

## 1<sup>st</sup> learning mobility

**MatLan** Learning math and languages through research and cooperation  
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### **1<sup>st</sup> students exchange 25/01/15 - 01/02/15 Cluj-Napoca, Romania**

First short-term exchange of groups of students, held in Cluj-Napoca, was a great opportunity for French and Romanian students to learn more about Mathematics and languages. We spent seven wonderful days together in which we managed to make new friends, strengthen bonds and enlarge our knowledge about French and Romanian culture. It was a successful meeting as we shared our findings on Mathematics research. All the students and teachers enjoyed these days and they are eager to carry on this experience.



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### **Upcoming activities**

We are looking forward to the next students' exchange, but also to the video conferences that will allow us to collaborate on the research topics. Students will talk about problem 7.1. "Picture compression" and problem 9.1. "Athletics" on the 11<sup>th</sup> of February 2015. Also, on the 11<sup>th</sup> of March there will be another video conference on the following subjects: 8.1. "Lichen dating", 2.1. "The bicycle wheel". Between 25<sup>th</sup> - 28<sup>th</sup> March some of the students will participate in the Congress of Avignon.



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## How is the Romanian educational system perceived by French students?

We were with Romanian students in their classroom to experience what their lessons look like. The educational system is really different from ours in some points but there are also common points. The most noticeable thing is that the students from the age of 7 to 18 are in the same school.

First we were split into several groups so we could attend almost every class. We figured out that they have different programs which are often more difficult than ours, for example in Mathematics they are studying the matrices that we will only see in 12th grade in an advanced math class, in France. In class they have much more freedom than in France but the teachers don't need to ask students to listen to their lesson even though students are allowed to use their phone in class. Moreover, they start at 8 a.m. and finish at 2 p.m. which makes their school day easier than ours. Also, they are marked out of 10 instead of 20 for us. An incredible thing was to see that the French literature is studied in Romania with authors such as Lamartine and his poem le Lac. To conclude we would say that the English level of Romanian students is really better than ours.



## **FRANCOMANIA** - French Institute in Cluj-Napoca

On Monday, we visited the French Institute. This institution, located in the Cluj center, was created in order to promote the French-Romanian exchange and make it easier.

First, the assistant director of the institute explained its goals and functioning. Then we played games. We had to talk about what comes to our mind when we evoke the words Romania and France, so we talked about clichés (for example Dracula and cheese). Then we did some little stage improvisations using French and English "transparent words" (the word "douche" for example) and we talked about linguistic exchanges with the director of the institute.

Basically we have understood that the French Institute promotes the French culture and tries to give an easier access to it.

# Treasure Hunt

Have you got tired of the boring guided tours of a city? Well we have, so we thought of a new and creative way to get to know Cluj-Napoca. In order to do so, we decided to organize a fun treasure hunt for our French visitors.

We began by splitting into two teams. Each team had a few Romanians students with it, in case they took too long to figure out a clue or they got lost. They also received the first card with a clue, which, if solved, led to another tourist attraction. Some problems were a bit more difficult than others, but in the end they were all managed to be solved.

One of the teams was so enthusiastic they started running and their enthusiasm proved to be the key factor in their victory. Even though it finished the first, the other team was quick to follow. However, everybody had a great time and they realized the importance of team work and orientation skills. All the old centre of Cluj was visited, in particular: St. Michael Church, the Orthodox Cathedral, the Babes-Bolyai University, the Tailors' tower and Unirii square.

In the end, they all received a symbolic present to forever remember Cluj-Napoca. The Romanian students hope that they managed to make the French students' stay enjoyable.



# Visit at the university



We visited the Babeş – Bolyai University, Faculty of Mathematics and Informatics where we learned a lot of interesting things about the university and regarding mathematics. First, a professor presented the history of this university. It was amazing because we learned new information. This university is renowned in Cluj – Napoca and has students from all over the country, but also international ones.

Afterwards, there was a long lesson about hyperbolic geometry which was a bit hard to understand at first because it's way different from the Euclidian Geometry we study at school. However, when we arrived at school we started to understand more of it as we split into groups and discussed daily applications of this geometry. I think it's great to learn new things every day and this is certainly a plus to everyone's knowledge.

The next day, we met with another math teacher who had a very good sense of humour. His presentation was really nice and we realized what we have to pay attention to when we do our research. I must confess that I am impressed by the human mind and how resourceful it can be.





## Cluj by night...

When you travel to a foreign country with your classmates and you make new friends, it is obviously that you want to remember the crazy moments and less the Math lessons (not that they weren't interesting). On the first night we met all together to play bowling and we had such a great time! It was Pierre who won but the others were pretty close. We got to know each other better and we can definitely say that you can have fun no matter what language you speak.

The other night, we thought that our French peers would like

to see the whole city from above, this just after we played some games in a pub. We sang both Romanian and French songs, we took photos and we were happy to spend time together.

We decided that Wednesday would be the shopping day, so we went to Iulius Mall. The prices in Romania are much lower than in France and all of the guest students did some pretty good bargains. After that we took the bus to the city Centre for another games session. I think all students enjoyed this night in particular.

## The astronomical observatory

During the fifth day of the meeting, we visited the Astronomical Observatory. We got there by foot, in the cold, but it was worth it. When we arrived, we were presented two applications which showed us the sky and the space.

The first application showed us Mars and Venus with their satellites, the Moon and some constellations, like Orion, Taurus and the Seven Sisters (in Romanian: “Cloșca cu pui”). Moreover, we were shown the next Sun partial eclipse and the “Red Moon” (a phenomenon present only when the Sun, the Moon and the Earth align) along with the dates in which they will happen.

With the other application we could view the whole known Universe, starting from our Galaxy to the point where what we know was only a dot. We could go only 13.7 billion light years away. We also saw pictures of the Pink Sun, event that took place in 2012 and will happen again in 100 years.

In the Observatory, we used the telescope to see Venus. We could see only this because the sky was foggy. We were fascinated by the shape of the ceiling and the fact that it could move, and also by the echo in the igloo-type room.

All in all, we all had a great time and would enjoy going there again.



## Cultural Experience

On a nice Friday afternoon we had the chance to visit two museums: the art museum of Cluj-Napoca, where a nice guide made an interactive presentation of the paintings in the exhibition. Afterwards, the French students could have an insight into Romanian culture at the Ethnographic museum.

However, the climax of the evening was the moment we stepped into the theatre. Ballet Bolero and Sheherazada were absolutely marvellous, the ballerinas were elegant and gentle. Everybody got out impressed and sad because it seemed too short.



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