

**ASTRONOMERS OF SERBIA IN PROFESSIONAL SOCIETIES (II):  
THE UNION OF SOCIETIES OF MATHEMATICIANS  
AND PHYSICISTS OF YUGOSLAVIA ON THE  
OCCASION OF 50 YEARS SINCE ITS FOUNDATION**

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**Abstract.** Astronomers were in the Union of Societies of Mathematicians and Physicists of Yugoslavia since its foundation in 1949. They were active and eventually, in 1966, this organization became the Union of Societies of Mathematicians, Physicists and Astronomers of Yugoslavia. The contribution of the three professional branches is briefly described, in order to get a general view of the activity of the Union.

## 1. FOUNDATION

The Societies of Mathematicians and Physicists (SMP) were founded in all the republics of Yugoslavia by the mid November 1949: in Serbia, in January 1948; in Croatia, in April 1949; in Montenegro, in July 1949; in Slovenia, in October 1949; in Bosnia and Herzegovina in October 1949 and in Macedonia at the beginning of November 1949. Thus the ground for a union was prepared.

The Union of Societies of Mathematicians and Physicists of the Federal People's Republic of Yugoslavia (USMPY) was founded on the 12th of November 1949, by the 1st Assembly of the Union, held during the 1st Congress of the Union, in Bled. Astronomers were also embraced in the Union from the very beginning, but it was officially registered as the Union of Societies of Mathematicians, Physicists and Astronomers of Yugoslavia (USMPAY) in 1966, although the name was used already in the title of the IVth Congress, in 1965\*.

The aim of the Union was to join the efforts to advance mathematics, physics and astronomy in Yugoslavia. The work was directed not only to scientific research but also to teaching.

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\* Since the full name of the Union changed several times either due to internal or external causes, whenever it was not necessary a simple word Union was used.

## 2. GENERAL STRUCTURE

Initially, the Union had the Executive Committee the president of which was also the president of the Union. It had six vicepresidents (one from each republic), two secretaries, treasurer, and four members. The Administrative board had 30 members.

Each republic and later each autonomous region (Vojvodina and Kosovo, both within Serbia) had its own organization, similar to the Union's structure.

Whenever necessary special committees were formed for particular tasks. Thus for each Congress of the Union another Coordinating Committee was elected.

The Union often initiated activities entrusting their realization to the Executive Committee of a republic interested in their realization. Thus the publication of the journal "Nastava matematike i fizike u srednjoj školi" (Teaching of Mathematics and Physics in High Schools) was handed over to the Society of Mathematicians and Physicists of Serbia, in 1951.

The Union gradually incorporated the National Committees for each of the three sciences. These Committees were the Union's main connection with corresponding international organizations, viz. the International Mathematical Union (IMU), the Balkan Mathematical Union, the International Union for Pure and Applied Physics (IUPAP), the European Physical Society, the Balkan Physical Union and the International Astronomical Union (IAU).

The history of the USMPAY was a replica of the country's history.

Following the general practice in the country, the site of the USMPAY Executive Committee changed every five years, moving each time to the capital of an other republic or autonomous province. The Presidents and the members of the Executive Committees were elected at the Assemblies of the Union, held once every five years (with the exception of the first two Assemblies), during the Congresses, each time at another place, strictly seeing to it that every republic and province is a host in turn. Gradually, a rule was established that between the Congresses the archives of the Union are kept in the site of the previous Congress.

## 3. CHANGES WITHIN REPUBLICS

The Serbian Society of Mathematicians, Physicists and Astronomers split in 1981 into separate societies: the Serbian Society of Mathematicians, the Serbian Society of Physicists and the Serbian Society of Astronomers (Mičić et al., 1998; Milogradov-Turin, 1998). Some republics of Yugoslavia followed such reforms, but in others the previous state was retained.

## 4. CHANGES OUTSIDE REPUBLICS

The first change due to political reasons occurred in 1991 when the Slovenian Societies submitted in a written form their wish not to be within the USMPAY any longer. Similar letters were received in the same year from the Societies in Croatia. The other two republics (Macedonia and Bosnia-Herzegovina) have not sent any letters, but behaved as their membership in the USMPAY ceased.

After a period of reduced activity new changes regarding the professional societies in the Federal Republic of Yugoslavia (FRY) were introduced. The Union of Societies



of Mathematicians of Yugoslavia was founded in 1994, in Beograd, while the Yugoslav Physical Society was founded in 1995, in Petrovac na Moru. Therefore the name of the USMPAY can be treated as valid only to 1994.

## 5. PRESIDENTS

The presidents of the Union were:

1. Professor Dr Pavle Savić, 1949-1954, physicists (physical chemist),
2. Professor Dr Đuro Kurepa, 1954-1960, mathematician,
3. Professor Dr Sreten Šljivić, 1960-1965, physicist,
4. Professor Dr Danilo Blanuša, 1965-1970, mathematician,
5. Professor Dr Blagoj Popov, 1970-1975, mathematician,
6. Professor Dr Dragiša Ivanović, 1975-1980, physicist,
7. Professor Dr Vojin Dajović, 1980-1985, mathematician,
8. Professor Dr Đorđe Bek-Uzarov, 1985-1994, physicist.

## 6. PRESENT STATE OF THE SOCIETIES

The Societies related to the three mentioned sciences have a rather complex organization in the FR Yugoslavia. There exist:

1. The Union of Yugoslav Societies of Mathematicians which has two members: the Society of Mathematicians of Serbia and the Society of Mathematicians and Physicists of Montenegro.

2. The Yugoslav Physical Society which includes the Society of Physicists of Serbia and the Society of Mathematicians and Physicists of Montenegro.

3. The Society of Astronomers of Serbia.

Presently, the Presidents of these Societies are:

1. The President of the Union of the Societies of Mathematicians of Yugoslavia is Professor Dr Vladimir Mičić (1994-),

2. The President of the Yugoslav Physical Society is Professor Dr Božidar Milić (1995-),

3. The President of the Mathematical Society of Serbia is Professor Dr Zoran Kadelburg (1999-),

4. The President of the Society of Physicists of Serbia is Professor Dr Jaroslav Labat (1995-),

5. The President of the Society of Astronomers of Serbia is Professor Dr Jelena Milogradov-Turin (1998-),

6. The President of the Society of Mathematicians and Physicists of Montenegro is Professor Dr Predrag Obradović (1999-).

## 7. CONGRESSES OF THE UNION

The Union summoned eight Congresses, held jointly with the Assemblies:

1. The Ist Congress of the Union of Yugoslav Societies of Mathematicians and Physicists of the FPR Yugoslavia, November 8-12, 1949, Bled,

2. The IInd Congress of the Union of Yugoslav Societies of Mathematicians and Physicists of the FPR Yugoslavia, October 4-9, 1954, Zagreb,

3. The IIIrd Congress of the Union of Yugoslav Societies of Mathematicians and Physicists of Yugoslavia, September 19-24, 1960, Beograd,

4. The IVth Congress of the Union of Societies of Mathematicians, Physicists and Astronomers of Yugoslavia, October 4-9, 1965, Sarajevo,

5. The Vth Congress of the Union of Societies of Mathematicians, Physicists and Astronomers of Yugoslavia, September 14-19, 1970, Ohrid,

6. The VIth Congress of the Union of Yugoslavia Societies of Mathematicians, Physicists and Astronomers of Yugoslavia, August 28 - September 2, 1975, Novi Sad,

7. The VIIth Congress of the Union of Societies of Mathematicians, Physicists and Astronomers of Yugoslavia, October 6-11, 1980, Budva-Bečići,

8. The VIIIth Congress of the Union of Societies of Mathematicians, Physicists and Astronomers of Yugoslavia, September 23-27, 1985, Priština.

The IXth Congress was scheduled for October 1990 in Ljubljana, but it did not take place, in view of political events in the country (see paragraph 4).

Astronomers took part in all of them. They had no scientific reports only at the first Congress. There were only invited lecturers at the first Congress (27 mathematicians and physicists).

Since foreign scientists were guests at most of the Congresses, these meetings had a character of national congresses with the international participation.

## 8. INTERNATIONAL MEETINGS ORGANIZED BY THE USMPAY

Apart from the mentioned Congresses devoted to all three sciences some other meetings related to more than one science were organized as well.

Within the IIIrd Congress of USMPY (Beograd, September 1960) the International Symposium "Coordination of Teaching of Mathematics and Physics" was held.

### 8. 1. MATHEMATICAL MEETINGS

Several international conferences in mathematics were organized under the auspices of the Union. Among them are:

1. The International Symposium on the Differential Equations (Beograd, 1957),

2. The International Symposium on Topology and its Applications (Herceg Novi, 1968; Budva-Bečići, 1972; Beograd, 1977), and with a slightly changed title "Topology and its Applications" (Dubrovnik, 1985; 1990),

3. The Balkan Mathematical Congress (Beograd, 1974),

4. The International Conference on Differential Geometry and its Applications (Dubrovnik, 1988).

The Union of Mathematicians of Yugoslavia organized:

1. Kurepa's Symposium – the International Mathematical Symposium Dedicated to the Memory of Đuro Kurepa (Belgrade, 1996),

2. The IVth Symposium on Mathematical Analysis and its Applications (Aranđelovac, 1997).

### 8. 2. PHYSICAL MEETINGS

Several symposia and conferences in physics were held in relation to the USMPAY or under its auspices. Among them are:



1. The International Conference on the Physics of Ionized Gases (ICPIG) in Beograd: the VIIth ICPIG in 1965 and the XIXth ICPIG in 1989,
2. The XIIIth General Assembly of the IUPAP, which was held in September 1969, in Dubrovnik,
3. The International Conference on the Physics of Electron and Atomic Collisions (ICPEAC), Beograd, 1973,
4. The International Symposium on Nuclear Collisions and Their Microscopic Description (Bled, 1977),
5. The Europhysics Study Conference on the Structure of Lighter Nuclei (Hvar, 1978),
6. The European Study Conference on Atomic and Molecular Physics in Ionized Gases (ESCAMPIG), in Dubrovnik, in 1980,
7. The Adriatic Europhysics Study Conference on the Dynamics of Heavy Ion Collisions (Hvar, 1981),
8. The Adriatic International Conference on Nuclear Physics, Fundamental Problems in Heavy Ion Collisions (Hvar, 1984),
9. The Adriatic International Conference on Nuclear Physics, Frontiers of Heavy-Ion Physics (Dubrovnik, 1987),
10. The International Conference "Classical Dynamics in Atomic and Molecular Physics" (Brioni, 1988),
11. The VIth Adriatic Meeting on Particle Physics, Modern Trends in Particle Physics'89 (Dubrovnik, 1989).
12. The Symposia on the Physics of Ionized Gases (SPIG) starting from the Forth Symposium were international ones (see paragraph 9).

### 8.3. ASTRONOMICAL MEETINGS

The USMPAY was the organizer of the VIth European Regional Astronomy Meeting (ERAM) "Sun and Planetary System", in Dubrovnik, in 1981.

The celebration of the centenary of the Astronomical Observatory in Beograd, in September 1987, was one of the most important gatherings in Yugoslavia within the last half century. It was accompanied by four astronomical scientific meetings (Mitrović et al. 1989):

1. The Colloquium No. 100 of the IAU "Fundamentals of Astrometry", under the auspices of the Commissions No. 8 and No. 24 of the IAU,
2. The International Workshop on Atmospheric Refraction,
3. The Second International Workshop on Catastrophic Disruptions of Small Solar System Bodies,
4. The Second Workshop – Astrophysics in Yugoslavia (more in paragraph 9).

The USMPAY was involved in its organization as well. Firstly, professor Dr Božidar D. Jovanović was coopted in the Organizing Committee of the celebration on behalf of the USMPAY (in September 1986). Secondly, the USMPAY agreed to take under its auspices the organization of the Colloquium No. 100 of the IAU "The Fundamentals of Astrometry" applying officially for a contract for open competition of the corresponding Yugoslav institutions (October 1986).

The official representative of the IAU at the Celebration was academician J. C. Pecker, who delivered his speech at the Opening Ceremony, on the 7th of September 1987.

At the festive gathering on the 9th of September 1987, among many speakers who greeted the participants, was professor Dr Đorđe Bek-Uzarov, the President of the USPMAY. The participants were also welcomed by Dr Božidar D. Jovanović on behalf of the USMPAY. Greetings by telegram were sent by the Executive Committee of the USMPAY, as well.

#### 8. 4. UNCLEAR CASES

There are several important conferences and activities for which clear connections to the Union have not been found up to the moment of submission of this article. The main reason is that they were organized by other institutions, which although incorporating members of the Union, did not mention the Union in the text.

The Conference on Nuclear Electronics, organized by the International Atomic Energy Agency, held in Beograd, in 1961, had local organizers and participants from Yugoslavia.

The Inter-union Symposium on the Solar-Terrestrial Physics, jointly organized by the URSI, the IAU, the IUGG and the COSPAR, was held in Beograd, in 1966. The Chairman of the Programme Committee was J. A. Ratcliffe (URSI). The Chairman of the Organizing Committee and of the Local Arrangements Committee was Dr Ing Dejan Bajić. In the participation form the word ETAN-URSI was stated in the address. Some physicists and astronomers were involved also, including the author of this article.

It has not been cleared whether various Summer Schools in different branches of Physics were under the auspices of the USMPAY.

### 9. YUGOSLAV CONFERENCES

The Congress of Physicists of the FR Yugoslavia is bearing the number of the failed Congress in Ljubljana – nine. It was organized by the Society of Mathematicians and Physicists of Montenegro and the Society of Physicists of Serbia. It is officially called the IXth Congress of the Physicists of Yugoslavia. It was held in Petrovac na Moru, from the 29th to 31st of May 1995. The Assembly joint to this Congress founded the Yugoslav Physical Society.

Following the same reason, the IXth Congress of Mathematicians of Yugoslavia held in Petrovac na Moru was bearing the number of the failed Congress of the USMPAY.

Nineteen Symposia on the Physics of Ionized Gases (SPIG) were organized out of which seventeen were under the auspices of the USMPAY (Beograd, 1962; Zagreb 1964; Niš, 1966; Herceg Novi, 1968; 1970; Miljevac by Split, 1972; Rovinj, 1974; Dubrovnik, 1976, 1978, 1980, 1982; Šibenik, 1984, 1986; Sarajevo, 1988; Dubrovnik, 1990; Beograd, 1993, 1994). The first three were on the level of Yugoslavia. Starting from the IVth Symposium they were international ones. This tradition was continued by the Yugoslav Physical Society: the XVIIIth SPIG was held in Kotor in 1996, while the XIXth SPIG took place on Zlatibor, in 1998.



Thirteen Yugoslav Symposia for Solid State Physics were organized by the corresponding section of the USMPAY (Beograd, 1968; Ohrid, 1970; Opatija, 1972; Portorož, 1974; Sarajevo, 1976; Kruševac, 1978; Ohrid, 1980; Poreč, 1982; Portorož, 1984; Sarajevo, 1986; Donji Milanovac, 1988; Skopje, 1991; Vrnjačka Banja, 1993). Recently, solid state physicists of Yugoslavia changed the name of their symposium into The Symposium for the Physics of the Condensed Matter (SFKM). The first SFKM was held in Kladovo, in 1997.

Eleven Yugoslav Conferences for Nuclear Physics and the Elementary Particle Physics were organized out of which the first nine were under the auspices of the USMPAY (Vogel, 1969; Opatija, 1971, Zlatibor, 1973, Čortanovci, 1974; Portorož, 1976; Dubrovnik, 1979; Herceg Novi, 1981; Portorož, 1985). After the reorganization of the country into the Federative Republic of Yugoslavia the tradition was continued; the next conferences were in Petrovac na Moru, in 1995; Kopaonik, in 1996 and Studenica in 1998.

There have been three Yugoslav Conferences on the Spectral Lines Shape, YCSLS for short, (Krivaja, 1995; Bela Crkva, 1997 and Brankovac, 1999).

Eleven National Conferences of Yugoslav Astronomers have been organized out of which the first nine were under the auspices of the USMPAY (Beograd, 1973; Novi Sad, 1975; Beograd, 1977; Sarajevo, 1979; Budva-Bečići, 1980; Hvar, 1983; Beograd, 1984; Pristina, 1985, and Sarajevo, 1988). After the reorganization of the country the astronomers continued to organize their National Conferences: the Xth was held in Beograd, in 1993 and the XIth in 1996.

Three national workshops (seminars) "Astrophysics in Yugoslavia" were organized (Ljubljana, 1986; Beograd, 1987 and Zagreb, 1989).

Astronomers have been participating in some symposia and conferences of physicists (e. g. SPIG, YCSLS).

## 10. WORK WITH THE YOUNG

The USMPAY organized yearly competitions in mathematics and physics on the level on the Yugoslav Federation. The mathematical competitions of the high school students on the level of the Federation started in 1960. The competitions for elementary schools started in 1970.

On the basis of results achieved in the federal competitions the olympic teams consisting of several high school students were formed. Yugoslav teams obtained excellent results many times. Yugoslavia was one of the very active members in the international mathematical and physical olympic movements.

There were two International Olympiads in mathematics organized in Yugoslavia: the IXth Olympiad (Cetinje, 1967) and the XIXth Olympiad (Beograd, 1977). The XVI International Olympiad in Physics (Portorož, 1985), was also held under the auspices of the USMPAY.

Yugoslavia has regularly taken part in the Balkan Mathematical Competitions, since 1986. Yugoslavia was a host twice: in Split, in 1989; and in Novi Sad, in 1994. Yugoslavia was also a host of the First Junior Balkan Mathematical Olympiad (for students under the age 15.5), held in Beograd, in 1997. The International Summer



Schools for Mathematics in Primošten and Preko were also organized under the auspices of the USMPAY.

The USMPAY initiated the publication of Yugoslav journals for the high and elementary school students: "Matematičko-fizički list", in 1950, and "Matematički list za učenike osnovne škole", in 1962. The publication of these journals were entrusted to the SMP of Croatia and the SMPA of Serbia, respectively.

Astronomers had similar activities but not under the auspices of the USMPAY. There were journals (e.g. *Vasiona* published by the Astronomical Society "Ruder Bošković") which had articles for the young. Competitions in astronomy were carried mainly by the organization "Science to the Young".

## 11. FINAL REMARKS

This text was written in order to mark an unique event – half a century of the Union of Societies of Mathematicians, Physicists and Astronomers of Yugoslavia. It is based on the material available to the author, which is very likely not complete. Events in the country made research on the history of the USMPAY very difficult.

Some texts were already written, mostly by mathematicians (Mičić et al., 1998; Stanković, 1999) and on astronomers side by Milogradov-Turin (1998). Therefore, the author attempted to reconstruct a general picture of the USMPAY, considering only events on the level of the Federation and international connections, without entering deeply into the fields already elaborated. The inclusion of some subjects treated in these papers was unavoidable, since the picture about the USMPAY would be too much deformed otherwise.

Half a century did not pass in vain.

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