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# CLIL4DSN



Erasmus+  
2018-1-RO01-KA201-049519

**DATE:** October 22<sup>nd</sup> – 25<sup>th</sup> 2019

**LOCATION:** Școala Gimnazială nr. 168  
9 Alizeului Street  
District 6, Bucharest

# WORKBOOK





## Agenda – 1<sup>st</sup> Day

October 22 <sup>st</sup> 2019		Location
9.30 – 10.00	<ul style="list-style-type: none"> <li>• Welcome by Carmen Buşu, Principal;</li> <li>• Welcome by guests from local authorities –School Inspectorate of Bucharest and Bucharest City Hall, district 6</li> </ul>	School no 168 9 Alizeului Street, district 6
10.00 – 11.00	<ul style="list-style-type: none"> <li>• Opening by Mr Cătălin Mosoia, science communication expert, Romanian Academy</li> <li>• “Colors and us” – first session</li> </ul>	School no 168 9 Alizeului Street, district 6
11.00 – 11.30	<ul style="list-style-type: none"> <li>• Coffee break</li> </ul>	School no 168 9 Alizeului Street, district6
11.30 – 12.30	<ul style="list-style-type: none"> <li>• “Colors and us” – second session Cătălin Mosoia, science communication expert, Romanian Academy</li> </ul>	School no 168 9 Alizeului Street, district 6
12.30 – 13.30	<ul style="list-style-type: none"> <li>• Lunch</li> </ul>	School no 168 9 Alizeului Street, district 6
14.30 – 19.00	<ul style="list-style-type: none"> <li>• Cultural tour of Bucharest <b>Cultural topic: Cultural diversity</b></li> </ul>	
19.00-20.00	<ul style="list-style-type: none"> <li>• Dinner</li> </ul>	



## Overview of the first workshop ‘Colours and Us’:

Catalin Mosoia, Science communication expert, The Romanian Academy

Colour is all around us. It is almost impossible to find an object or phenomenon without attaching them the name of a colour. We are living in a world full of colours. The workshop ‘Colours and Us’ aims to raise awareness of the possible impact that colour has on each of us based on scientific research. Are we feeling more relaxed in a room painted in red or in green? Does the meaning of colours depend on the culture we most identify? Is there any connection between the language we speak and colour we perceive? What about the relationship between health and colour? There are a lot of myths about the meaning and influence of colours in our lives. However, what science says about myths?

The workshop consists of two sessions. In the first session, we are stepping into the world of colours, and present the connection between colours and the brain; we will also speak about the myths and the high importance of critical thinking. The second session deals with activities with different multicultural groups of students and teachers. We end up with the take-home message of the workshop.

**Keywords:** colour, science, nature, research, colour psychology

### **References:**

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### **Cultural topic: Cultural diversity. Cultural tour of Bucharest**

<https://en.wikipedia.org/wiki/Bucharest>

Bucharest was first mentioned in documents in 1459. It became the capital of Romania in 1862 and is the centre of Romanian media, culture, and art. Its architecture is a mix of historical (neo-classical and Art Nouveau), interbellum (Bauhaus and art deco), communist era and modern. In the period between the two World Wars, the city's elegant architecture and the sophistication of its elite earned Bucharest the nickname of "Little Paris" (*Micul Paris*).<sup>[10]</sup> Although buildings and districts in the historic city centre were heavily damaged or destroyed by war, earthquakes, and Nicolae Ceaușescu's program of systematization, many survived and have been renovated. In recent years, the city has been experiencing an economic and cultural boom.<sup>[11]</sup> In 2016, the historical city centre was listed as "endangered" by the World Monuments Watch.<sup>[12]</sup>

According to the 2011 census, 1,883,425 inhabitants live within the city limits,<sup>[6]</sup> a decrease from the 2002 census.<sup>[3]</sup> Adding the satellite towns around the urban area, the proposed metropolitan area of Bucharest would have a population of 2.27 million people.<sup>[13]</sup> According to Eurostat, Bucharest has a functional urban area of 2,412,530 residents (as of 2015).<sup>[5]</sup> Bucharest is the sixth-largest city in the European Union by population within city limits, after London, Berlin, Madrid, Rome, and Paris.

Economically, Bucharest is the most prosperous city in Romania.<sup>[14]</sup> The city has a number of large convention facilities, educational institutes, cultural venues, traditional "shopping arcades" and recreational areas.

The city proper is administratively known as the "Municipality of Bucharest" (*Municipiul București*), and has the same administrative level as that of a national county, being further subdivided into six sectors, each governed by a local mayor.



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## Bucharest Itinerary



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### 1. The Palace of the Parliament (House of People)



The Palace of the Parliament (Romanian: Palatul Parlamentului) is the seat of the Parliament of Romania. It is located on Dealul Arsenalului in the national capital city of central Bucharest (Sector 5). The Palace has a height of 84 metres (276 ft), a floor area of 365,000 square metres (3,930,000 sq ft) and a volume of 2,550,000 cubic metres (90,000,000 cu ft). The Palace of the Parliament is the heaviest building in the world, weighing about 4,098,500,000 kilograms (9.0356×10<sup>9</sup> lb).

A colossal building, designed and supervised by chief architect Anca Petrescu (1949–2013), with a team of approximately 700 architects, and constructed over a period of 13 years (1984–97), it was built as a monument for a totalitarian kitsch style of architecture, in Totalitarian and modernist Neoclassical architectural forms and styles, with socialist realism in mind. The Palace was ordered by Nicolae Ceaușescu (1918–1989), the dictator of Communist Romania and the second of two longtime autocrats in power in the country since World War II, during a period in which the personality cult of political worship and adoration was in full force for him and his family. Known for its ornate interior composed of 23 sections, it houses the two houses of the Parliament of Romania: the Senate (Senat)



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and the Chamber of Deputies (Camera Deputaților), along with three museums and an international conference center. The several museums hosted inside the Palace are the National Museum of Contemporary Art, the Museum of Communist Totalitarianism (established in 2015) and the Museum of the Palace. Though originally named the House of the Republic when under its long period of construction (Romanian: Casa Republicii), after the Romanian Revolution in December 1989 it became widely known as The People's House (Romanian: Casa Poporului). Due to its impressive endowments, events organized by state institutions and international bodies such as conferences, symposia, and others take place there, but even so about 70% of the building almost four decades later still remains empty.

In 1990, Australian-born business and media magnate Rupert Murdoch wanted to buy the building for US\$1 billion, but his bid was rejected. As of 2008, the Palace of the Parliament is valued at €3 billion euros (\$3.4 billion), making it also the most expensive administrative building in the world. The cost of heating and electric use and lighting alone exceeds \$6 million per year, as much as the total cost for powering a medium-sized city.

The building of the Palace is located in the central part of Bucharest (in Sector 5), in a location that today is known as Dealul Arsenalului. It is situated at the west end of the Unirii Boulevard, constructed simultaneously with the Palace, and is framed by Izvor Street to the west and northwest, United Nations Avenue to the north, Liberty Avenue to the east and Calea 13 Septembrie to the south.

The building of the Palace of the Parliament was the most extreme expression of the systematization program imposed by Nicolae Ceaușescu upon Romania. The systematization was a program of urban planning carried out by Ceaușescu, who was impressed by the societal organization and mass adulation in North Korea's Juche ideology during his East Asia visit in 1971, and decided to implement similar policies in Romania, with the stated goal of turning Romania into a "multilaterally developed socialist society".

The Vrancea earthquake of 4 March 1977 gave Ceaușescu a pretext to demolish parts of old Bucharest. He wanted a civic center more in line with the country's political stance, started a reconstruction plan of Bucharest based on socialist realism style. The House of the Republic (later The People's House after the 1989 Revolution) was the center of this project. Named Project Bucharest, it was an ambitious project of Ceaușescu's begun in 1978 as an intended replica of Pyongyang, the capital of North Korea. A systematization project existed since the 1930s (during the time of King Carol II) for the Unirii–Dealul Arsenalului area. Its construction was organized as a contest and won by Anca Petrescu (1949-2013), who was appointed chief architect of the project when she was just age 28. In total, the team that coordinated the work was made up of 10 assisting



architects, which supervised a further lower 700. Construction of the Palace began on June 25, 1984, and the inauguration of the work was attended by Ceaușescu and frequently inspected personally.

The building was also erected on the site of some monasteries that were demolished and on the site of Uranus Hill that was leveled. In this area were previously located the National Archives, Văcărești Monastery [ro], Brâncovenesc Hospital, as well as about 37 old factories and workshops. Demolition in the Uranus area began in 1982. 7 square kilometres (2.7 sq mi) of the old city center was demolished, with 40,000 people being relocated from this area. The works were carried out with forced labor of soldiers and so the cost was minimized.

Between 20,000 and 100,000 people worked on the site and project, operating in three shifts of 5,000 soldiers of the Romanian Army and huge numbers of "volunteers". Thousands of workers died in connection with the construction of the House of the Republic / People's House, some sources mention a figure of 3,000 people lost.

In 1989, the building costs were estimated at \$1.75 billion, and in 2006 at €3 billion euros

### **After 1989**

Since 1994, the building hosts the Chamber of Deputies, after the initial headquarters of the institution, the Palace of the Chamber of Deputies (now the Palace of the Patriarchate), was donated by the State to the Romanian Orthodox Church. Since 2004 the Romanian Senate has been headquartered in the Parliamentary Palace and was originally housed in the former building of the Central Committee of the Romanian Communist Party.

Six years after the Palace's completion, between 2003 and 2004, a glass annex was built alongside the external elevators. This was done to facilitate outside access to the National Museum of Contemporary Art which opened in 2004 inside the west wing of the Palace. In the same period, a project aiming to hoist a huge flag was canceled following protests from the public. A flag was already hoisted on the building, but was removed together with the support.

The restaurant, accessible only to politicians, was refurbished. Since 1998 the building houses an office for the Regional Southeast European Cooperative Initiative (SECI) Center for Fighting Transborder Crime.

In 2008, the Palace hosted the 20th NATO summit for the North Atlantic Treaty Organization. In 2010, politician Silviu Prigoană proposed re-purposing the building into a shopping centre and an entertainment complex. Citing costs, Prigoană said that the Romanian Parliament should move to a new building, since they occupied only 30% of the interior of the massive palace. While the proposal has sparked a debate in Romania, another politician Miron Mitrea dismissed the idea as a "joke".





The Palace has also been the background of several motorsports events, including the 2011 Drift Grand Prix Romania, which brought together professional drifters from all over Europe.

Although the Palace of the Parliament was financed from public funds and the architects did a work for hire, after the death of Anca Petrescu, the chief architect of this colossal building, her heirs sued the Inferior Chamber of the Romanian Parliament for using the image of the iconic building without authorization. The institution was accused of selling photos and souvenirs depicting the building's image. Besides the copyright infringement of the architectural works, in several ongoing trials the heirs claims the violation of trademarks, owned by the chief architect, and depicting the Palace of the Parliament from different angles.

While the legal experts consider there are no restrictions for tourists wishing to photograph the iconic building for non-commercial purposes, the heirs of Anca Petrescu have clearly set out that any commercial use of the building's image is subject to a 2% royalty fee. It is believed this situation could have been avoided if an agreement between the chief architect and the beneficiary (Romanian State) had addressed the intellectual property rights and Romania had implemented Freedom of Panorama, restricting the scope of copyright law in a such case.

### **Technical details**

#### **Elaborate decorations in Alexandru Ioan Cuza Hall**

The construction of the Palace began in 1984 and initially should have been completed in only two years. The term was then extended until 1990, but even now it is not finalized. Only 400 rooms and two meeting rooms are finished and used, out of 1,100 rooms.

The building has eight underground levels, the last one being a nuclear bunker, linked to the main state institutions by 20 km of catacombs. Nicolae Ceaușescu feared nuclear war. The bunker is a room with 1.5 m thick concrete walls and can not be penetrated by radiation. The shelter is composed of the main hall – headquarters that would have had telephone connections with all military units in Romania – and several residential apartments for state leadership, in the event of war.

The building has a developed area of 365,000 m<sup>2</sup>, making it the world's third-largest administrative building, after The Pentagon, and in terms of volume, with its 2.55 million m<sup>3</sup>, it is among the most massive. For comparison, it can be mentioned that the building exceeds by 2% the volume of the Great Pyramid of Giza along the Nile River in Egypt, and therefore some sources label it as a "pharaonic" construction.

The building of the Palace of the Parliament sinks by 6 mm each year because of its weight. Romanian specialists who analyzed the data argue that massive weight and structure of the Palace lead to the settlement of layers below the construction.

### **Materials**



The palace's famous crystal chandeliers were manufactured at Vitrometan Mediaş glass factory. The manufacture of the 480 chandeliers took two years.

The building was constructed almost entirely of materials of Romanian origin. The only exceptions are the doors of Nicolae Bălcescu Hall. These were received by Ceauşescu as a gift from his friend Mobutu Sese Seko (Joseph Mobutu), the longtime President and similar dictator of Zaire in Central Africa (now the Democratic Republic of the Congo).

Among them: 3,500 tonnes of crystal – 480 chandeliers, 1,409 ceiling lights and mirrors were manufactured; 700,000 tonnes of steel and bronze for monumental doors and windows, chandeliers, and capitals; 1,000,000 cubic metres (35,000,000 cu ft) of marble,[32] 900,000 cubic metres (32,000,000 cu ft) of wood (over 95% domestic) for parquet and wainscotting, including walnut, oak, sweet cherry, elm, sycamore maple; 200,000 square metres (2,200,000 sq ft) of woolen carpets of various dimensions (machines had to be moved inside the building to weave some of the larger carpets); velvet and brocade curtains adorned with embroideries and passementeries in silver and gold.

The seven halls and salons of the Parliament Palace were arranged and named after 1989, reminiscent of the most important events and personalities in the history of the Roman people.

### **Nicolae Balcescu Hall**

The columns in the hall are made of Ruschita marble, the chandeliers represent the works of a craftsman from Medias, silk draperies and carpet were woven in Sighisoara and Cisnădie (the largest carpet factory in Romania at the time), and the doors in mahogany wood were given to Ceausescu by the President of Zaire (Democratic Republic of Congo, today), Mobutu Sese Seko.

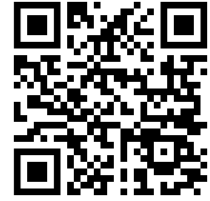
### **Nicolae Iorga Hall**

The hall is decorated almost entirely with oak wood (on the ceiling and walls). The walls are also decorated with the works of great contemporary Romanian artists: Nicolae Blei, Margareta Sterian, Zamfir Dumitrescu.

### **The Hall Alexandru Ioan Cuza**

It is located in the main axis of the Palace of Parliament and has been decorated with elements of eclectic architecture. The main element is the column with the Corinthian-style capitel, the spine being processed with traditional motifs in brancovenesc style. The drapes are sewn with gold thread, and the doors have decorative sculptures.

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### **Ion I. C. Bratianu Hall**

It is located on the ground floor and is very rich in decorations: it has a large rosette in the center of the ceiling, with the geometries of several types of marble, and the draperies of the windows are of Red velvet, sewn with gold and silver thread.

**AC Rosetti Room** Comprised the Tache Ionescu Hall and the C.A. Rosetti Hall. The first one is used very often for fairs, cocktails and exhibitions, being decorated with elements reminiscent of the ancient East. The ceiling is covered with gold foil, the walls are upholed with paintings signed by remarkable names: Marian David, Vasile Celmare or Angela Bradean. The Floorsela has floral and geometric ornaments on the edges. The second Hall, AC Rosetti, is usually used for theatre performances, conferences and concerts by the International Conference Center. The style chosen for this room is cubist, Art-Deco, and carpets are placed in semi-circle. Remarkable is the chandelier in the hall, which weighs no less than three tonnes.

### **Union Hall**

This is destined for the great receptions of the heads of State. The hall columns, white marble of Ruschita, have grooves in Romanian style. The walls are decorated with mirrors of plaster and plat of white marble of ruschita with rich ornaments, and the ceiling is glass. The decorative motifs on the doors are traditional Romanian. The hall rug weighs three tons.

### **Human Rights Hall**

The distinctive elements are the richly ornate ceiling and the two wooden pilasters. The chandelier is from the crystal of Medias and weighs two tonnes. The round table with the 60 chairs is made of oak wood, and the chairs have velvet trim.



## 2. The Patriarchal Cathedral



The Patriarchal cathedral is a church in Bucharest, located on the hill of Patriarchy, founded by Voievod Constantin Șerban and his wife, Bălașa, between 1654-1658. The church, bearing the patron saint Constantine and Helena, was consecrated by Mihnea III in the year 1658, and was soon transformed into Mitropolie. After the First World War, Mitropolia was transformed into patriarchy (in 1925).

Currently, the cathedral is incorporated into the "Patriarchal Ensemble, composed of:

- Patriarchal Cathedral "St. Constantine and Helena"
- Belfry Tower
- Chapel and Patriarchal Residence
- Patrial Palace, former headquarters of the Chamber of Deputies

### **Romanian Patriarchal Cathedral**

The Romanian Orthodox Patriarchal Cathedral (also known as the Metropolitan Church) is a functioning religious and civic landmark, on Dealul Mitropoliei, in Bucharest, Romania. It is located



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near the Palace of the Chamber of Deputies of the Patriarchate of the Romanian Orthodox Church. Since it is a working cathedral, it is the site of many religious holidays and observances that take place for those who follow the Orthodox Christian faith in Bucharest, including a Palm Sunday pilgrimage. The Orthodox Divine Liturgy at the cathedral is known for its a cappella choir, a common practice shared by all the Orthodox churches, in both their prayer services and liturgical rites. The Romanian Orthodox Patriarchal Cathedral is a designated Historical monument of Romania.

The structure was begun in 1655 and completed in 1659 under the orders of the Wallachian prince, Serban Basarb. The facade is in the Brâncovenesc style. All of the original frescoes and sculptures were destroyed, except for the icon of Constantine and Helen, who are the patron saints of the cathedral. The present-day frescoes were added in 1923 by Dimitrie Belizarie.

In 1862, the Romanian prime minister, Barbu Catargiu, was assassinated as his open carriage passed in front of the cathedral.



### 3. Antim Monastery



The Antim Monastery is located in Bucharest, Romania on Mitropolit Antim Ivireanu Street, no. 29. It was built between 1713 and 1715 by Saint Antim Ivireanu, at that time a Metropolitan Bishop of Wallachia. The buildings were restored by Patriarch Justinian Marina in the 1950s. As of 2005, there are 7 monks living in the Monastery. The monastery also hosts a museum with religious objects and facts about the life of Antim Ivireanu.

During the Communist rule of Nicolae Ceausescu the government threatened demolition of the church and many other historic structures in Romania. A project organized by engineer Eugeniu Iordachescu moved the church to a different nearby site and saved it in time.

Antim Monastery is one of the old and beautiful Orthodox monasteries in Bucharest. The monastery of the metropolitan believer Antim Ivireanul was built in the Bucharest district, called at that time "the slum of the people of Ivasco", not far from the Patriarchal Cathedral. Saint Antim Ivireanul



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elaborated, with his hand, the execution plans of the monastery, two of them remaining to this day, namely: the original church plan (on paper) and another plan (on parchment), the latter being worked on in 1715, within the monastery settlement.

The consecration of the largest church in the Antim Monastery took place in 1715, as we read in Pittania, beautifully carved, located within the monumental portal of the entrance door.

Through the typography of the Antim Monastery, the saint pursued the moral and intellectual education of the people, in the light of the Christian teaching. Therefore, he wants "to have the typographer's duty to learn the craft of printing one after another, so that he does not like this craft in the country." At the Antim monastery, the founder establishes for the first time in the Romanian Country, a public library for borrowing.

#### **4.The Court of Justice, Bucharest**





The Palace of Justice (Romanian: Palatul Justiției), located in Bucharest, Romania, was designed by the architects Albert Ballu and Ion Mincu and built between 1890 and 1895.

Located on the banks of the Dâmbovița River, it houses the Bucharest Court of Appeal and the Sector 5 Court. Its last major restoration was between 2003 and 2006.

The Palace has 690 rooms with a total area of 33,235 m<sup>2</sup> (357,740 sq ft).

The Palace of Justice, located in Sector 4 of Bucharest, is located on the banks of Dâmbovița. It was built between 1890-1895 following the plans of the architect Albert Ballu, the one who designed the Paris Court and the Courthouse in Brussels. After the death of the architect Ballu, the architect Ion Mincu was in charge of finishing and designing the interiors. The exterior of the building has urban influences, and the central body is built in a French Renaissance style. The building was started in 1890, and completed and inaugurated in 1895.

It has four facades. The main façade runs along the Dâmbovița embankment and presents a monumental staircase, 50 m long, which stretches half the length of the edifice. Under the vaults of construction, above the main entrance, are placed six allegorical statues, symbolizing Law, Justice, Justice and Truth. Above these, two statues built by Karol Storck (son), representing Force and Prudence, frame the clock of the building.





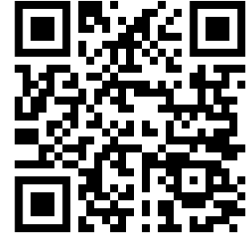
## **5.The Old Courtyard Complex with the ruins of the Voivode Palace of the 15TH-16TH centuries The Old Princely Court**



Curtea Veche (the Old Princely Court) was built as a palace or residence during the rule of Vlad III Dracula in 1459. Archaeological excavations started in 1953, and now the site is operated by the Muzeul Municipiului Bucuresti in the historic centre of Bucharest.

Vlad the Impaler's reign was dominated by conflicts with the Turks, hence "The obligation to permanently watch over and protect the southern boundary, the Danube, made him stay in the fortified town on the Dimbovita banks". He issued a Latin document on 13 June 1458 from the area of current Bucharest. Then, on 20 September 1459, he issued a document in Slavonic, specifically referring to the "fortress" in Bucharest, his "princely residence". Other documents were issued in 1460 and 1461. Vlad would have been accompanied by his family, courtiers, and an army corps.

During his reign, Mircea Ciobanul repaired the palace, and defined the limits of the city. His palace became the economic nucleus of Bucharest, surrounded by the houses of traders and



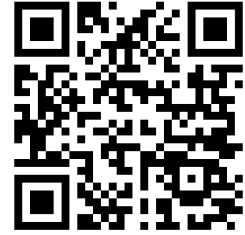
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craftsmen known as the Lipscani. Matei Basarab repaired the palace during his reign, so that it was "completely rebuilt...amazingly elegant" with a "charming aspect, much finer and gayer". Constantin Brâncoveanu rebuilt and extended the palace using stone, including a great marble staircase at the entrance

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Alexander Ypsilantis built a new princely court in 1775 at Spirii Hill. The old court was auctioned in 1798 by Constantine Hangerli.

The Old Court represents the nucleus of development of the city of Bucharest, being mentioned for the first time in a document from the 14th century in which it speaks of "Our fortress", possibly the citadel on the Dâmbovița shore. Later, during Vlad Țepeș's reign, the first documentary attestation of the "Bucharest Citadel" appears, in an act issued on September 20, 1459, which mentions the exemption of data of the inhabitants of Bucharest. The name "Curtea Veche" receives it in 1775 when Alexandru Ipsilanti decides to build the new court of the Dealul Spirii, known as the Burned Court, after being burned down in 1812. The entire Royal Court was formed by a palace - Voievodal Palace, a church - The Good Church, later known as the Curtea Veche Church, houses with reception halls, royal chancery, stables and gardens. Not many details are known about the founder of the court, but according to the researchers who studied the history of Bucharest, the court seems to be built by Mircea cel Bătrân, somewhere at the end of the 14th century and the beginning of the 15th century. After the two calamities of the eighteenth century, which destroyed the court and the related buildings, a new royal court, the New Court, was built. At present, the ruins of the Voievodal Palace have become a protected archaeological site, and a museum, the Curtea Veche Museum, is being set up.



### **Annunciation Church of Saint Anthony**

This princely church was built by Mircea Ciobanul in 1559, and is the location of his grave. The church is "the oldest religious building maintained in its original aspect in Bucharest".

In its current role as a museum, the palace and neighbourhood inspired Mateiu Caragiale to write his novel *Craii de Curtea-Veche*. It is also at the center of efforts to restore the historic center of Bucharest.

### **Manuc's Inn**

Manuc's Inn (Romanian: Hanul lui Manuc, pronounced [ˈhanu(l) luj maˈnuk]) is the oldest operating hotel building in Bucharest, Romania. It also houses a popular restaurant, several bars, a coffee-house, and (facing the street) several stores and an extensive bar. Its massive, multiply balconied courtyard hosted many performances and fairs and was a popular place for Romanian Television crews to shoot folkloric performances. The building is located at 62–64 strada Franceză (the street has been variously known in the past as Iuliu Maniu, 30 Decembrie, and Carol), across the street from the ruins of the Old Court (Curtea Veche). Although one side now faces a vast modern public square, Piața Unirii, there is no evidence of this in the courtyard or the inward-facing rooms. The hotel and restaurant were refurbished in 2007.

### **History**

The inn was built in 1808 as a khan, and originally owned by a wealthy and flamboyant Armenian entrepreneur, Emanuel Mârzaian, better known under his Turkish name Manuc Bei. By the middle of the 19th century, it was Bucharest's most important commercial complex, with 15 wholesalers, 23 retail stores, 107 rooms for offices or living, two receiving rooms and a pub.

Although Manuc's Inn has been subject to repeated restorations — in 1848, 1863, 1966–1970, and 1991–1992, as well as the last one in 2007 — its essential structure remained intact; of the three surviving 19th century inns in the Lipsicani district, it is the only one currently in use as a hotel.

The inn was the site of the preliminary talks for the Treaty of Bucharest, which put an end to the 1806–1812 Russo-Turkish war. In 1842 it briefly housed Bucharest's town hall. Around 1880 a hall at the inn was used as a theatre, and was the site of the first Romanian operetta performance.



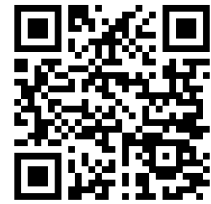
Before Romania entered World War I, in 1914–1916, the hall "Sala Dacia" hosted meetings of the Wallachian pro-war party seeking to establish a Greater Romania by uniting with Transylvania and Bukovina; speakers included Nicolae Filipescu, Take Ionescu, Barbu Ștefănescu Delavrancea, and Octavian Goga.

The building was nationalized 19 February 1949. Ownership was restored to Prince Șerban Constantin Cantacuzino in February 2007.

## 6. Stavropoleos Monastery



Stavropoleos Monastery (Romanian: Mănăstirea Stavropoleos), also known as Stavropoleos Church (Romanian: Biserica Stavropoleos) during the last century when the monastery was dissolved, is an Eastern Orthodox monastery for nuns in central Bucharest, Romania. Its church is built in Brâncovenesc style. The patrons of the church (the saints to whom the church is dedicated) are St. Archangels Michael and Gabriel. The name Stavropoleos is the genitive case of Stavropolis (Greek, "The city of the Cross"). One of the monastery's constant interests is Byzantine music, expressed through its choir and the largest collection of Byzantine music books in Romania.



[www.scoala168.net/clil-21](http://www.scoala168.net/clil-21)

The church was built in 1724, during the reign of Nicholas Mavrocordat (Prince of Wallachia, 1719-1730), by the archimandrite Ioannikios Stratonikeas, a Greek monk from Pogoniani. Within the precinct of his inn, Ioannikios built the church, and a monastery which was economically sustained with the incomes from the inn (a relatively common situation in those times). In 1726 Ioannikios was elected metropolitan of Stavropolis and exarch of Caria. Since then the monastery he built is named Stavropoleos, after the name of the old seat. On February 7, 1742 Ioannikios, aged 61, died and was buried in his church.

The inn and the monastery's annexes were demolished at the end of 19th century. Over time the church suffered from earthquakes, which caused the dome to fall. The dome's paintings were restored at the beginning of the 20th century.

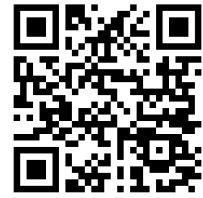
All that remains from the original monastery is the church, alongside a building from the beginning of the 20th century which shelters a library, a conference room and a collection of old (early 18th century) icons and ecclesiastical objects, and parts of wall paintings recovered from churches demolished during the communist regime. This new building was constructed following the plans of architect Ion Mincu.

The church has been pastored since 1991 by father Iustin Marchiș, the first hieromonk of the church in the last century. The community living here, besides routine worship, is engaged in renovating old books, icons and sacerdotal clothes. The choir of the church sings (neo-)Byzantine music (a single voice part, sustained by a prolonged sound called ison - approx. translation: accompaniment -, or tonic note), now a rare occurrence for churches in Romania. The monastery's library has over 8000 books of theology, byzantine music, arts and history. There are patristic, biblical, dogmatic, liturgic, historical, homiletic, catechetic writings, classic languages dictionaries and textbooks, studies on Byzantine art and Orthodox iconography, and on the Romanian history and civilization of the 18th century. Some of the books are a donation from the personal library of art historian Vasile Drăguț, former rector of the Bucharest University of Arts.

There is a significant number of old books: more than 80 manuscripts and 400 printed works. There are Romanian, Greek, and Church Slavonic books.

The Byzantine music books collection is the largest in Romania, and consists mostly of the donations of two Romanian byzantologists, Sebastian Barbu-Bucur, and Titus Moiescu.

The Stavropoleos Church and Monastery, located in the old center of Bucharest, behind the National Museum of History, have been declared among the most prestigious historical monuments in Romania (next to the National Museum of Art and the Museum of the Romanian Peasant), with the Michelin Guide awarding them three stars.



[www.scoala168.net/clil-22](http://www.scoala168.net/clil-22)

The name of the church, as well as of the street that bears its name, comes from the archimandrite Ioanichie Stratonikeas, elected in 1726 metropolitan of Stavropola and exarch of Caria, who erected the place of worship and an inn in 1724, during the second gentlemen in the Romanian Country of Nicolae Mavrocordat (1719-1730). The name Stavropoleos comes from the Greek "Staupolis" which means "City of the Cross". Less known is the fact that the poet Tudor Arghezi was a long time deacon in this church, during the five years of monastic life.

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The monastery has started a virtual library project by digitizing its old books.

The music sung during the offices is neo-Byzantine, based on the works of 19th century Romanian psalmodists: Macarie the Hieromonk, Nectarie the Hermit, Anton Pann, Dimitrie Suceveanu, Greek chants translated into Romanian, or modern compositions.

The Stavropoleos Byzantine Choir was created in 1994, and is led by archdeacon Gabriel Constantin Oprea who officiates and chants at the Stavropoleos Church and teaches Byzantine music at the National University of Music Bucharest. The group has performed in Romania and abroad, and they are issuing their music on CDs.



## 7. National Museum of Romanian History



The National Museum of Romanian History (Romanian: Muzeul Național de Istorie a României) is a museum located on the Calea Victoriei in Bucharest, Romania, which contains Romanian historical artifacts from prehistoric times up to modern times.

The museum is located inside the former Postal Services Palace, which also houses a philatelic museum. With a surface of over 8,000 square meters, the museum has approx. 60 valuable exhibition rooms. The permanent displays include a plaster cast of the entirety of Trajan's Column, the Romanian Crown Jewels, and the Pietroasele treasure.



[www.scoala168.net/clil-24](http://www.scoala168.net/clil-24)

The building was authorized, in 1892, and the architect, Alexandru Săvulescu was sent with the postal inspector, Ernest Sturza, to tour various postal facilities of Europe for the design. The final sketches were influenced primarily by the postal facility in Geneva. Built in an eclectic style, it is rectangular with a large porch on a high basement and three upper floors. The stone façade features a portico supported by 10 Doric columns and a platform consisting of 12 steps spanning the length of the building. There are many allegorical sculptural decorative details.

As of 2012, the museum is undergoing extensive restoration work and it is only partially open; a late medieval archaeological site was discovered under the building.

## 8. Romanian Savings Bank Building



Romanian Savings Bank was founded in 1864—five years after the union of the two Danubian Principalities, and more than a decade before the Romanian state as such—as the *Casa de Depuneri și Consemnațiuni* (literally "Deposits and Consignments House" but effectively "Deposits and Consignments Bank": the Romanian word *casa* is used analogously to the French *caisse*; both are related to the English cash. In 1880, the name was changed to *Casa de Depuneri, Consemnațiuni și Economie* ("Deposits, Consignments and Savings House"). In 1881, the financially independent *Casa de Economie* ("Savings Bank"), was set up under its aegis.





In 1887, the cornerstone of the Romanian Savings Bank Palace was set; the building opened as the bank's headquarters in 1900. As of 2012, Romanian Savings Bank is still headquartered there, although the building has been sold to the municipality of Bucharest for an eventual museum; Romanian Savings Bank is leasing the building until they build or otherwise obtain an appropriate modern headquarters.

Romania entered World War One belatedly on the Allied or Entente side, and was largely overrun by the forces of the Central Powers. A portion of the bank's management remained in occupied Bucharest, while another portion relocated to Iași, in Northeast Romania. Prime minister Ion I. C. Brătianu decided to send the Bank's treasury, as well as other assets including the treasury of the National Bank of Romania, to Iași and later to Moscow.

In Communist Romania, Romanian Savings Bank created a number of types of accounts, including passbook savings accounts with various combinations of interest and prizes, and opened branches throughout Romania. From 1970 to 1985, Romanian Savings Bank made housing loans as well. After the 1989 revolution, Romanian Savings Bank began activities such as granting loans to other banks and dealing in government securities. In 1996, Law No. 66 reorganized Romanian Savings Bank as a joint-stock company with the Finance Ministry as its sole shareholder. Beginning in 2005, moves were made toward privatization. A 2006 attempt at privatization was cut short when the government was dissatisfied with the bids. The possibility of privatization has been in play as recently as January 2011.

At 10 minutes walk from the zero point of Bucharest, University Square, is the Romanian Savings Bank Palace, one of the most beautiful buildings in the Capital, which attracts especially with the Renaissance architectural style. The Romanian Savings Bank Palace, called in the beginning the Palace of the House of Deposits, Consignments and Economy, is a building that abounds in history, located on Calea Victoriei, the promenade of the Bucharest aristocracy. Those who laid the foundation stone of the new building, in June 1897, were King Carol I of Romania and Queen Elizabeth. Made according to Paul Gottereau's plans, with specific elements of French architecture from the end of the 19th century, the CEC Palace was completed in 1900. The construction has five glass domes, one in the middle and four in the corners. They not only have an aesthetic role, they help the acoustics. The sound propagates vertically, so that what is being discussed at the counters could not be heard by the other people. The entrance to the palace is also spectacular. It is crowned by a semicircular pediment supported by a pair of composite columns. The Palace's rooms are decorated with large chandeliers brought from Vienna.



[www.scoala168.net/clil-26](http://www.scoala168.net/clil-26)

The most elegant room remains the Boardroom. Its distinction is seen as you enter. With a height of eight meters, the room is decorated with carved panels and green silk panels.

Romanian Savings Bank Bank and the Romanian Savings Bank Museum are now the hosts of the Romanian Savings Bank Palace. The museum was opened in 2005. Inside you can find important documents and objects from the institution's history, as well as art exhibitions.

The Romanian Savings Bank, as an institution, was established in 1864 by a law initiated by Alexandru Ioan Cuza.

## 9. Grand Hôtel du Boulevard



Grand Hôtel du Boulevard is located in the center of Bucharest, at the intersection of Calea Victoriei Street with Elisabeth Avenue.

In 1865 businessman Jacques Herdan buys the land and begins construction of a hotel after the plans of architect Alexandru Orăscu. The building called Hotel Herdan is inaugurated in 1871 (after other sources the hotel started operating from 1873 ). It has a French restaurant and Alkay Library on the ground floor. Starting with 1877 the hotel is called Grand Hôtel du Boulevard and is the first Bucharest hotel to draw running water. The hotel is appreciated but the prices are high, for example, a modest room costs 12 francs per day in 1877.



[www.scoala168.net/clii-27](http://www.scoala168.net/clii-27)

Over time, the Grand Hôtel du Boulevard hosted painting halls, parliamentary meetings, and in the salons, after 1918, Pour toi et pour moi, a dance club is organized.

### **Bombing against Charles II**

In 1934, four Romanian army officers are plotting an attempt against King Charles II. They were accommodated on the second floor, in room 44, and planned the king's murder on the Night of Resurrection, when the Royal Sea was passing under the hotel's balconies. To the Metropolitan hill, the bombing failed, officers being arrested. Later, the post-war regime nationalised the hotel, on its ground floor, opening the Academy bookstore, where it was the famous Alkay bookstore.

The hotel has been undergoing renovation for more than 10 years.

### **10. Palace of the National Military Circle**





[www.scoala168.net/clii-28](http://www.scoala168.net/clii-28)

The Palace of the National Military Circle, also known as the Officers' Circle Palace (Romanian:Cercul Militar Național) is located on Constantin Mile street in Bucharest, Romania. It was built in 1911 by architect Dimitrie Maimarolu using French neoclassical style. The beneficiary was the Officers' Circle of the Bucharest military garrison, which was founded in 1876.

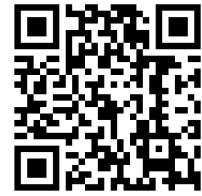
The palace was built on the site of the old Sărindar monastery; the fountain in front of the palace bears its name.

During the 1919 German occupation of Bucharest in the First World War, the building's interiors were devastated. After the end of the war, the palace was officially inaugurated in 1923. During the communist period, the name was replaced with "Central House of the Army" (Casa Centrală a Armatei). In 1989, it was renamed the "National Military Circle" (Cercul Militar Național).

Today, the National Military Circle is considered a historic and architectural monument. It represents the central cultural institution of the Romanian army and it is also used for various cultural events and for representation and protocol purposes. The restaurant and the terrace are open to the public.

### **11.The University of Bucharest**





The University of Bucharest (Romanian: Universitatea din București), commonly known after its abbreviation UB in Romania, is a public university founded in 1864 by decree of Prince Alexandru Ioan Cuza to convert the former Saint Sava Academy into the current University of Bucharest, making it the second oldest modern university in Romania. It is one of the five members of the Universitaria Consortium (the group of elite Romanian universities).

The University of Bucharest offers study programmes in Romanian and English and is classified as an advanced research and education university by the Ministry of Education. In the 2012 QS World University Rankings, it was included in the top 700 universities of the world, together with three other Romanian universities.

The University of Bucharest was founded by the Decree no. 765 of July 4th, 1864 by Prince Alexandru Ioan Cuza and is a leading academic centre and a significant point of reference in society.

The University of Bucharest is rich in history and has been actively contributing to the development and modernisation of Romanian education, science and culture since 1694. In 1694 Constantin Brâncoveanu, ruler of Wallachia, had founded the Princely Academy of Saint Sava in Bucharest with lectures delivered in Greek. In 1776, Alexander Ypsilantis, ruler of Wallachia, reformed the curriculum of the Saint Sava Academy, where courses of French, Italian and Latin were now taught. In 1859, the Faculty of Law was created. In 1857, Carol Davila created the Carol Davila University of Medicine and Pharmacy. In 1869 the Faculty of Medicine is created through the transformation of the National School of Medicine and Pharmacy. In 1857, the foundation stone of the University Palace in Bucharest was laid.

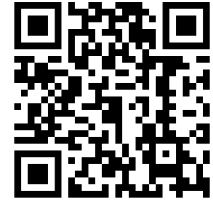
The original 1857 project of the University main building by Alexandru Orăscu

On July 4/16 1864 Prince Alexander John Cuza created the University of Bucharest, bringing together the Faculties of Law, Sciences and Letters as one single body. In the following years, new faculties were created: 1884 – the Faculty of Theology; 1906 – the Institute of Geology; 1913 – the Academic Institute for Electrotechnology; 1921 – the Faculty of Veterinary Medicine; 1923 – the Faculty of Pharmacy, 1924 – the Mina Minovici Institute of Forensic Medicine.

In 1956, student leaders, mainly from this university, planned a peaceful protest against Romania's Communist regime but were forcibly prevented from carrying it out.

For a while (1950s-early 1960s?), it was called the "C. I. Parhon University", after C. I. Parhon.

Most of the building is still intact, however during the bombardments of Bucharest in 1944, the central corpus of the building was heavily damaged and demolished due to Luftwaffe bombs, and was only re-constructed in 1969-1971. Other sections were also completed by 1980.



[www.scoala168.net/clil-30](http://www.scoala168.net/clil-30)

The area around the old University building (the University Square), adjacent to the C. A. Rosetti, Roman, Kogălniceanu, and Union Squares was the scene of many riots, protests and clashes with the security forces during the Romanian Revolution of 1989. During the months of April–June 1990, the University of Bucharest was the centre of anti-communist protests.

In the 2012 QS World University Rankings University of Bucharest was included in the Top 601 + 701 universities of the world, together with three other Romanian universities, including Babeş-Bolyai University in Cluj-Napoca, and Alexandru Ioan Cuza University in Iaşi.

## **12. The Central University Library and the New Royal Palace become the National Art Museum of Romania**



The Central University Library of Bucharest (Romanian: Biblioteca Centrală Universitară) is a library in central Bucharest, located across the street from the National Museum of Art of Romania.

When the University of Bucharest was created in 1864, there was no central university library; this role was played by the Central State Library of Bucharest until 1895. That institution was moved and housed in the university building, and in 1867 was specially reorganised for the university's needs by the scholar August Treboniu Laurian. It had an unmistakable university quality, being governed by a special university committee (including the rector, the faculties' deans, the school ephor and the chief librarian as secretary), and the deans were always consulted for selection and purchasing. Nevertheless, the need for a proper central university library became increasingly apparent.



[www.scoala168.net/clil-31](http://www.scoala168.net/clil-31)

The present Central University Library was founded in 1895 as the Carol I Library of the University Foundation. It was built on land bought by King Carol I of Romania for the "Carol I University Foundation" (Fundăția Universitară Carol I) and designed by French architect Paul Gottereau. The building was completed in 1893 and opened on 14 March 1895. In 1911, the building was extended by the same architect and the new wing was opened on 9 May 1914. It began with an initial stock of 3,400 volumes of books and periodicals. The collection grew to 7,264 volumes in 1899, 31,080 volumes in 1914, and 91,000 volumes in 1944. In 1949 (after its reorganisation on 12 July 1948 as the Central Library of Bucharest University), the collection contained 516,916 volumes; in 1960, about a million; and over 2 million in 1970.

During the Romanian Revolution of 1989, a fire was started in the building and over 500,000 books, along with 3,700 manuscripts, were burnt. Starting in April 1990, the building was repaired and modernized, being reopened on 20 November 2001.

In parallel with the development of the central library, a more complex network of specialised library branches was developed. For example, the Library of the Law Faculty was founded in 1873-76 (based on Professor Alexandru Lahovary's donation of books); in 1884 the Archaeological Seminary's Library was established through Professor Grigore Tocilescu's grant; and in 1892 the Library of the Slavic Languages Seminary began, based on Ion Bogdan's donation. These libraries functioned within the Faculty of Letters. Specialised libraries were also founded in the Sciences Faculty, such as the Mathematical Seminary's Library (after 1890), the Laboratory for Animal Physiology Library (1892, on the basis of Professor Alexandru Vitzu's grant); and the Laboratory for Plant Morphology Library (1893, using Professor D. Voinov's book donation). Until 1869, the Faculty of Medicine had only the customary collection, but by 1884 had a well-organised, specialised library.

The Central University Library "Carol I" in Bucharest, abbreviated BCU, is the oldest university library in Bucharest, located in the "Palace of the Carol I University Foundation", the headquarters of the Royal Foundations.

The building was built on the site purchased by King Carol I and was designed by French architect Paul Gottereau. The construction of the building was completed in 1893 and in the next two years the settlement, called the Carol I University Foundation, was equipped and arranged. The inauguration was done by King Carol I on March 14, 1895. In 1911, under the leadership of the same architect, the edifice was enlarged and put into use on May 9, 1914.



In general, these libraries were founded and developed using teachers' donations, state grants and, after 1890, a percentage (usually 10%) of student-paid tuition.

### **National Museum of Art of Romania**

The National Museum of Art of Romania (Romanian: Muzeul Național de Artă al României) is located in the Royal Palace in Revolution Square, central Bucharest. It features collections of medieval and modern Romanian art, as well as the international collection assembled by the Romanian royal family.

The exhibition "Shadows and Light" ran from 15 July to 2 October 2005. With four centuries of French art, it was the largest exhibition of French painting in Central and Eastern Europe since 1945. 77 works were exhibited, including masterpieces by painters such as Poussin, Chardin, Ingres, David, Delacroix, Corot, Cézanne, Matisse, Picasso, and Braque.

The museum was damaged during the 1989 Romanian Revolution that led to the downfall of Nicolae Ceaușescu. In 2000, part of the museum reopened to the public, housing the modern Romanian collection and the international collection; the comprehensive Medieval art collection, which now features works salvaged from monasteries destroyed during the Ceaușescu era, reopened in spring 2002. There are also two halls that house temporary exhibits.

The modern Romanian collection features sculptures by Constantin Brâncuși and Dimitrie Paciurea, as well as paintings by Theodor Aman, Nicolae Grigorescu, Theodor Pallady, Gheorghe Petrașcu, and Gheorghe Tattarescu.

The international collection includes works by Old Masters such as Domenico Veneziano, El Greco, Tintoretto, Jan van Eyck, Jan Brueghel the Elder, Peter Paul Rubens, and Rembrandt, plus a smattering of works by impressionists such as Claude Monet and Alfred Sisley. Among the best known Old Master works in the collection are Jacopo Amigoni's portrait of the singer Farinelli, a Crucifixion by Antonello da Messina, and Alonso Cano's Christ at the Column.

In the southern part of the building the European Museum Art Gallery was reopened in 2000. The painting collection was made available on the basis of 214 works of art from the collection of King Charles I, to which were added pictures of other members of the royal family. The king's collection included paintings by El Greco, Rembrandt, Bruegel the Elder, Rubens, and Domenico Veneziano.

In spring 2001, the Romanian Modern Art Gallery reopened. The paintings are displayed on the mezzanine and second floor wing of the building. Mezzanine Romanian painting works are exhibited early (Nicholas Polcovnicul, Eustathius Altini, Anton Chladek, Livaditti Niccolo Giovanni Schiavoni, Carol Wahlstein Constantin Daniel Rosenthal, John Negulici, Constantin Lecca, Carol Popp de Szathmary), along with portraits of family members and a few landscapes.





### 13.The Romanian Athenaeum



The Romanian Athenaeum (Romanian: Ateneul Român) is a concert hall in the center of Bucharest, Romania and a landmark of the Romanian capital city. Opened in 1888, the ornate, domed, circular building is the city's main concert hall and home of the "George Enescu" Philharmonic and of the George Enescu annual international music festival. In 1865, cultural and scientific personalities such as Constantin Esarcu, V. A. Urechia, and Nicolae Crețulescu founded the Romanian Athenaeum Cultural Society. To serve its purposes, the Romanian Athenaeum, a building dedicated to art and science, would be erected in Bucharest.

The building was designed by the French architect Albert Galleron, built on a property that had belonged to the Văcărescu family and inaugurated in 1888, although work continued until 1897. A portion of the construction funds was raised by public subscription in a 28-year-long effort, of which the slogan is still remembered today: "Donate one leu for the Ateneu!"



On December 29, 1919, the Atheneum was the site of the conference of leading Romanians who voted to ratify the unification of Bessarabia, Transylvania, and Bukovina with the Romanian Old Kingdom to constitute Greater Romania.

Extensive reconstruction and restoration work has been conducted in 1992 by a Romanian construction company and restoration painter Silviu Petrescu, saving the building from collapse. The 9 million Euro required were contributed in equal shares by the government and the Council of Europe Development Bank.

The overall style is neoclassical, with some more romantic touches. In front of the building there is a small park and a statue of Romanian poet Mihai Eminescu.

Inside, the ground floor hosts an ornate conference hall as large as the auditorium above; the auditorium seats 600 in the stalls and another 52 in loge seating.

A 75-sqm long and 3-m wide fresco by Costin Petrescu decorates the inside of the circular wall of the concert hall. Painted using the al fresco technique, the piece depicts the most important moments of Romanian history, starting with the conquest of Dacia by Roman emperor Trajan and ending with the realization of Greater Romania in 1918.

Recognized as a symbol of Romanian culture, the building has been inscribed in 2007 on the list of the Label of European Heritage sites.

Built to be a palace of arts and sciences, the building is the place where exhibitions, concerts and conferences are organized in a lavish environment. The palace was the host of a pinacoteci (the State Pinacoteca - its patrimony was donated to the National Museum of Art of Romania), a library and sometimes film screenings. The image of the building, the neo-Greek portico, located under the ionic pediment, and the beautifully decorated dome, was for a long time the emblem of Bucharest

The building has a total height of 41 m and is built in neoclassical style, with elements of decoration typical of the French architecture of the turn of the century.

The facade of the building is facing west and contains a peristyle of six ionic columns, which give the building the appearance of an ancient Greek temple. The columns support a triangular pediment and are based on a platform consisting of 8 steps.

The peristyle wall, above the entrance doors to the palace, presents 5 medallions in the mosaic, representing Alexandru cel Bun, Neagoe Basarab, Vasile Lupul, Matei Basarab and King Carol I.

Inside the palace there are exhibition halls, cinemas, a library, a book store (about 10,000), a large conference or concert hall and the State Art Gallery.



On the ground floor the construction has a large circular vestibule, doubled by a 12-column ring with a plaster that imitates the pink marble. From the vestibule known as the "Athenaeum Roundabout", four stairs and the stairs of honor, made of pink marble by Carrara, each built around a masonry pillar and form balconies to the roundabout. The stairs lead to the large concert hall.

The fresco of the Athenaeum, 3 m wide, extends from one side of the stage to a length of 75 m and comprises 25 episodes from Roman history, symbolizing "the open book of national history for those who see it". The scenes are presented in a chained sequence, without being separated from each other.

Looking at the royal box, from left to right, the 25 episodes can be described as follows: Trajan enters Dacia, Colonization of Dacia, Dacian blending with Romanians, Roman Sentinel, Invasion of barbarians, beginning of Romanian life etc.

#### **14. Romanian National Opera, Bucharest**



The Romanian National Opera, Bucharest (Romanian: Opera Națională București) is one of the national opera and ballet companies of Romania. It is situated in a historical building in Bucharest, built in 1953, near the Cotroceni neighbourhood.



[www.scoala168.net/clii-36](http://www.scoala168.net/clii-36)

The first opera performed there was Tchaikovsky's Queen of Spades on 9 January 1954; the first ballet was Coppélia, the following night.

Its auditorium has 952 seats, but occasionally concerts are held in the Yellow Foyer with a maximum of 200 seats. The company presented 182 performances in 2009 (up from 146 in 2006). At the beginning of each season, a free show is held in open air to promote opera and the artists, "Promenada Operei".

Their annual season runs September–June.

#### **14. National Theatre Bucharest**



The National Theatre Bucharest (Romanian: Teatrul Național "Ion Luca Caragiale" București) is one of the national theatres of Romania, located in the capital city of Bucharest.

It was founded as the Teatrul cel Mare din București ("Grand Theatre of Bucharest") in 1852, its first director being Costache Caragiale. It became a national institution in 1864 by a decree of Prime Minister Mihail Kogălniceanu, and was officially named as the National Theatre in 1875; it is now administered by the Romanian Ministry of Culture.



[www.scoala168.net/ciil-37](http://www.scoala168.net/ciil-37)

In April 1836, the Societatea Filarmonica — a cultural society founded by Ion Heliade Rădulescu and Ion Câmpineanu — bought the Câmpinencii Inn to build a National Theatre on the site, and began to collect money and materials for this purpose. In 1840, Obşteasca Adunare (the legislative branch established under the terms of the Imperial Russian-approved Organic Statute) proposed to Alexandru II Ghica, the Prince of Wallachia, a project to build a National Theatre with state support. The request was approved on June 4, 1840. Prince Gheorghe Bibescu adopted the idea of founding the theatre and chose a new location, on the spot of the former Filaret Inn. There were several reasons to favor this locations: it was centrally located, right in the middle of Podul Mogoşoaiei (today's Calea Victoriei); the earthquake of 1838 had damaged the inn beyond repair, and it needed to be torn down.

### **Old building**

The August 13, 1843, report of the commission charged with building the theatre determined that construction would cost 20,300 Austrian guilder (standard gold coin) of which only 13,000 gold coins were available. In 1846, a new commission engaged the Viennese architect A. Hefft, who came up with an acceptable plan.

Construction got under way in 1848, only to be interrupted in June by the Wallachian revolution. In August 1849, after Prince Barbu Dimitrie Ţirbei took power, he ordered that construction be completed.

The front of the Bucharest Novotel, on Calea Victoriei in 2010, replicates the exterior of the old Romanian National Theatre approximately in its original location

The theatre was inaugurated on December 31, 1852, with the play *Zoe or The borrowed lover*, described in the newspapers of the time as a "vaudeville with songs". The building was built in the baroque style, with 338 stalls on the main floor, three levels of loges, a luxurious foyer with staircases of Carrara marble and a large gallery in which students could attend free of charge. For its first two years, the theatre was lit with tallow lamps, but from 1854 it used rape oil lamps; still later this was replaced by gaslights and eventually electric lights. In 1875, at the time its name was changed to Teatrul Naţional, its director was the writer Alexandru Odobescu.

The historic theatre building on Calea Victoriei — now featured on the 100-leu banknote — was destroyed during the Luftwaffe bombardment of Bucharest on August 24, 1944.



### **The modern theatre**

The current National Theatre is located about half a kilometre away from the old site, just south of the Hotel Intercontinental at Piața Universității (University Square), and has been in use since 1973.

The new edifice reconstructed from 2010 to 2014, was inaugurated to the end of the year 2014, and with 7 halls, as the Grand Hall (Sala Mare) with 900 seats, is the biggest and the latest theater edifice of Europe.

### **Theater activity**

Currently, the Bucharest National Theater presents its performances in four halls: Grand Hall (1,155 seats), Amphitheater Hall (353 seats), Atelier Hall (without a fixed scene, 94-219 seats) and Studio Room 99 (without fixed scene, 99 places).

In over 150 years of existence, the Bucharest National Theater presented on stage many of the most significant pieces of universal dramaturgy. It has had successful performances both in and outside the country: France, Germany, Austria, Yugoslavia, Italy, England, Spain, Portugal, Greece, Brazil, etc.

### **15. Coltea Church**





Colțea Church is a church in Bucharest which belonged to the ensemble of the Monastery of Colțea, now gone, which the tower of the corner was serving as a belfry. The church was probably completed around 18 October 1702, when it received a Patrial decree privilege.

The Church of Colus is today the oldest functional Bucharest Edifa, still standing. It has a status of historical monument.

The stone church with the three Hierarhi (Vasile cel Mare, Grigore theologian and Ioan Chrysostom, feast on January 30) and the Holy Father of Parascheva (14 October) was erected by the backrest of Mihai Cantacuzino, from 1695 to 1698, on the site of a church Of the wood, with the Holy Martyr Paraschevi, in Rome (26 July), which was probably erected in 1641-1642 by the servant Udrea Doicescu. Although it can be considered the most important foundation of the backrest Mihail Cantacuzino, the church bears the name of the Cluj-Napoca, the brother of Udrea Doicescu, who took care of his brother's Ctitanic, killed in the year 1655 in the uprising The Seimans. In the realization of the Church there is the Brancovenesc style, but combines with the Byzantine, Romanian and Italian Baroque.

The 1838 earthquake seriously injured the church. The cult of worship was repaired in 1841 by architect Faiser and entrepreneur Conrad Schwink. In 1871, the interior painting was remade by Gheorghe Tattarescu who alternated various motifs and decorations from imitation marble. In the



church, on the Western wall of the Pronabone, is the votive painting, where the backrest of Mihai Cantacuzino is depicted with his wife Maria. Subsequently, in 1895, during the repairs supervised by architect G. Mandrea, it was discovered under the outer plaster a paint in the fresco, red and black, covering the church, and which was attributed to Pârnu Mutu. The bombing of 1944 again affected the church, the restoration and consolidation works taking place in 1949, then, between 1950 and 1955, the tower – The belfry of the Pronaos, was rebuilt after architect Horia Teodoru's project. The Great Earth Earthquake of 1977 severely damaged the church. The restoration of the Church of the coldness, held from 2006, also assumed the reconstruction of the second Turle, the one above the Naos (fallen in the aftermath of the 1940 earthquake and the bombing of World War II). Now the church is very close to the look it originally had.

Among the exquisite paintings in the church are the icon of the Virgin Mary, the icon of the Holy three Hierarchs, the icon of the non-silver Saints Cozma and Damian and the proper Parascheva. The Catapeteasma and the porch are decorated with many floral elements and there is an Italian Baroque portal mixed with indigenous elements in the porch. It consists of a finished door hole in the Trilobat arch, framed by two neo-Corinthian columns, adorned with vines and grapes, which support a high cornice, cut in the style of Italian Renaissance. On its frieze, two winged griffins, carved in altorelief, lay down a stone plate which was later dug into the inscription, then race by the Turks, in which there were marked data on the construction of the church and its founders. The pedestals of the columns, like the architraving fragments above the Capitella, are adorned with the figures, removed much in relief, of the four Evangelists, accompanied each by its attribute. Parts of the railing decorated with stone-carved reliquers of the corner tower balcony, which were preserved whole after the collapse of the upper part of the tower on the occasion of the 1802 earthquake, were recovered and were framed between the columns The porch of the church of coldness. Among the decorative reliefs with floral elements lies the headed Cantacuzin Eagle.

In 1715, Mihai Cantacuzino built the Colțea Inn (now vanished), around the Colțea Church of, to be able to procure the church and those who serve her income from which to support.

During the repair work of 2006, the foundations of a church prior to the present church were discovered around the churches, which could be the Church of Udrea and the Doicescu Colțea, as well as 104 tombs from the 17TH to 19TH centuries. Graves are part of the cemetery formed around the two churches. In the graves were found western and Ottoman coins, filed ritual in graves, rings, earrings, pafiale. Bricks with inscriptions under the skulls of some graves prove that monks were buried here.





[www.scoala168.net/clil-41](http://www.scoala168.net/clil-41)

Some of the graves had been affected when, during the excavations of the subway tunnels between the villages of Unirii Square and the university, in the sidewalk in front of the church's Pronabone the coldness was built a "protective support wall" from drilled columns . Then, at very shallow (approx. 1 - 1, 5m) human bones were discovered.

### **16. St. George's new church in Bucharest**



The Church of Saint George is a church in Bucharest, founded by Constantin Brâncoveanu Voivode.



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The last known foundation of the ruler Constantin Brâncoveanu, the Church of Saint George in Bucharest is also called "Saint George-Nou" to distinguish it from another important Bucharest place, founded at the end of the 15TH century, "saint Gheorghe-old".

Here lies a part of the right hand of the Holy Hierarch Nicholas of the groom of the wound. The relics were donated to the Church of Saint George Nou in Bucharest by the Basilica of St. Nicholas in Bari, Italy.

In the courtyard of the Church of St. George Nou in Bucharest, from 1830, was the first Romanian bookstore of Joseph Romanov, having a great role in achieving the cultural and spiritual solidarity of Romanians, the testamental desire of the Great and enlightenment Romanian voivode.



## Agenda – 2th Day

October 23 <sup>st</sup> 2019		Location
10.00 – 11.00	<ul style="list-style-type: none"> <li>● Welcome</li> <li>● Workshop 1 - First 1: Presentation of the most relevant physical, geographic, human and economic aspects of Ilfov County</li> <li>● Prof. dr. Cristina Petre-Ghiță, prof. dr. Steluța Dan, prof. dr. Florin PETRESCU, prof. Marius Ovidiu SEBE</li> </ul>	Teachers Training Center, Brănești, Ilfov County
11.00 – 11.30	<ul style="list-style-type: none"> <li>● Coffee break</li> </ul>	Teachers Training Center, Brănești, Ilfov County
11.30 – 12.30	<ul style="list-style-type: none"> <li>● Workshop 1 - Second 2: Elements of cultural identity (visiting exhibitions within the Ilfov CCD)</li> <li>● Prof.Dr. Cristina Petre-Ghiță, Prof.Dr.Steluța Dan, Prof. Marius-Ovidiu SEBE</li> </ul>	Teachers Training Center, Brănești, Ilfov County
12.30 – 14.00	<ul style="list-style-type: none"> <li>● Lunch</li> </ul>	Teachers Training Center, Brănești, Ilfov County
14.00 – 15.30	<ul style="list-style-type: none"> <li>● Workshop 2: Study visit to the Brănești treatment plant, Pasărea valley Prof. dr. Cristina Petre-Ghiță, prof. dr. Steluța Dan</li> <li>● Final conclusions</li> </ul>	Teachers Training Center, Brănești, Ilfov County
15.30 – 16.00	<ul style="list-style-type: none"> <li>● Coffee break</li> </ul>	Teachers Training Center, Brănești, Ilfov County
16.00 – 17.00	<ul style="list-style-type: none"> <li>● <b>Cultural topic: Cultural diversity. Cultural tour of Pasarea Monastery</b></li> </ul>	Teachers Training Center, Brănești



	Prof. dr. Cristina Ghiță, prof. dr. Steluța Dan	Ilfov County
17.30-19.00	<ul style="list-style-type: none"> <li>Astronomical Observations at Astronomical Observatory Amiral Vasile Urseanu</li> </ul>	Astronomical Observatory AmiralVasileUrseanu
19.00	<ul style="list-style-type: none"> <li>Dinner</li> </ul>	

**Workshop 1 - First 1:** Presentation of the most relevant physical, geographic, human and economic aspects of Ilfov County

Prof.dr. Cristina Petre-Ghiță, prof. dr. Steluța Dan, prof. dr. Florin PETRESCU, prof. Marius Ovidiu SEBE

**Keywords:** Ilfov County, environment, identity, population, industry.

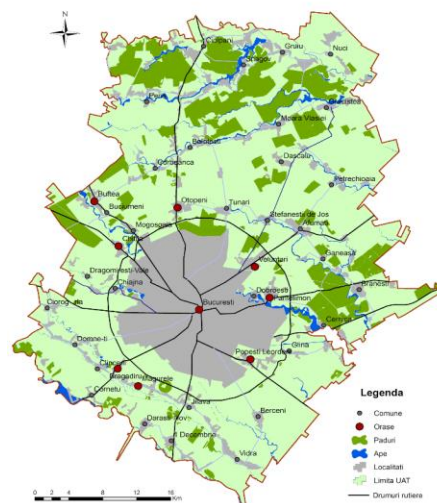
**Objective:** To present the defining geographical aspects of Ilfov County, capitalizing on the knowledge and skills specific to the natural sciences and the social sciences.

Ilfov County is characterized by a strong economic and social development, characterized by population growth (the largest demographic growth in the EU, according to Eurostat) and the rapid development of the industry. This situation has a certain impact on the environment.

**Application:**

1. Specify:
  - a. a factor that determined the socio-economic development of Ilfov County;
  - b. a consequence on the environment.
2. Propose two applicable, concrete solutions, to diminish the impact of the industry development on environment in Ilfov County.

**Brănești - Satellite images Overview**



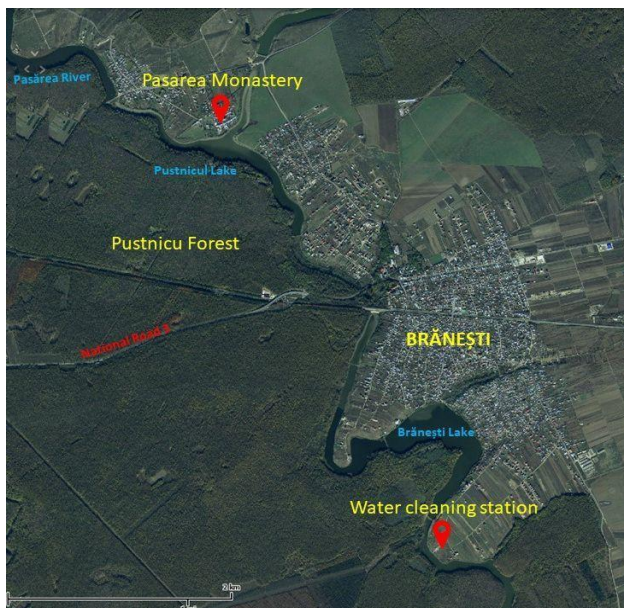
the



[www.scoala168.net/clil-44](http://www.scoala168.net/clil-44)



[www.scoala168.net/clii-45](http://www.scoala168.net/clii-45)



**Workshop 1 - Second 2:** Elements of cultural identity (visiting exhibitions within the Ilfov CCD)  
Prof. Dr. Cristina Petre- Ghiță, Prof. Dr. Steluța Dan, Prof. Marius- Ovidiu SEBE



[www.scoala168.net/cil-46](http://www.scoala168.net/cil-46)

**Workshop 2:** Study visit to the Brănești treatment plant, Pasărea valley  
Prof.dr. Cristina Petre-Ghiță, prof. dr. Steluța Dan

**Keywords:** water cleaning station, Bird valley, pollution



[www.scoala168.net/clil-47](http://www.scoala168.net/clil-47)

**Objective: Applying specific skills to the natural sciences to study the basic processes within a water treatment plant.**

The water treatment plant includes complex processes by which the domestic waters are brought to physico-chemical parameters that allow their reintegration into the environment. The treatment processes and the quality of the water, however, depend on our behavior as users of the water supply system and the sewage system.

**Application:**

1. Identify a solution that could lead to reduced water consumption in households.
2. List two substances / objects / products used in household use that should not be discharged into the sewage system.
3. Present a physical or chemical process during the water purification steps.



**Treatment plant - Brănești**



**Cultural topic: Cultural diversity. Cultural tour of Pasarea Monastery**

Prof.dr. Cristina Ghiță, prof. dr. Steluța Dan

Example of spirituality and nature mix

[https://www.tripadvisor.com/Attraction\\_Review-g7208333-d7205633-Reviews-Pasarea\\_Monastery-Pasarea\\_Ilfov\\_County\\_Southern\\_Romania.html](https://www.tripadvisor.com/Attraction_Review-g7208333-d7205633-Reviews-Pasarea_Monastery-Pasarea_Ilfov_County_Southern_Romania.html)

The Pasarea Monastery is located in the Pasarea village, a component of Branesti commune, being difficult to visit without a car. The place where the monastery was built in the 19th century is a beautiful natural area, with a nice river and a forest which is part of the CodriiVlasiei. The place is full of beauty as the noons are working all day to maintain the beautiful garden. Inside, there are beautiful paintings and a nice golden iconostasis. There is also a museum that is open during Sundays or anytime by request.







### **Astronomical Observations at Astronomical Observatory Amiral Vasile Urseanu**

<https://muzeulbucurestiului.ro/en/the-admiral-vasile-urseanu-astronomic-observatory.html>

The Astronomical Observatory Admiral Vasile Urseanu is the first Astronomical Observatory in Romania open to the public since 1910, in a private residence. Admiral Vasile Urseanu is one of the founders of the “Flammarion” Romanian Astronomical Society (1907) of which he was elected president in 1908. In 1933, the admiral’s widow, Jeanne Urseanu, donated the building to the municipality of Bucharest, with the condition that the building keeps its role of astronomical observatory for the public, a request which was present in the admiral’s will. After the war, the building’s astronomic activity began again in 1950, under the name of “The People’s Astronomic Observatory”.

Starting with 2008 the observatory’s visitors could make use of new and improved equipment, such as a professional computerized telescope with a 30cm diameter mirror. The Observatory is also equipped with two field glasses that can be used on clear nights, as well as a telescope designed for the observing of solar flares. One of the Observatory’s main activities is its astronomical class for beginners, held by experts in the field, in collaboration with members of the Bucharest Astroclub, an educational program initiated in the 60s.

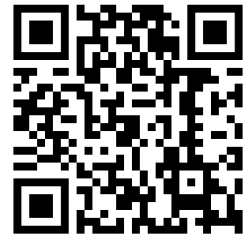
Presently the Admiral Vasile Urseanu Astronomical Observatory is being reconditioned with the help of European funds, a process which will be completed in November 2016.

Observations are held by our colleagues at the Filipescu-Cesianu House (No. 151 Victoria Avenue) only if the sky is clear.

Nighttime observations: Thursday, Friday and Saturday, from 20:00 to 22:00, in the Filipescu-Cesianu gardens.

Daytime observations: Wednesday and Sunday, between 11:00 and 14:00, also in the Filipescu-Cesianu House’s garden.

Astronomy presentations are held on Saturdays, at Suțu Palace (No. 2, I. C. Brătianu Boulevard). For more details please check the Events section on our webpage.



[www.scoala168.net/clii-50](http://www.scoala168.net/clii-50)





## Agenda – 3rd Day

October 24 <sup>st</sup> 2019		Location
10.00 – 11.30	<ul style="list-style-type: none"> <li>• Welcome</li> <li>• <b>Workshop 1: Planeterrella – Polar lights simulator. Fascinating experiment to explore the field of solar-terrestrial interactions /Planeterrella - Simulator de aurorepolare. Experiment fascinant de explorare a intercațiilor solar-terestre</b> (Dr. Gabriel Voitcu, Dr. Maximilian Teodorescu, Dr. Catalin Negrea)</li> </ul>	Institute of Space Science 409, Atomistilor Street. Magurele, Ilfov
11.30 – 11.45	<ul style="list-style-type: none"> <li>• Coffee break</li> </ul>	
11.45 – 12.45	<ul style="list-style-type: none"> <li>• <b>Workshop 2: Cosmic rays - Exploring their interactions from the outer space to the Earth's atmosphere/ Radiatii cosmice - Explorarea interacțiilor lor din spatiu și din atmosfera Pământului</b> (Dr. Gina Isar)</li> </ul>	Institute of Space Science 409, Atomistilor Street. Magurele, Ilfov
12.45 – 14.15	<ul style="list-style-type: none"> <li>• Lunch</li> </ul>	
14.15 – 15.15	<ul style="list-style-type: none"> <li>• <b>Workshop 3: Solar System - Exploring the Solar System and the interactions between its small objects. Observing the Sun through the telescope/ Sistemul Solar - Explorarea Sistemului Solar și a interacțiilor dintre corpurile lui mici. Observarea Soarelui prin telescop</b> (Dr. Bogdan Dumitru, Dr. Gina Isar)</li> </ul>	Institute of Space Science 409, Atomistilor Street. Magurele, Ilfov
15.15 – 15.30	<ul style="list-style-type: none"> <li>• Coffee break</li> </ul>	
15,30 – 16,30	<ul style="list-style-type: none"> <li>• Visit at the Institute of Space Science (e.g. Data Center, Emulsions Lab, VR) (Dr.Ionel Stan, Dr. Elena Firu, Dr.LaurentiuCaramete)</li> </ul>	Institute of Space Science 409, Atomistilor



		Street. Magurele, Ilfov
16.30 – 17.30	<ul style="list-style-type: none"> <li>Round table discussions and final conclusions. (All participants)</li> </ul>	Institute of Space Science 409, Atomistilor Street. Magurele, Ilfov
19,00	<ul style="list-style-type: none"> <li>Dinner</li> </ul>	

### Workshop 1: Planeterrella – the polar lights simulator

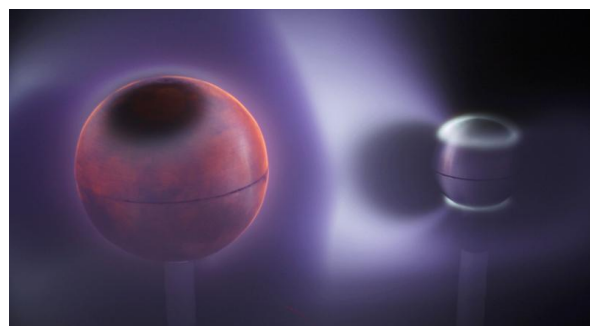
Gabriel Voitcu, Maximilian Teodorescu, Catalin Negrea

*Institute of Space Science, Magurele, Romania*



[www.scoala168.net/clil-52](http://www.scoala168.net/clil-52)

The Planeterrella<sup>1</sup> (Lilensten *et al.*, 2009, 2013) is an impressive laboratory experiment that allows the direct observation of various physical phenomena that are related to those occurring in Earth’s magnetic and plasma environment. This is a modern version of the famous Terrella experiment that has been developed by Kristian Birkeland more than a century ago to study the formation of aurora borealis. His pioneering experiments played a fundamental role for the physics of solar-terrestrial interactions. Today, the Planeterrella is mostly used for educational and outreach activities to increase the awareness of space weather and space science among the general public. The image below shows how the glow discharge plasma looks like inside the vacuum chamber of our experiment. We can easily notice a solar coronal hole on the upper part of the large sphere representing the Sun, the solar wind interacting with Earth’s magnetic shield – the magnetosphere, and the northern and southern auroras at the two poles of the small sphere. The current experimental setup has been developed at the Institute of Space Science in Magurele, Romania with the support of Jean Lilensten from the Institute for Planetary sciences and Astrophysics in Grenoble, France.



<sup>1</sup><http://www.spacescience.ro/sites/planeterrella/>



- *The glow discharge plasma inside the vacuum chamber that simulates the interaction between the high energy particles originating from the Sun and the geomagnetic shield.*

#### References

- Lilensten, J., Barthelemy, M., Simon, C., Jeanjacquot, P., Gronoff, G.: „*The Planeterrella, a pedagogic experiment in planetology and plasma physics*”, *ActaGeophysica*, 57 (1), 220–235, 2009.
- Lilensten, J., Provan, G., Grimald, S., Brekke, A., Fluckiger, E., Vanlommel, P., Wedlund, C. S., Barthelemy, M., Garnier, P.: “*The Planeterrella experiment: from individual initiative to networking*”, *Journal of Space Weather and Space Climate*, 3, A07, 2013.

**Keywords:**planeterrella, terrella, plasma, sun, earth, solar wind, magnetosphere, auroras



[www.scoala168.net/clil-53](http://www.scoala168.net/clil-53)



[www.scoala168.net/clil-54](http://www.scoala168.net/clil-54)



## **Workshop 2: Cosmic rays and its interactions in the Earth's atmosphere**

Dr. Gina Isar, *Institute of Space Science, Magurele, Romania*

During a balloon flight high up in the atmosphere to about 5 km, a century ago it has been discovered that the level of radiation increases, being thus confirmed the existence of natural radiation from the outer space. Victor Hess won a Nobel Prize in Physics in 1936 for its discovery. The higher the altitude the increased level of cosmic radiation, the more exposed being the pilots and astronauts, as well as space crafts. Our Sun is the main source of low energy cosmic ray particles, while the provenience of the ultra high energy cosmic rays is still unknown, either galactic or extragalactic. Although we are always and everywhere exposed to cosmic radiation, on the Earth's surface we are protected by its atmosphere and magnetic field; when an ultra-high energy primary cosmic ray enters the Earth's atmosphere, it collides with atmospheric nuclei, and through nuclear interactions it produces an avalanching cascade of secondary elementary particles, which develops in the air. Various detection techniques have been developed so far in order to observe the effects of secondary cosmic rays in different media (e.g. air, water, ice, soil.). The world's largest cosmic ray experiment on ground is the Pierre Auger Observatory, which is covering a 3000 km square array in the Argentinian pampas; its aim objective is to measure ultra-high energy cosmic rays, estimate their energy and mass, the incoming direction and source origin. Unraveling the mystery of cosmic rays, one better knows the structure of the Universe we are leaving in.



Figure 1. Artistic illustration of an ultra high-energy cosmic ray that regularly penetrates the Earth's atmosphere. © NSF/J. Yang



[www.scoala168.net/clil-55](http://www.scoala168.net/clil-55)



**Keywords:** astroparticle physics, cosmic rays, air showers, detection techniques

## **Workshop 2: The Solar System and its interaction with Earth**

Dr. Bogdan Dumitru, Dr. Gina Isar

*Institute of Space Science, Magurele, Romania*

Our Solar System is a gravitationally bounded complex, which includes one star and its planetary system. The last one includes planets, dwarf planets, natural satellites and small bodies. Our Earth planet interacts with all these objects through different processes: gravitational, thermal, collisions, etc. One of the interesting subjects is the Earth's interaction with small bodies of the Solar System. Meteoroids, asteroids, and comets have been permanently interacting with Earth during its existence. When an object, such as a comet or an asteroid, revolve around the Sun, it may leave fragments of matter behind it and if this object is in the Earth's proximity, those fragments are gathered by the planet gravity. When the fragments enter in the Earth's atmosphere, they burn up and produce flashes of light that can be observed on the night sky. The study of these objects and the link between them can help in the understanding of the formation and evolution conditions of the Solar System, the conditions of developing the life on Earth, the chaotic processes in the Solar System, Earth security and maybe, in future, space industry.

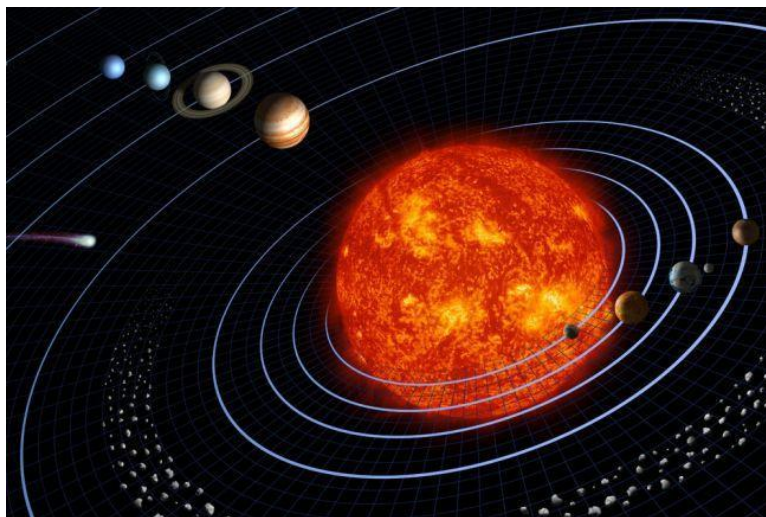


Figure 1. Artistic illustration of the Solar System. © NASA/JPL

**Keywords:** the solar system, planets, small objects, astronomical observations



### Visit at the Institute of Space Science

1. Data Center
2. Emulsions Lab,
3. Solar System guided Tour

#### 1. Visit at the Data Center ISS

Dr. Ionel Stan

Institute of Space Science, Magurele, Romania

The Institute of Space Science (ISS) has a remarkable activity of developing High Performance Computing (HPC) with applications in nuclear physics, astrophysics and space sciences (e.g. ALICE-LHC at CERN, Euclid-ESA space mission, Pierre Auger Observatory etc.), and contributions at large-scale on mass job production and large data storage.



Figure 1. Data Center ISS.

**Keywords:** distributed computing, mass production, large data storage





[www.scoala168.net/clil-57](http://www.scoala168.net/clil-57)



## 2. Nuclear emulsion as TINTA and DETECTOR

Dr. Elena Firu

*Institute of Space Science, Magurele, Romania*

Nuclear emulsions have been one of the most important detection tools since the early days of Particle Physics and are still a useful method in many fields of physics. It is probably the longest-lived detector used in nuclear physics experiments and this is because it has features that no other detector has been able to equal. Nuclear emulsions were first used in 1896 when Henri Bequerel discovered radioactivity by observing for the first time the accidental blackening of photographic plates in contact with certain uranium salts. Nuclear emulsions benefit from one of the most important advantages of detectors, namely the extraordinary spatial resolution, which makes their applicability in the field of nuclear physics extend over a very large beach. Initially these detectors were used in the study of cosmic radiation, but as the technology began to advance and experiments could be performed using particle accelerators, new applications were developed that would benefit from the extraordinary characteristics of the nuclear emulsions. Therefore, with the help of nuclear emulsions, experiments were carried out that made it possible to measure the lifetime of the  $\pi^0$  meson, to determine the bonding energies of the hypernuclei, especially the hyperon  $\Lambda^0$  in nuclear matter, or to discover a double hyperfragment. Nuclear emulsions are mainly used for detecting charged particles, study their interactions and disintegrations or indirectly to study neutral particles through their interactions. Sometimes, they are also used as active target, also target and detector simultaneously due to the accuracy in spatial and angular measurements (fractions of microns and several milliradians), so they are still used in nuclear experiments. The technology for making nuclear emulsions has greatly improved and the analysis techniques have changed a lot, and continued use of nuclear emulsions as detectors has been favored especially by the development of automatic scanning systems (Figure 1).



Pion Interaction



[www.scoala168.net/clil-58](http://www.scoala168.net/clil-58)



**Keywords:** nuclear physics, nuclear emulsions, photographic plate, spatial resolution, cosmic radiation

### 3. Solar System guided Tour

Dr. Laurentiu Caramete

*Institute of Space Science, Magurele, Romania*

In this activity the students will travel within the Solar System using a Virtual Reality headset. Being an audio guided tour, they will learn about the inner planets, the outer ones and also about Pluto, at the edge of our Solar system. Except the Sun, which is 10 times smaller due to visualization purposes, all other planet and their relative distances are at scale.



Figure 1. left: ExpoSol Pictogram; right: VR exploration of the Solar System

**Keywords:** Virtual Reality, Solar System



[www.scoala168.net/clil-59](http://www.scoala168.net/clil-59)



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## Agenda – 4th Day

October 25 <sup>th</sup> 2019		Location
10.30 – 12.00	<ul style="list-style-type: none"> <li>● CLIL crosscurricular activities. Conclusions of each workshop, discussions;</li> <li>● Mr Cătălin Mosoia, science communication expert, Romanian Academy</li> </ul>	School no 168 9 Alizeului Street, district 6
12.00 – 12.15	Coffee break	School no 168 9 Alizeului Street, district 6
12,15-13,45	<ul style="list-style-type: none"> <li>● CLIL crosscurricular activities. Conclusions of each workshop, discussions;</li> <li>● Mr Cătălin Mosoia, science communication expert, Romanian Academy</li> </ul>	School no 168 9 Alizeului Street, district 6
13.45 – 15.00	Lunch	School no 168 9 Alizeului Street, district 6
15.00 – 16.00	<ul style="list-style-type: none"> <li>● Final conclusions and delivery of Certificates of Attendance. Photo session</li> </ul>	School no 168 9 Alizeului Street, district 6
19.00	Farewell Erasmus Dinner	

### CLIL crosscurricular activities. Conclusions of each workshop, discussions

Overview of the workshops and conclusions and remarks. The key messages of the sessions. Evaluation and feedback from the participants.



[www.scoala168.net/cii-60](http://www.scoala168.net/cii-60)

