

HISTORY OF ‘DYNAMICS OF MACHINES’ CONFERENCES

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This article presents an overview on series of Conferences and Colloquia on Dynamics of Machines organized in the first place by the Institute of Thermomechanics of Academy of Sciences of Czech Republic. This overview includes scientific meetings from the first Conference held in Liblice Castle in 1958 up to the last Colloquium in 2009. It is an extended paper presented in 2007 and accompanied by the exhibition of Proceedings organized in the frame of Colloquium ‘Dynamics of Machines 2007’.

Keywords: history of conferences and colloquia on Dynamics of Machines

1. Introduction

The story of conferences originates before more than half a century. On the beginning, there was the 3rd Conference of Designers [1], which was organized by Institute of Thermomechanics ASCR (the name of Institute at that time was Institute for Machines Research – Ústav pro výzkum strojů ČSAV) in the castle Liblice at Melník in 1957. Dr. Půst was charged by its organization and by publishing of proceedings (edition NCSAV 1959). Scientific editors were prof. Josef Šrejtr (statics, kinematics and dynamics of bodies) and prof. Jaroslav Němec (elasticity and strengths of materials). Topics of conference was very wide, it covered the entire field of mechanics of solids and also the spectrum of participants (approx. 100) was very wide – they were from industry, high schools, research intitutes, etc. It was a successful conference, but due to a very wide scientific and technical subject matter the discussions cannot be sufficiently deep.

2. Dynamics of Machines Conferences

In the conclusions of this conference, it was therefore recommended to split into two more specialized conferences: on dynamics of machines and on experimental strength analysis. Institute for Machines Research – ČSAV was charged with organizing the first Conference on Dynamics of Machines [2] in November 1958. Unfortunately no proceedings were edited from this conference – the publishing of proceedings at that time was not so easy as fifty years later. The common reproduction apparatuses were not at disposal for civil purposes and when they exist, they were very strictly checked. Publication of proceedings was possible by using classical hand block printing, text and equations were transcribed from manuscripts, figures were over-drowned. The book of proceedings was published two years after the Conference of Designers, and one year after the first Conference on Dynamics of Machines. However from further point of view it was favourable time for participants, no conference fees exist, all expenses on Conference were paid by Academy of Sciences.

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At that time all conferences at their closing sessions formulated resolutions, which were distributed to Presidium of Academy of Sciences, to Government, to selected ministry and to some Universities.

Slovak Academy of Sciences had much better conditions for publishing and therefore the proceedings of IInd Conference on Dynamics of Machines [3] organized by Institute of Machines and Automation SAS (now Institute of Materials and Machines Mechanics, SAS, Bratislava) in the castle Smolenice in November 1961 was published also till in two years in 1963, but in a form of a very nice book.

Next IIIrd Conference [4] was organized by IT CSAV in Liblice in year 1963, but the Proceedings were edited again in Bratislava NSAS [3] as a book edition in 1966.

The organizing structure of Conferences on Dynamics of Machines changed at that time, the series of Czechoslovak Conferences modified into Czechoslovak-Polish Conference, as the IVth Conference was held in Krakow in 1965, [5].

Following nine Conferences were realized in three cycles with rotating of Academies of Sciences: Czech (Vth, VIIIth, XIth), Slovak (VIth, IXth, XIIth) and Polish (VIIth, Xth, XIIIth), see [6–14]. Next series began again by the XIVth Conference of Institute of Thermomechanics in Liblice at Melnik in 1983 [15], but then the conference cycle was enlarged by the connection of Academy of Sciences of GDR (Institute for Mechanics, Berlin), which held the XVth Conference in Frankfurt/Oder in 1985 [16].

Due to the better conditions with printing apparatuses, the proceedings of the last ten Conferences could be edited at the time of sessions. Number of participants was 100–200 and proceedings with up to 1000 pages were sometimes published in three volumes.

The series of Conferences on Dynamics of Machines, which developed during three decades of 20th century into well known international scientific and technical meetings ended by the XVIth Conference organized by IMMM SAS in Stupava Slovak in 1989 [17]. The political changes and corresponding variations in the Academies of Sciences of Czechoslovakia, Poland, GDR had great influence also on international cooperation and this Conference series was interrupted for the next years

3. Colloquia Dynamics of Machines

Series of international Conferences on Dynamics of Machines was interrupted, but the research in the field of machine dynamics continued without any interruption. Therefore Ing. Ivan Dobiáš, DrSc., FEng (†), director of Institute of Thermomechanics had founded further series of scientific meetings by organizing a new National Colloquium with international participation 'Dynamics of Machines 1994' held in April 1994 [18]. These Colloquia are held in the building of Institute every year usually in February with the similar topics as previous Conferences but with extension on the new trends – biomechanics, mechatronics, etc. Number of participants is about 80 together with 4–8 foreigners, proceedings are always printed and selected papers are in extended form published in the journal of Engineering Mechanics.

In years 1994–2004 was chairman of Colloquia and Chief-editor of Proceedings Dr. Dobiáš, then he delivered these functions to Ing. Luděk Pešek, CSc., who controlled these Colloquia and Proceedings up to these days. The series of Colloquia 'Dynamics of Machines' successfully continues up to present time [18–32] and includes now 16 valuable scientific meetings with 16 editions of Proceedings.

4. Conclusion

Presented over-view of 32 scientific Conferences and Colloquia together with 32 published Proceedings containing more than one thousand papers summarizes a very great contribution to the theory and practice of machine research and design and through this also to the development of Czech mechanical engineering. The positive contributions of very active discussions and exchanges of experiences on these meetings were also very valuable.

It can be expected that the next Dynamics of Machines Colloquia will have again high scientific level and will bring a lot of new contributions for mechanical sciences and technology.

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