

## **In the beginning, ...**

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Today, I would like to tell you the story about the beginning of the International Federation for the Theory of Machines and Mechanisms (IFTToMM). IFTToMM did not spring – fully clothed – from the 1969 Assembly at Zakopane, as many believe. The real beginning – the spark of conception, if you will – occurred in Sukhumi, Soviet Georgia, in October 1967.

### **Sukhumi, Soviet Georgia**

In the Soviet Union, Ivan Ivanovich Artobolevskii was an engineering professor and an Academician, and also a member of the Supreme Soviet (that is, the governing body of the whole Soviet Union). In 1967, he organized a seminar meeting for all Soviet engineering professors specializing in Mechanisms, to be held at Sukhumi, that October. A small number of professors, also specializing in Mechanisms, from outside of the Soviet Union, were also invited. Professors Meyer zur Capellen (Aachen TH, West Germany), George Sandor (Yale University, USA), den Hartog (M.I.T, USA), and I all received invitations. I decided to go and den Hartog sent Professor Adams in his place.

My wife and I arrived in Sukhumi on the eastern shore of the Black Sea, on the first day of that conference. I hurried in to attend the opening session, but every speech was in Russian, which I do not understand at all. By lunchtime, I was disappointed, but went to rejoin my wife and have lunch at our hotel. Several small tables in the dining room there

carried small national flags; I immediately saw a West German flag and our USA “stars and stripes,” so it was clear they wanted to govern where we would sit. Probably, I suspect, because there was a microphone hidden under each table, connected through to a translator, out of sight, in the next room. This is what it was like in the Cold War days. At the West German table sat Professor and Mrs. Meyer zur Capellen, good friends of ours from Aachen. We greeted them and sat down with them, but at once, a waitress came over and directed us to go to the US table. Instead, I went over, grabbed the American flag there, and carried it back to the German table. There was a quick conversation between waitresses, but no complaint; I knew I had won with the two flags, and I knew that the hidden translators had acquiesced. Both my wife and I spoke German, so all was well.

After our meal, a messenger came to invite us to meet our chairman, Professor Academician Artobolevskii, who quickly told me of his desire to create a worldwide society-association for research into the Theory of Machines and Mechanisms (TMM). I told him I was already appointed chairman of the next ASME conference on Mechanisms to be held in October 1968, and that one reason I had come to Sukhumi was to invite Soviet professors to attend. He proposed that we jointly form a worldwide federation and we could work together. I agreed enthusiastically. Our translator in all this conversation was Professor Aron Kobrinski, who spoke fluent English.

Having jointly agreed on a goal, Academician Artobolevskii invited my wife and me to accompany him and his wife to the state opera the next night. We did, and it was a grand performance of Don Quixote. An old gentleman, apparently president of the Opera

House, came over during the intermission and took us on a tour of the museum, full of many treasures like the slippers of a renowned ballet dancer.

The next day we continued our discussions, with Professor Kobrinski again translating. Artobolevskii stated his belief that this new world-wide society would need a governing constitution, and asked me if I would write this. By chance, at home, I had just finished writing a zoning ordinance for a new subdivision in our village, so with confidence I offered to undertake this legal task. We went on to discuss staff officers, especially the need for a secretary-general for correspondence and the collection of dues, also a treasurer to hold the dues and keep a budget.

Artobolevskii then expressed his hope for the two of us to meet in USA, and he proposed his plan for an international organization with joint meetings, though he was having difficulty deciding on an initial title. “How could you pronounce “IFTMM?”” he asked me. I immediately suggested including an “o” and pronouncing it “IFTtoMM.” Artobolevskii accepted my idea and went on to suggest that four or five Russians could attend the next ASME meeting in Atlanta, which delighted me. (This never came to pass, because I did not know the US State Department procedures, and the US State Department would not approve the issuance of so many visas to Soviet citizens. We were able to have Bessonov come, which did much to deepen our friendly relationship.)

On the fourth day of the all-Soviet conference, Artobolevskii threw an evening party at his dacha for the heads of each national delegation, with their wives, on a promontory of land in front of his villa. It was a most beautiful spot: the view was out over the Black Sea at sundown. There was a very long table, set for delegates from Hungary, Romania, Bulgaria, Georgia and so on, each man with his wife, and also for Artobolevskii’s staff

helpers such as Professors Kobrinski, Bessonov, and (the Romanian) Bogdan. Then also, there were several Polish professors and their wives, and finally myself with my wife, May. Each place was laid with two cut-crystal wine glasses and a short vodka glass, beside small bottles of red wine, making the table sparkle in the setting sun. It was really splendid. A plentiful staff was busy serving everyone with fish or salad plus one of several small roast piglets. Professor Kobrinski was again sitting next to me, so that I had no trouble following the series of toasts. My wife, sitting beside me, had Professor Bessonov, who also spoke good English, on her other side.

Artobolevskii himself was the “tamidan” – the chief proposer of toasts. We all began to call him Ivan Ivanovich. I discovered the smaller wine glasses were always full of vodka or brandy. The whole Polish contingent called for a toast to Poland, then another to all the women of Poland. I noted that Artobolevskii was edging nearer to me, so I knew my turn would be next to make a toast; however, it was he that proposed a toast to the U.S. President. Then the game changed: Ivan Ivanovich came forward with two hollowed out ram’s horns to replace the glasses – each could hold a whole bottle of wine. Furthermore, neither horn could be set down, for they would roll over and spill their contents. Artobolevskii kept proposing some other toast. Normally I drink nothing, but this was a friendly competition, and a way for us all to become closer.

The actual founding of the federation would be achieved at a conference in 1969 at a ski resort in Zakopane in the mountains of south Poland. A Polish organizing committee under Professor Jan Oderfeld of Warsaw Polytechnic was already on the job. We however would also need a subcommittee to approve the proposed constitution. This would take place at Varna, a seaside resort in Bulgaria, several months ahead of the

major conference at Zakopane, under the leadership of the proposed secretary-general, Professor Konstantinov, of Sofia. It was easy for me to agree to all this, but I had a big task! I had only months to compose an acceptable constitution.

### **Varna, Bulgaria**

During the following months, I was busy writing a draft constitution. The U.S. Academy of Sciences in Washington, USA was most helpful in providing me examples from similar organizations, so I had good materials to work from. In addition, on the issue of fees, there would need to be a ladder of dues for different sizes of nation, the bigger nations paying more. Much of this plan came from the meetings of a committee of Soviet countries that had been planned earlier.

For the meeting at Varna, Bulgaria, held July 2-4, 1969, delegates from additional countries had been added. We now had delegates from Sweden, Holland, and France. On the first day, the draft constitution I had created was presented to the delegates. However, this meeting was not without some drama, for, at this point, the Russians proposed their own constitution. With only one more day to get approval, the question was: what to do? So, after supper, Konstantinov and I sat down to rewrite my draft constitution to accommodate the unexpected Russian proposal. We worked until 3 a.m. the next morning to reach an acceptable version. Then Konstantinov woke up his secretary, who retyped the whole document and made copies for all the delegates – all in time for the 10 a.m. session. This version of the proposed constitution was finally approved, as well as the list of proposed officers. Off to Zakopane!

## **Zakopane, Poland**

This very large assembly was very well run by the Polish sub-committee, lead by Professor Jan Oderfeld of the Warsaw Polytechnic Institute. The countries represented had continued to expand, with new delegates from Japan and Canada, for example. At this assembly, the delegates approved the proposed constitution, as written by Professor Crossley, and the proposed slate of officers was elected to four-year terms of office as follows:

President – Artobolevskii (Soviet Union)

Vice President – Crossley (USA)

Secretary General – Konstantinov (Bulgaria)

Thus was IFToMM born!

August 12, 2009

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