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IVAN I. ARTOBOLEVSKI AS THE FIRST IFToMM PRESIDENT

1. Introduction

IFToMM – the International Federation for the Promotion of Mechanism and Machine Science (up to 2000 the International Federation for the Theory of Mechanisms and Machines) was founded in 1969, by people who believed that collaboration among engineers and scientists from various countries would improve the effectiveness of the Science for enhancement of life and society. Memory of their names is aimed at keeping a track of the IFToMM evolution. Today we are with the third generation of IFToMMists, who can be named as those working within the community. History studies can give us a greater awareness of community identity and significance [1-4].

Many authors have attached the problem of outlining the History of MMS at different level of content, in the past as for example Chasles (1837), Reuleaux (1875), and Allievi (1895), and recently as for example De Jonge (1943), Ferguson (1962), Hartenberg and Denavit (1956 and 1964), Hain (1967), Nolle (1974), Crossley (1988), Dimarogonas (1993), Marchis (1994), Angeles (1997), Ceccarelli (1998). Those authors have addressed to mechanism classification as a part of TMM evolution giving it a marginal attention, like for example in (Hartenberg and Denavit 1956), or a certain importance, like for example in (Ceccarelli 2001).

For more than forty years the IFToMM has grown rapidly through the people who have been involved in its activity. One of them is the successful organizer, beginner and founding father, Ivan Ivanovich Artobolevski, the first IFToMM President [5].

2. Short Artobolevski's biography

Ivan Ivanovich Artobolevski (Fig. 1) was born on October 9, 1905, in Moscow, as a son of a faith teacher [6-9]. Soon his father, Ivan Alexievich Artobolevski, was elected MA Professor of Theology and the Head of Divinity Department at the Moscow Agricultural Academy named after K.A. Timiryazev (nowadays). Later, in 1911 he became the Prior of the Peter and Paul church and in 1919 was erected as an Archpriest.

Artobolevski's house was always full of scientists, professors, philosophers, and among them the famous Russian historian Vasily Kluchevsky. The atmosphere of creative work as well as the relation with well-known natural science professors as S. Zernov, N. Kulagin, D. Prianishnikov and et al. couldn't but influence on the interests of young Ivan towards the learning of natural science, machines and technology.

His mother, Zinaida Petrovna Artobolevski, taught music and Russian language to her son. Since then, Ivan Artobolevski managed to keep love to music and deep understanding of it during all his life.

Young Artobolevski passed his first examination in 1915 when he went to gymnasium. Later in 1921, under the influence of his tutor Professor A. Fortunatov, who inculcated in his pupil love for mathematics, he went to the Faculty of Mechanical Engineering at the Moscow Agricultural Academy (MTAA) and successfully graduated from it in 1924.

After the October revolution, in 1918, by reason of the separation of the church from the state (Russia) and the extinction of the Divinity Department, Artobolevski's father was dismissed from his position and forced to accept the post of a parson in a small parochial church. Naturally the family got in poverty and, besides, they had to quit their service apartment. The future scientist had to begin his labour activity combining studies with librarian, laboratory, and land surveyor's assistant work. In 1938, his father was sentenced to death and executed by a firing squad on February 14. Despite this tragic fact, Ivan Ivanovich Artobolevski could become the Soviet academician and top-ranked world scientist.

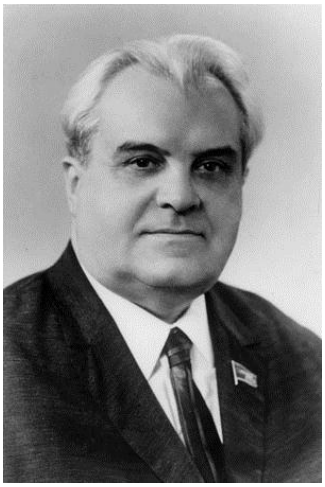


Fig. 1. Ivan Ivanovich Artobolevski (1905-1977)

Nicolai Ivanovich Mertsalov (1866-1948), a well-known scientist in area of TMM, together with academician Vasili Prohorovich Goriachkin (1868-1935), the founder of the new, for that time, science – "Agricultural mechanics", became his first teachers. According to their advice he attended a complete course at Faculty of Physics and Mathematics at Lomonosov Moscow State University (MSU).

The scientist's wife, Olga Nikolaevna Artobolevski, being a pianist and a singer promoted his approach to art personalities. She was also the author of IFToMM's hymn. The most famous Soviet and foreign scientists, musicians, opera singers, artists, painters, writers and sportsmen could be seen with their hospitable family, which often arranged home concerts in their country house as well as in their apartment in Moscow.

In 1939 there was founded the Institute for Machine Science (IMASH RAS) and academician E.A. Chudakov (1890-1953) became the Director of it. Since then and up to his final days Artobolevski worked in the Institute, where he founded and headed a department of "Machine Mechanics and Control" (Fig. 2).

Ivan Artobolevski has written the first in the USSR monograph on spatial mechanisms [10] and contributed much in the area of structure, kinematics, synthesis of mechanisms, and theory of machines balancing. He developed a system of mechanisms classification that became the basis for the whole MMS in the Soviet Union and all over the world.

Since the beginning of the Second World War in 1941 Artobolevski, being a corresponding member of the USSR Academy of Sciences (AS), voluntary joined the army. Fortunately, he sewed only three weeks when according to the order of the higher leadership of the country all the scientists were taken back from the front.

His scientific activity was highly appreciated by the USSR AS: in 1936 a scientific degree of Doctor in Engineering Science was conferred to him; in 1939 he was elected a corresponding member of AS and in 1946, at the age of 40, an academician on Mechanics. Due to his great services in the development of national science and social activity, Artobolevski was awarded the highest title – Gold Star of the Hero of Socialist Labour and the highest reward – the Lenin Order (six times!).

In 1946 he was given by the USSR AS Presidium the P.L. Chebyshev award for his works "Synthesis of mechanisms" (with coauthors) [11], and "Scientific heritage of P.L. Chebyshev" [12].

The academician also gained an enormous recognition abroad. In 1967 the Institute of Mechanical Engineering of Great Britain awarded him James Watt Gold Medal – the highest award in the world given to engineers that in the field of applied mechanics is not less the Nobel Prize. He became the 14th winner of the medal and the first Soviet scientist who has received it [13].

Artobolevski as well carried out much work for the International Organization of Scientific Workers (IOSW) and in 1965 he was elected its vice-president. This organization was founded in 1945 by the great French man, Frederick Jolio Curie, who wished to direct the efforts of the scientists towards the struggle for peace and happiness of all people, against nuclear war and use of other means of mass destruction. In 1959 Artobolevski was awarded by the International Peace Council with the Jolio Curie Silver Anniversary medal.

In 1968 the academician at one time with outstanding French physicist de-Broglie was elected an honorary member of the International Academy of History of Sciences (Paris) as he published his works on TMM history and its outstanding personalities [14-18].

In 1969 the IFToMM was founded, and Artobolevski was unanimously elected its first President. He held the position for two periods (8 years) and then became its Past-President up to his final days. Besides, he was the first chairman of National Committee of the Soviet Union on TMM and the first President of IFToMM National Committee of Russia.

Fig. 2. Artobolevski's portrait in IMASH office, Moscow, courtesy of IMASH

3. List of main Artobolevski's works

Artobolevski's bibliography includes more than 1000 published works. The main are:

- "On Structure of Spatial Mechanisms" (1935) [19],
- "Theory of Spatial Mechanisms" (1937) [20],
- "Theory of Mechanisms and Machines", p.1, 2 (1938) [21],
- "Synthesis of Planer Mechanisms" (1939) [22],
- "Fundamentals of United Mechanisms Classification" (1939) [23],
- "Synthesis of Mechanisms" (1944),
- "Mechanisms", T. 1-4, (1947, 1949, 1951) [24-25],
- "Acoustic Dynamics of Machines" (1969) [26],
- "Mechanisms in Modern Engineering Design", T. 1-4, (1970-1975) [26-29],
- "Successes of the Soviet School on Theory of Machines and Mechanisms" (1977).

His textbooks are: "Theory of Mechanisms and Machines" (1940) [30], "Course on Theory of Mechanisms and Machines" (1945) "Theory of Mechanisms" (1940, 1945, 1952, 1953, 1965 [31], and other editions).

It is necessary to address attention to Artobolevski's works on History of Machine and Mechanism Science. His works are interesting and instructive as dedicated to the scientific legacy

of Ivan P. Kulibin [14], N.I. Mertzalov [15], P.L. Chebyshev [12], N.E. Zhukovski, L.V. S.I. Vavilov [16], I.P. Goriachkin, and Mikhail V. Lomonosov [17]. He always underlined a valuable contribution made by Russian scientists as Chebyshev, Vishnegradski, Petrov, Somov, Maliyshev and others to the formation of a scientific school on machine science and their influence on the development of a world scientific school on TMM.

He carried out a very detailed investigation dedicated to Leonardo da Vinci's legacy [18], and during the last years wrote a fundamental work "Leonid Vladimirovich Assur" [32] in which it was proved that some questions on the structure of mechanisms were worked out by Assur wider and deeper in comparison to the works of Burmester and Grubler.

A great number of Artobolevski's scientific works are translated into foreign languages (mainly in English) and published in other countries.

4. God-given pedagogical talent

Ivan Ivanovich Artobolevski was an excellent teacher. His lectures were always full of the latest information about the achievements in the world science and technology. His scientific activity was inextricably connected with teaching, and knowledge transfer. As a student of Timiryazev Academy he started teaching at Agricultural Machine Chair. He carried out a large-scale organizing, educational and teaching work. In 1929 Ivan Ivanovich was elected a professor and headed a chair of "Technical Mechanics" at Mendeleev University of Chemical Technology of Russia (MUCTR). Later he lectured at Moscow Institute of Chemical Machine Building, Zhukovski Academy, MSU, and Moscow Aviation Institute.

In 1940 for the first time he published a textbook for students, postgraduates and teachers, originally for the mechanic-mathematical faculty of MSU, but soon it became the basis for TMM course for all universities in the USSR, and it gained international recognition. Later the manual was revised and republished many times in Russia and abroad. It became a classical textbook for thousands of students [31]. Artobolevski always helped young scientists. More than 100 of his postgraduates' pupils became Professors, PhD, and Doctors of Sciences.

5. Artobolevski – the First IFToMM President

The activity of many scientists in the area of mechanical engineering and theory of MMS of the USSR and Russia was closely connected with the activity of IFToMM.

5.1. A Brief History of IFToMM, [2]

IFToMM was founded as the International Federation for the Theory of Mechanisms and Machines in Zakopane, Poland, on September 29, 1969, during the Second World Congress on TMM. In 1965, September, four years before, the First International Congress on TMM took place in Bulgaria, on a seaside resort near Varna. There, at final session, on behalf of Bulgarian scientists Professor Mikhail S. Konstantinov proposed to create an International Coordinating Committee on TMM to direct activity of national conferences in the mentioned area and to provide conditions for a foundation of a Federation on TMM in future. To name the new organization an abbreviated form under the first letters of the English words was used – IFToMM [8]. Thus, in frames of the Second Congress on TMM a Constituent General Assembly of IFToMM took place, where the Chairman, Prof. Jan Oderfeld from Poland, officially declared the creation of a new Federation and the Congress series were immediately recognized as the IFToMM World Congress.

From the very beginning the main promoters of the new Federation were Academician Ivan I. Artobolevski (USSR), and Prof. Erskine F.R. Crossley (USA), whose principal aim was to overpass the obstacles of the time of the Cold War, to develop international collaboration in TMM science for the benefit of the world society. The great positive role was played by the scientist from Bulgaria Prof. Mikail S. Konstantinov, who became the first Secretary-General of IFToMM. In his

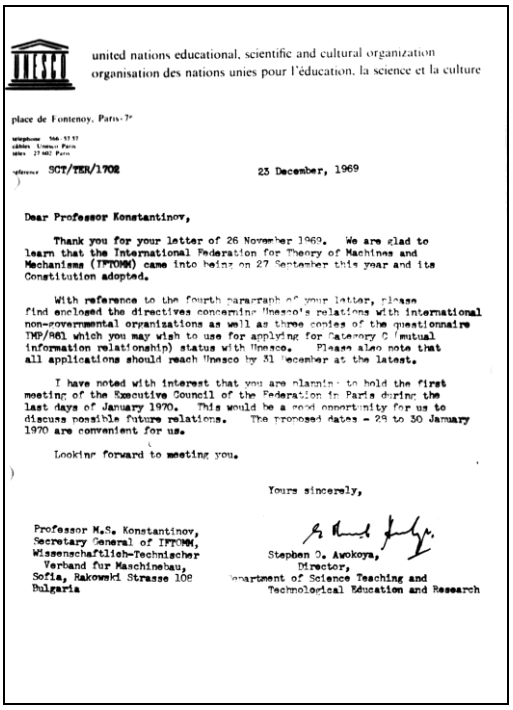
memories Artobolevski wrote that he had a strong friendship with both – Prof. Crossley and Prof. Konstantinov, who were all together one team.

The Federation started as a family of TMM scientists among whom we may identify the IFToMM founding fathers, who signed or contributed in the foundation act with the initial of 13 Member Organizations, in the persons: Academician Ivan Ivanovich Artobolevski (USSR), Prof. Erskine F.R. Crossley (USA), Prof. Mikail S. Konstantinov (Bulgaria), Dr. Werner Thomas (GFR), Prof. B.M. Belgaumkar (India), Prof. Kenneth H. Hunt (Australia), Prof. J. Oderfeld (Poland), Prof. Jack Phillips (Australia), Prof. George Rusanov (Bulgaria), Prof. Wolfgang Rössner (GDR), Prof. Zènò Terplàn (Hungary), Prof. Jammi S. Rao (India), Prof. Giovanni Bianchi (Italy), Prof. Adam Morecki (Poland), Nicolae I. Manolescu (Rumania), Leonard Maunder (UK), Douglas Muster (USA), Ilic Branisky (Yugoslavia). The Foundation Act (document) is kept now in IFToMM Archive.

No doubts, the foundation of IFToMM was the result of an intense activity for stimulating and promoting international collaboration, more than never in the past.

5.2. IFToMM and UNESCO

In November, 1969, after receiving a letter (Fig. 3) from UNESCO, it was agreed the forthcoming meeting of IFToMM Executive Council to be held in Paris. On agenda there was a discussion of relations between the new Federation and UNESCO [5].



united nations educational, scientific and cultural organization
organisation des nations unies pour l'éducation, la science et la culture

place de Fontenoy, Paris-7e

SCT/TER/1702 23 December, 1969

Dear Professor Konstantinov,

Thank you for your letter of 26 November 1969. We are glad to learn that the International Federation for Theory of Machines and Mechanisms (IFTOMM) came into being on 27 September this year and its Constitution adopted.

With reference to the fourth paragraph of your letter, please find enclosed the directives concerning Unesco's relations with international non-governmental organizations as well as three copies of the questionnaire IMP/861 which you may wish to use for applying for Category C (mutual information relationship) status with Unesco. Please also note that all applications should reach Unesco by 31 December at the latest.

I have noted with interest that you are planning to hold the first meeting of the Executive Council of the Federation in Paris during the last days of January 1970. This would be a good opportunity for us to discuss possible future relations. The proposed dates - 29 to 30 January 1970 are convenient for us.

Looking forward to meeting you.

Yours sincerely,

Professor M.S. Konstantinov,
Secretary General of IFTOMM,
Wissenschaftlich-Technischer
Verband fur Maschinebau,
Sofia, Rakowski Strasse 108
Bulgaria

Stephen O. Awokoya,
Director,
Department of Science Teaching and
Technological Education and Research

Fig. 3. A letter from UNESCO, December, 1969, courtesy of IFToMM Archive, Russia

Next year, on January 30, 1970, a delegation of representatives of IFToMM Executive Council visited UNESCO headquarters in Paris, and the negotiations with Dr. Stephen O. Awokoya, Director of Department of Science Teaching and Technological Education and Research, took place. It was that time when Ivan Artobolevski used his French which he had studied in his childhood. Unfortunately, the main problem, concerning the membership and affiliation of non-government organization – IFToMM within UNESCO, was not solved. Still, they agreed to fill three copies of questionnaire IMP/861 which are to be used for applying for Category C (mutual information relationship) status with UNESCO.

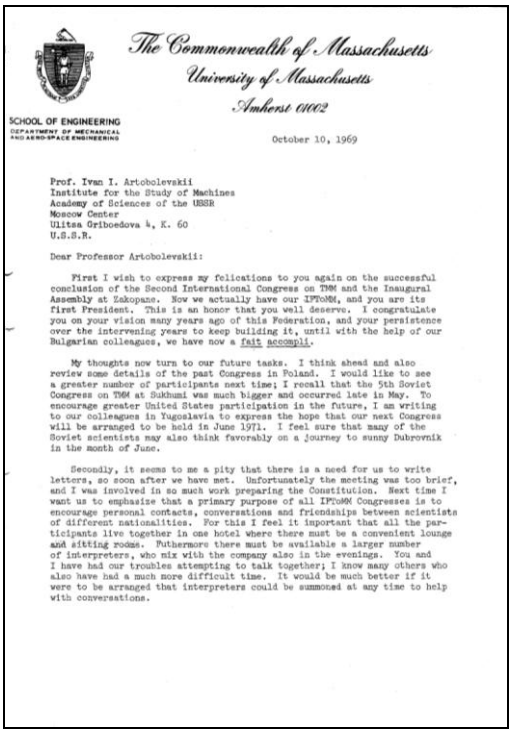
Following the history during the 2nd World Congress on TMM, after Constitution acceptance the Executive Council had been chosen and the Soviet academician Ivan Artobolevski was elected to the presidency. In his letter Erskine Crossley wrote (Fig. 4):

"Now we actually have our IFToMM and you are its first President. This is an honour that you well deserve. I congratulate you on your vision many years ago of this federation, and your persistence over the intervening years to keep building it, until with the help of our Bulgarian colleagues, we have now a fait accompli".

According to the archive documents one of the main tasks of the Federation for TMM was to assist UNESCO to organize courses, lectures, and etc. both in their own countries and in the developing countries with the goal of improving the quality of engineering teachers, doctoral candidates, engineers and students; to assist also in organizing new technical-educational institutions in developing countries and more particular in the recruitment of teaching personal and in the drafting of teaching programs. We still hope that one day IFToMM and UNESCO would start some mutual programs and beneficial cooperation.

5.3. Artobolevski's role in IFToMM

Artobolevski dedicated a lot of his efforts and energy to an aggregation of the specialists of different countries into IFToMM, because he realised the huge value of the international contacts for the development of the world science.



The Commonwealth of Massachusetts
University of Massachusetts
Amherst 01002

SCHOOL OF ENGINEERING
DEPARTMENT OF MECHANICAL AND AERO-SPACE ENGINEERING

October 10, 1969

Prof. Ivan I. Artobolevskii
Institute for the Study of Machines
Academy of Sciences of the USSR
Moscow Center
Ulitsa Griboedova 4, K. 60
U.S.S.R.

Dear Professor Artobolevskii:

First I wish to express my felications to you again on the successful conclusion of the Second International Congress on TMM and the Inaugural Assembly at Zakopane. Now we actually have our IFToMM, and you are its first President. This is an honor that you well deserve. I congratulate you on your vision many years ago of this Federation, and your persistence over the intervening years to keep building it, until with the help of our Bulgarian colleagues, we have now a fait accompli.

My thoughts now turn to our future tasks. I think ahead and also review some details of the past Congress in Poland. I would like to see a greater number of participants next time; I recall that the 5th Soviet Congress on TMM at Sukhumi was much bigger and occurred late in May. To encourage greater United States participation in the future, I am writing to our colleagues in Yugoslavia to express the hope that our next Congress will be arranged to be held in June 1971. I feel sure that many of the Soviet scientists may also think favorably on a journey to sunny Dubrovnik in the month of June.

Secondly, it seems to me a pity that there is a need for us to write letters, so soon after we have met. Unfortunately the meeting was too brief, and I was involved in so much work preparing the Constitution. Next time I want us to emphasize that a primary purpose of all IFToMM Congresses is to encourage personal contacts, conversations and friendships between scientists of different nationalities. For this I feel it important that all the participants live together in one hotel where there must be a convenient lounge and sitting rooms. Futhermore there must be available a larger number of interpreters, who mix with the company also in the evenings. You and I have had our troubles attempting to talk together; I know many others who also have had a much more difficult time. It would be much better if it were to be arranged that interpreters could be summoned at any time to help with conversations.

Fig. 4. An abstract from E. Crossley's letter, October 10, 1969, IFToMM Archive, Russia

He had an extensive correspondence, by that time, with the most famous world scientists and even met some outside or within the Soviet Union. Many of them were acquainted with his manuals, monographs, articles, that were translated in many foreign languages. Ivan I. Artobolevski was one of the first who joined the Coordinating Committee on TMM, participated in its sessions, worked over the Constitution for the future Federation. Without any exaggeration it is possible to say that the last 12 years of his life Ivan Ivanovich paid unrelenting attention to a creation and strengthening of IFToMM.

To expend the connections and to involve new people Artobolevski invited some representatives of IUTAM (International Union on Theoretical and Applied Mechanics), IFAC (International federation on automatic control), ICM (International Centre on Mechanics), ISO/TC (International Organization for Standardization, Technical Committee) and others, at sessions of IFToMM Executive Council.

With enormous energy he advertized a role and value of the Federation and as a result for the period of his presidency the number of IFToMM members has almost doubled.

In IFToMM Executive Council Artobolevski managed to create a spirit of efficiency and friendship. Possessing a diplomatic talent he always tried to speak logically and with conviction, showing finesse. It is not causal that his proposals and decisions were supported by all.

Artobolevski participated in the work of the Third International Congress on TMM and II General Assembly of IFToMM (Dubrovnik, Yugoslavia, 1971) where he was re-elected for the second term. At plenary session he presented a paper "The past, the present and the future of Theory of Machines and Mechanisms", taking an epigraph from the famous scientist-philosopher, John Bernal:

"In a science more than at other institutes of mankind, it is necessary to study the past for understanding of the present and domination over the nature in the future".

It is important that since the beginning, thanks to Artobolevski's chairmanship, the Soviet and Russian scientists actively participated in scientific IFToMM events, and still today many of them are the members of IFToMM Committees and Editorial Boards.

From private memories of I. Artobolevski [6]:

"Having founded the International Federation on TMM (IFToMM), I have completed successfully my mission as a scientist and an organizer of science".

6. IFToMM today

IFToMM was founded in 1969 and in 2011 we were celebrating the 13th World Congress with a participation of near than 50 Member Organizations. It was founded as a Federation but as based on the activity of individuals within a family frame with the aim to facilitate co-operation and exchange of opinions and research results in almost all the fields of TMM. Many individuals have contributed and still contribute to IFToMM success and related activity under the vision coordination of IFToMM Presidents. [2, 5].

The modernity and relevance of IFToMM activity can be recognized in the common frame of views and results on TMM, although in many different technical fields. Thus, the role of IFToMM can be still recognized, like stated in its constitution, as instrumental in stimulating enhancements and giving common frames and views for the evolution of MMS both with technical aims and benefits for the Society. Since the beginning, IFToMM Community has been very active in deepening and applying TMM, but even in enlarging TMM areas of interest. The modernity of MMS has augmented TMM with new vision and means but with many new disciplines, whose the most significant can be recognized in: Robotics; Mechatronics; Computational Kinematics; Computer Graphics; Computer Simulation; CAD/CAM for TMM. Thus, the new Science vision of TMM can be recognized in an interest and integration of other aspects/disciplines for the study and design of modern current mechanical systems.

The IFToMM community has grown continually over time and the TMM has evolved to encompass large engineering science, including even new disciplines. This has brought in the year 2000 to an update of the name of IFToMM as the International Federation for the Promotion of Mechanism and Machine Science and a change of the name of TMM to MMS (Mechanism and Machine Science) in order to emphasize the modernity and broader mission of the IFToMM community.

The IFToMM activity has grown in many aspects, as for example concerning the membership (from the beginners 13 to the current 48 members), conference events (beside the MMS World Congress, with many other Conferences, even on specific topics, at national and international levels), and Technical Committees working on specific discipline areas (currently 13).

The IFToMM community evolved in character from that of a family of a few beginners and founders into a scientific worldwide community through the following generations:

- 1950's-79' First generation: founding fathers and their friendly colleagues up to the 4th IFToMM World Congress in Newcastle-upon-Tyne in 1975, with Prof. Maunder as Congress Chair;
- 1980-95 Second Generation: students and people educated by founding fathers and their friendly colleagues; up to the 9th World Congress in Milan in 1995 with Professor Rovetta as Congress Chair;
- 1996-today Third Generation: educated people in the frame of IFToMM and within IFToMM activity with 48 national organizations as IFToMM members.

More information on IFToMM is available in the Proceedings of the Second International Symposium on History of Machines and Mechanisms HMM2004 that has been published by Kluwer [33], and on website: http://www.iftomm.org.

7. Modern view on Artobolevski contribution

Ivan I. Artobolevski wrote a great four-volume work "Mechanisms" [24-25] after having worked on it for 10 years. The first edition, which was published in 1947-1952, contained a description of about 4,000 mechanisms applied by modern science, as catalogue for designing machines.

In 1808 "Course of Construction of Machines" ('Essai sur la composition des machines'), one of the first history textbooks in engineering and MMS written by Lanz and Betancourt [33-35] was published. It has a table where the authors included all known mechanisms at the end of the XVIII – the beginnings of XIX. For one and a half century the quantity of mechanisms has increased almost in 30 times! At the end of the 60-s, Artobolevski started to work on a new edition of the catalogue. Its first two volumes named "Mechanisms in Modern Engineering Design", were published in 1970 and 1971, contained 2,228 lever mechanisms, and in the second volume there appeared a description of 123 mechanisms made by Artobolevski himself: for example, a link-lever ellipsograph, the mechanism for plotting and rounding of ellipses and a hyperboloid, a link-lever hyper-bolograph.

Classification system of mechanisms proposed by him became a basis for the development of MMS. Together with his followers N. Levitski and S. Cherkudinov Artobolevski developed a fundamental theory of planar mechanisms synthesis [36].

As time passed, a number of problems appeared which earlier didn't ever enter TMM, like, for example: vibrating, vibrating-percussive systems, the theory of machines with variable structure and parameters, account of elasticity of parts and backlashes in kinematic pairs, and the theory of systems of automatic machines. These problems are of current interest. They have not only scientific and technical implication, but also social values connected with studying of complex system "man-machine-environment [39].

Artobolevski was never a scientist of one idea. He took great interest in everything new and constantly put new tasks before pupils and colleagues and actively developed new sections of the "Theory of Machines", such as acoustic dynamics of machines; theory of walking machines; theory of automatic systems; of multiple parameter and multicriterion synthesis of machines. Thanks to Artobolevski there was a rehabilitation of a word "Robot" after a very long-term prohibition of cybernetics and robotics in the USSR.

During his direct participation in the Institute of Surgery the laboratory of medical cybernetics was created, successfully solving problems of the diagnosis of various diseases. Together with A. E. Kobrinski [37-38], he gave a lecture "Some problems on construction of systems known as robots". He was the first to show the huge value of these machines in the future not only from the scientific and technical point of view, but also from the social and humanistic point of view. Thus, one of the first functioning biomechanical artificial arms appeared in the USSR.

Academician Artobolevski stressed in his lectures and reports that mechanical engineering is one of the most fundamental modern sciences, and Russian researchers continue to take efforts for development of this science.

During the last years Artobolevski wrote one of his greatest works: “Successes of the Soviet school on Theory of machines and mechanisms”, in which he summed up activity of all Soviet schools on TMM, actually created by him. His scientific ideas and the published works help acceleration of scientific and technical progress.

In 1977 the news about the death of academician Ivan Ivanovich Artobolevski quickly spread all over the world. Many telegrams and letters from different plants, research institutes, universities, well-known scientists of the Soviet Union and foreign countries presented condolences. Such largest newspapers as «New York Times», "Times", a number of magazines printed articles in memory of the scientist and his contribution to TMM Science.

No doubts, the heritage of Ivan I. Artobolevski is a source of new ideas for many generations of engineers nowadays and in future. Ivan Ivanovich always dreamed to design machines, facilitating people’s life and doing their work more intellectual. He devoted his scientific life for prosperity of human beings.

In 2005 a scientific conference dedicated to the centenary of Ivan I. Artobolevski was carried out in IMASH RAS. IFToMM President Professor K. Waldron and Secretary-General Prof. Marco Ceccarelli took part in the activity of this conference [4, 5, 40]. All the participants spoke with deep satisfaction of the great contribution of the scientist and rhapsodized on his merits. The same year there was published a book “Scientific heritage. Ivan Ivanovich Artobolevski. Life and Science” written by his niece, and based on the real scientist’s dairy [6].

8. Conclusions

Artobolevski is considered to be one of the greatest scientists on TMM (MMS now). He carried out a large-scale organizing, educational and teaching work. His textbooks are republished many times in Russia and other countries and became classical. His name is forever connected with IFToMM and we, its third generation, appreciate greatly his efforts and activity as its first President. In his memories academician wrote that he was very proud to have a life of a scientist, but also as an organizer of a science.

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