located around Freedom Square.

The monument, which stands out above all for its monolithic column, was criticised shortly after its construction. It was erected to honour the liberation from the Nazis by the Red Army, but for the citizens of Budapest only the occupier changed. Unlike many other Soviet monuments, most of which were dismantled and collected in the Statue Park Museum, this monument still stands today, which can be seen as a gesture of forgiveness for the occupation of the Red Army.



Monument to the liberation of Hungary by the Red Army

Next on the programme was St Stephen's Basilica, an impressive religious building. With a height of 94 metres and a width of 62 metres, the church towers over the skyline of Budapest. We were able to admire the magnificent architecture and learn more about the religious significance of this important city landmark. The church itself seats up to 8500 people and is located near the Chain Bridge, and is dedicated to the first Christian Hungarian King Stephen. In the entrance area, there is a sculpture of St Gellért with his disciple, St Emmerich, the son of King Stephen the Saint. The basilica houses numerous stained glass windows, paintings, and sculptures. Incidentally, the basilica is the first Hungarian church building to be awarded the title "Basilica minor". In 1987, it was even declared a UNESCO World Heritage Site because it is part of the Danube panorama. Construction of the basilica began in 1851 according to plans by József Hild in the classical style. After his death, Miklós Ybl took over the construction management and continued to build the church in the classical style. Between 1848 and 1849, construction work had to be cancelled due to a freedom struggle and in 1868 the dome collapsed, which led to further delays. József Kauser therefore had to work on the foundations for several more years.



Stephans-Basilika

One of Hungary's most controversial monuments, the memorial to the victims of the German occupation, is located at the head of Freedom Square. The memorial was erected on the night of 19 March 2014, with the public excluded. It shows a figure of the Archangel Gabriel, the patron saint of Hungary, holding the orb in his right hand, above him the imperial eagle symbolising the invasion of the German troops, which knocks the orb out of Gabriel's hand. The neoclassical portal behind the angel bears the inscription "Memorial to the Victims of the German Occupation". The memorial caused a great stir among the Hungarian public because facts were created in the politics of remembrance without the involvement of the civilian population. For many, the memorial trivialised Hungary's role in the Second World War. Hungary was one of Nazi Germany's allies. However, there was growing concern in Berlin that Hungary wanted to break off the alliance due to the course of the war, and that the flank in south-east Europe should also be secured against the advance of the Red Army. Thus, the Wehrmacht marched into Hungary on 19 March 1944. After the German invasion, pro-German forces gained the upper hand within the government, the previous protection of Hungarian Jews fell into disrepair, and 400,000 Hungarian Jews were deported in a very short time. In response to this criticism, local residents, Holocaust survivors and relatives of those murdered installed writings and pictures in front of the memorial. Under the motto "Living Memorial", talks and lectures were also organised in front of the memorial, primarily with the aim of telling the story properly.



Memorial to the victims of the German occupation

The Jewish quarter, also known as Erzsébetváros or the 7th district, was the first suburban settlement east of the medieval city of Pest on the Danube. At the beginning of the 18th century it was used as a horticultural area, and shortly afterwards people of the Jewish faith settled near the city walls. Subsequently, the agricultural land was subdivided into building plots, and more and more people settled there. Today's Budapest was only formed in 1873 from the parts of Buda, Obuda and Pest. From this merger, Erzsébetváros and part of the "Istvánmező" neighbourhood were assigned to the 7th district. Just as in many other European countries, there have been repeated attacks on Hungary's own Jewish population throughout the country's history. The first anti-Jewish racial law was passed shortly after the First World War, in 1920. Right-wing parties fueled anti-Jewish sentiment and the rejection spread to the population. At the end of 1944, a ghetto was set up in the Erzsébetváros neighbourhood where around 60,000 Jews lived. The ghetto existed for less than half a year. Today, the Jewish quarter is one of Budapest's most popular neighbourhoods. The streets are characterised by beautiful old buildings, partly dilapidated buildings, and street art. It is also home to the city's pub and party district.



The Jewish quarter

One of the most famous and important sights in the Jewish quarter is the Great Synagogue. It is located in Dhánystraße and was built from 1854-1859 in Moorish style under the direction of Ignaz Wechseltmann. Today it is the largest synagogue in Europe with 2964 seats.



The Great Synagogue

The Jewish Museum, built on the site of the childhood home of Theodor Herzl, the founder of modern political Zionism, is also part of the building complex of the Great Synagogue and was erected between 1930 and 1931. The Tree of Life is located on the grounds of the large synagogue. It is a steel memorial in the size and shape of a weeping willow. More than 30,000 Jews murdered in Budapest during the Nazi era are engraved on the leaves of the willow.



The tree of life

The Jewish quarter is not only lined with beautiful old Art Nouveau buildings, but is also adorned with the works of local artists. One of the most important artists is probably Mykhailo Kolodko, who comes from Ukraine and lives in Budapest. The picture on the right shows an art installation by him near the Great Synagogue. You can see a small sculpture of Theodor Herzl, holding a bicycle in his hand. A photo of Herzl with his Opel "Blitz" bicycle in his hand served as a model. Herzl was instrumental in the founding of the State of Israel and was born in Budapest in 1860; the small sculpture is the first portrait of him in Budapest. The picture on the left shows the Rubik's cube. The "Rubik's Cube" was invented by the Hungarian civil engineer and architect Ernő Rubik. Visitors encounter the cube everywhere in the city, including here on a house wall. In the last picture you can see a mural, murals are usually large wall paintings that are mostly commissioned works and serve to embellish the facades. Many of these murals are painted by a local street art group called Neopaint.



Street art in the Jewish quarter

The title of the painting in the picture below is "The Game of the Century - 6:3", it is 1000m² in size and is located at Rumbach Sebestyén utca 6-10. The mural refers to a legendary football match in which Hungary won 6:3 against England at Wembley Stadium in 1953.



The game of the century - 6:3

The country's first underground railway and the third underground railway in the world was inaugurated in Budapest on the occasion of the millennium celebrations marking the thousandth anniversary of the Hungarian conquest of Hungary in 1896. Its first line is today's M1, which is also the shortest line in today's Budapest metro network. A few other aspects distinguish the line from the other metros in the capital: it is operated with an overhead power line or a single overhead contact line with a lower voltage of 225 volts. In addition, the platforms on the M1 are shorter and lower than on the other lines and also differ in style. The vehicles are also different, they are shorter, have low floors, and have manually operated trumpet couplers. The vehicles also travel more slowly and the station spacing is considerably shorter at 419 metres. The M1 line is also the only underground line to have access to the tram network.



Metro Budapest

At the end of the week, our expedition through Budapest took us to Heroes' Square, a historical and cultural centre of the city. The square is also in the Pest district and marks the end of the famous Andrassy Street as well as the entrance to the city forest that stretches behind the square. Here, in front of the impressive Millennium Monument, we talked about Hungary's past. The Millennium Monument is a 36 metre high structure and stands at the centre of Heroes' Square. It is a symbol of Hungary's thousand-year history and was erected to celebrate the millennium in 1896. The monumental structure is flanked by equestrian statues of Hungarian kings and statesmen, including St Stephen, the founder of the Hungarian state, as well as András II and Lajos Kossuth, important historical figures of the country. Along Heroes' Square are the Museum of Fine Arts and the Art Gallery, both of which are important institutions for art and culture in Budapest. The Museum of Fine Arts displays an impressive collection of European artworks from the Middle Ages to the present day. The Art Gallery is a platform for contemporary art from Hungary and around the world. These cultural institutions complement the historical ambience of Heroes' Square and make it a lively centre for art and culture. Our visit to Heroes' Square was really impressive. We learnt a lot about the history and culture of Hungary. The monuments and buildings are really impressive. There is also a lot of art to see here.



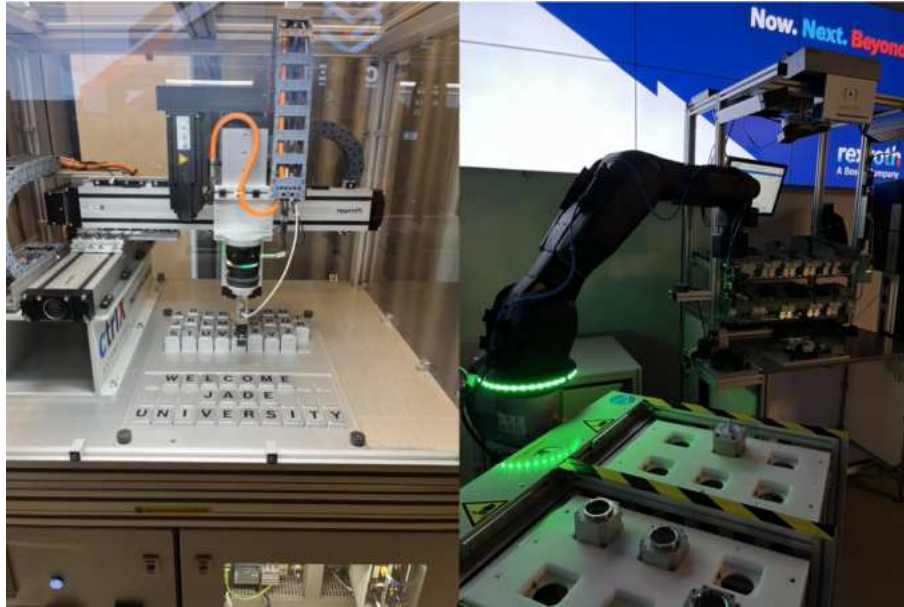
Heroes Square

Welcome ceremony at the Obuda University

In the afternoon, there was a registration, gifts were distributed, photos were taken, and the 25th anniversary of the partnership was celebrated. The first visit to Obuda University took place on Monday, April 15, 2024, at around 9 AM. This appointment was primarily to acquaint visitors with Obuda University and to allow them to attend lectures of their own interest. The group attended a lecture on project management, which also included other international students. During the lecture, students were encouraged to participate and were given a few small tasks. The visit lasted until around 11:30 AM, as there were other appointments on the agenda. At 4 PM, the students registered and received a small gift. At 4:15 PM, the 20th anniversary international week began with an opening ceremony and various speeches. Afterwards, voluntary group photos were taken, with some students participating. Lecturers Mr. Timmerberg and Mr. Beckmann were treated to a welcome dinner by the university at 5 PM, while the students were free to leave the university after receiving gift bags. The following day, Tuesday, April 16, students again had the opportunity to attend lectures at the university based on their interests, starting at around 9 AM. On Thursday, April 18, 2024, there was another opportunity to attend lectures from 2:00 to 4:30 PM. This marked the end of the visits to Obuda University.

16.04.2024: Bosch-Rexroth Budapest

The Bosch-Rexroth company in Budapest is part of the Bosch Group. The Rexroth company originally started out as an iron forge in 1795, developed into an iron foundry and entered the hydraulics market in the 1950s. The company originated in Lohr am Main. Rexroth continuously expanded its own product range and became a point of contact for multi-technology solutions. In 2001, the Bosch Group and Rexroth merged. Until 2016, the new brand focussed on software-controlled and vulnerable drive and control solutions. In 2017, Bosch-Rexroth decides to drive forward the digital transformation with Connected Hydraulics. The aim of the new products and solutions is to contribute to the more sustainable development of machines, manufacturing and lifestyles in everyday life. In addition to the location in Budapest, Bosch-Rexroth is also represented in 18 locations in Germany, has subsidiaries in 38 countries and sales and service partners in 80 countries around the world. During our visit to Bosch-Rexroth Budapest, everything centred around the so-called CU.BE. After a brief welcome, we walked through a tunnel with four stations. At each station, a section of the company's history was illustrated by a project. The audio track of the presentation was played back using loudspeakers that looked like lamps. The special thing about the loudspeakers is that we only heard something if we were standing directly under the loudspeaker. In the actual CU.BE there were various stations where Bosch-Rexroth's technological innovations were exhibited. Among other things, a lawnmower was shown that can be used to mow the verges of roads or motorways better, as the mowing attachment recognises pillars and mows around them. The use of collaborative robots was particularly impressive, so that workers suffer less from the physical strain of lifting components, for example. In summary, I found the visit to Bosch-Rexroth very interesting, but it was unfortunate that we didn't get a direct insight into the production process.



Bosch CU.BE demonstration startions

17.04.2024: FESTO AM

Festo AM in Budapest is part of the global Festo Group, which specialises in automation technologies. The company was originally founded in 1925 as a family business in Esslingen, Germany. In the period from 1925 to the present day, the company has developed into the leading supplier of pneumatic and electrical automation technologies. The Budapest site plays a central role in research and development within the Festo Group. The focus is on the development of automated solutions for Industry 4.0. Our visit to Festo AM began with a presentation by plant manager Arpad Fazekas, who, like our other contacts during the tour, was also able to answer our questions in German, in which the history of Festo, the locations and goals were discussed. The central topic of the presentation was the optimisation of processes, for example using the MTM method (methods-time measurement). After the presentation, we were given a short safety briefing and had to put on safety waistcoats. We were shown various workstations within the production area. It was noticeable that everything was actually very spatially optimised, the workstations were clean and organised and everything was set up in such a way that it was as gentle as possible on the health of the workers. In addition to the order and optimisation at the individual workstations, I noticed that the entire hall was very clean and well organised compared to the production facilities I have seen in Germany so far. The highlight of the tour was a fully automated system: a 70 metre assembly line that only requires two people to operate. At the moment, the plant is not yet running at full capacity, but Festo is expecting high capacity utilisation within the next 12 months. In addition to the workstations, we were also shown assembly points where parameters such as sickness, accidents at work and machine utilisation are discussed on a daily basis and the status of the plant is set to either red, yellow or green. On request, we were also shown the production area so that we could see how many individual parts Festo actually produces itself. Finally, we were able to ask questions and were invited to have lunch together in the company canteen.



Automated Assembly Line



Groupfoto at FESTO

18.04.2024: TE Connectivity Esztergom

The TE Connectivity site in Esztergom (Hungary) was founded in 1992. Since then, the plant has developed into an important production site for electronic components and connectivity solutions used in the automotive industry and various other industries worldwide. TE Connectivity has continuously invested in Esztergom to expand production capacity and drive technological development. Internal logistics have been optimised to compensate for a deficit that has worsened due to the labour shortage. To overcome this challenge, smart robot systems have been implemented in production. These robots navigate the narrow production aisles autonomously, without the need for guidance systems such as magnetic strips. In 1999 Tyco Electronics acquired the company AMP (Aircraft Marine Products). Since 1941, Aircraft Marine Products has been producing solderless electrical connectors, relays and resistors for aircraft and ships for quick and detachable wire connections.



Entrance Area

Production comprises around 220 injection moulding machines which heat the raw material (the granulate) and press it into the desired shape. Special moulds that are developed and maintained in-house are used for this purpose. It is important to maintain the correct temperature throughout the process and to store the granulate in a dry place. To achieve this, the mould must also be heated and suitable storage and logistics must be found. In order to achieve flexible production, it is important to distribute the various granulates to the machines according to the order. For this purpose, pipe systems are used which connect the warehouse and machines and thus enable the systems to be changed over quickly. In order to increase efficiency and ensure the sustainable use of resources, waste and rejects are ground into new granulate and fed back into the circular process. A further step is to assemble the individual components. Due to the large quantities involved, this process is fully automated. The small components are aligned by vibratory bowl feeders and fed into the machine, where they are picked up by sophisticated mechatronic units for further processing.



Connectors

19.04.2024: Budapest to Prague and Sightseeing in Prague

Before we knew it, our stay in Budapest was already over. Do you remember when we arrived at the hotel on 14.04.2024 after 13 hours? Now we were already leaving again, how quickly it can happen. But there was no reason to be sad because we were already looking forward to Prague on the way there. So we set off at 9 a.m. for the journey to Prague, with one last look at the city of Budapest, which was now out of sight. Since we took the same route back as on the way there, some places seemed familiar to us, like the cracked roads in Slovakia, which made us smile again. Since we were not in a hurry, we stopped in Brno. On the way, the weather began to get stormy, which was noticeable while driving. After about five and a half hours, we reached Prague, which was, however, covered by dark clouds. Nevertheless, the room on the 10th floor offered us a beautiful view.



View of Prague

After a journey of around 7 hours and a few short breaks, we arrived at the hotel to the west of the city. Due to the exhausting journey, everyone rested for a few minutes before taking the tram directly into the centre of Prague.



Prague Metro

Prague, the golden city, is undoubtedly one of the most fascinating destinations in Central Europe. Its rich history and cultural significance are reflected in the numerous historical sights that the city has to offer. The first, which we visited after a short walk through the rain, is the St Wenceslas Monument. The Wenceslas Monument in Prague is an impressive equestrian statue of Wenceslas IV, an important Bohemian king. It is located on Wenceslas Square, a central square in the New Town of Prague. The monument is a symbol of Czech history and culture. However, Prague has much more to offer. The majestic Prague Castle, standing high above the city, symbolizes its royal past and houses architectural masterpieces such as St. Vitus Cathedral and the Royal Palace. The Old Town Square is a lively centre full of history, where the famous astronomical clock and magnificent buildings from different eras attract visitors from all over the world. The Jewish neighbourhood of Josefov is a touching place that reflects the city's rich Jewish culture and tradition, while Petřín Hill, with its idyllic gardens and Mirror Labyrinth Park, offers a peaceful retreat to admire the city's beauty. Our journey also took us through Prague's Old Town to Charles Bridge.



View of Prague



Enjoying the meal together

The Charles Bridge, lined with Baroque statues, not only offers an impressive view of the Old Town but also serves as a link between Prague's past and present. It was the highlight of Prague for us. Finally, we found ourselves in a small Czech restaurant, where we toasted together to a successful and, above all, instructive excursion that broadened our horizons.

20.04.2024: Techmania in Pilsen

On Saturday 20 April 2024 at around 8:30 a.m., the trip to Pilsen was on the agenda, followed by a visit to the "Techmania" technical museum. The address of the museum is U Planetária 1; 301 00 Pilsen. Techmania is an interactive science and technology centre in Pilsen, Czech Republic. It offers interesting and educational experiences for visitors of all ages. The centre is divided into different areas, each dedicated to a specific topic, including physics, biology, engineering and astronomy, some of which are also covered in the students' degree programmes. Visitors to the Techmania Science Centre can explore a variety of interactive exhibits that allow them to discover the principles of science and technology in a simple way. From experiments on electricity to robotics demonstrations, Techmania offers a variety of activities that are both entertaining and educational.



Techmania entrance



Planet exhibition

Directly opposite the technical museum is Skoda Transportation, which is a leading company in the manufacture of rail vehicles. Across their 3 sites in the Czech Republic, including Pilsen, they employ over 5000 people, who produce trams, underground trains and locomotives to the most modern standards.



Construction of a tramway

21.04.2024: Prague to Wilhelmshaven

The time had come; we set off for home once again. Exactly seven days ago, we had embarked from Wilhelmshaven to Budapest, and now it was time to return. This time it wasn't as difficult for us to leave, as the weather in Prague was quite poor. So, we set off at 8 o'clock, but this time, instead of a 13-hour journey, we faced only an eight-hour one. During the journey, the weather continued to deteriorate, it was raining heavily, and the strong wind regularly caused the car to sway, requiring us to be particularly cautious. After about two hours, it became so cold that it started to snow, which surprised us.



Sudden snow on the road

Fortunately, the snowy area was relatively small, so we didn't have to drive in the snow for long. Shortly after we crossed the border into Germany, the highway was blocked off, and a police checkpoint was set up. However, with six innocent faces and an older professor, the police had no choice but to let us pass. We minimized stops during the journey (only short toilet breaks) to get home quickly. Between Hannover and Oldenburg, the weather gradually calmed down, allowing us to have at least clear visibility while driving. At 3:30 PM, we reached Oldenburg, where the students from Oldenburg had been picked up on April 14, 2024. From there, only two of us continued on to Wilhelmshaven, arriving there at 4:30 PM. There, we bid farewell, thus ending the excursion to Budapest/Prague 2024.