MINUTES
OF THE
IFTOMM ROTOR-DYNAMICS COMMITTEE MEETING
SEPTEMBER 26, 2006 – VIENNA, AUSTRIA

Attendees:

Bachschmid, Nicolo  Politecnico di Milano
Cavalca, Katia Lucchesi  UNICAMP – Universidade Estadual de Campinas
Diaz, Sergio E.  Universidad Simon Bolivar
Dufour, Régis  INSA de Lyon
Ecker, Horst (new Secretary)  Vienna University of Technology
El-Shafei, Aly  Cairo University
Ewins, David  Imperial College of Science, London
Forrai, Laszlo  University of Miskolc, Hungary
Garvey, Seamus  University of Nottingham
Hahn, Eric  The University of New South Wales
Irretier, Horst  University of Kassel
Iwatsubo, Takuzo  Kansai University
Kim, Chang-Ho  KIST-Europe
Lee, Chong-Won  KAIST
Larsonneur, René  MECOS Traxler AG
Malenovsky, Eduard  Brno University of Technology
Nordmann, Rainer (new Chairman)  Darmstadt University of Technology
Pennacchi, Paolo  Politecnico di Milano
Pugnet, Jean-Marc  Thermody
Randall, Robert  The University of New South Wales
Rao, J. S.  Altair Engineering Bangalore
Rieger, Neville (outgoing Chairman)  STI Technologies, Inc.
Smalley, Tony (outgoing Secretary)  Tony Smalley Consulting, LLC
Springer, Helmut  Vienna University of Technology
Tanaka, Masato  National Institution of Academic Degrees & University Evaluation
Weber, Hans Ingo  PUC-Rio
Wen, Bangchun  Northeastern University
Wettergren, Hakan L.  Mathcore Engineering AB
Zapomel, Jaroslav  VSB – Technical University of Ostrava
Zhang, Wen  Fudan University

Solomin, Oleg  Ovel State Technical University
Tondl, Aleš  Prague, Czech Republic
Apologies for absence noted from:

Childs, Dara  
Preciado Delgado, Eduardo  
White, Maurice  
Myllerup, Claus  

Texas A&M University  
Instituto De Investigaciones Electricas  
Norwegian University of Science & Technology, NTNU  
Odegaard & Danneskiold-Samsoe A/S

AGENDA ITEM 1

The Rotor-Dynamics Committee meeting was called to order by outgoing Chairman Neville Rieger at 6:00 p.m., Tuesday, September 26, 2006. The meeting agenda is attached (and these minutes follow the agenda line items). Attendance sheets and address sheets were distributed, together with copies of the minutes of the preceding meeting.

Outgoing Chairman N. Rieger introduced the new Chairman Rainer Nordmann and thanked TC Secretary Tony Smalley for the excellent cooperation during his term. He then handed over session control to the new Chairman.

AGENDA ITEM 2

No new items proposed and added to the agenda as distributed.

AGENDA ITEM 3

Chairman Rainer Nordmann reported on the resignation of outgoing Chairman Neville Rieger, which became effective by the end of year 2005 (Dec. 31, 2005). Qualified candidates were nominated by TC Committee members until January 2006 and by absentee vote, conducted by Tony Smalley, the new Chairman Rainer Nordmann was elected in February 2006. This election was confirmed by IFToMM EC. In a meeting of Neville Rieger and Rainer Nordmann in July 2006 it was agreed on a transfer of chairman duties at the TC member meeting in Vienna on the occasion of the 7th IFToMM Rotordynamics Conference.

Since TC Secretary Tony Smalley also wanted to resign, the election of a successor was put as item 8 on the agenda of this meeting.

The Chairman thanked Neville Rieger for 8 successful years of leadership (1998-2006), for the well prepared and guided meetings with a good atmosphere, for the stimulation of fruitful discussions and for well balanced decisions. Among the various new ideas introduced by Neville Rieger he pointed out the initiative for creating the J.W. Lund Award. Chairman Rainer Nordmann also thanked Tony Smalley for his eight years of serving as the TC secretary and expressed his hope that both outgoing officials will continue their membership for the U.S. in the Rotordynamics TC.

To remember the successful chairmanship of N. Rieger, and former Chairman J.S. Rao as well, it was proposed to invest these honorable gentlemen as “Emeritus Chairman” of this committee.
AGENDA ITEM 4

The minutes of the previous meeting in Swansea, UK were summarized by the outgoing Secretary Tony Smalley. A motion to accept the minutes was proposed and seconded. The motion passed unanimously.

Since the term of the previous Chairman Neville Rieger has ended and the new Chairman Rainer Nordmann will propose a new Committee Secretary, Tony Smalley makes a motion for Horst Ecker to act as the recording secretary from now on until the new Secretary is elected. The motion passed unanimously. H. Ecker accepted this nomination.

AGENDA ITEM 5

There was no business arising from the minutes of the Swansea meeting.

AGENDA ITEM 6

Chairman Rainer Nordmann reported on the IFToMM Executive Council meeting in Warsaw, June 20, 2006. At this meeting R. Nordmann asked for support for young delegates at the 7th IFToMM Rotordynamics Conference in Vienna. Later on the support was granted by IFToMM and four young delegates were supported via the Local Organizing Committee of the Vienna Conference. Rainer Nordmann also reported at the Warsaw meeting on the preparations for the Vienna Rotordynamics Conference in September of this year. The Rotor-Dynamics Committee in general and the Vienna Organizing Committee in particular was commended by the Executive Council for its vigor and activity, which is appreciated.

AGENDA ITEM 7

T. Smalley reported on the resignation of the former TC members G. Schweitzer, Switzerland and J.M. Pugnet, France. The Chairman expressed his appreciation for the dedicated service of these members.

A discussion followed, initiated by the Chairman, on criteria for the election of new members. There is common consent on four criteria to be met by new members: the home country of the candidate should be a member state, the country should recommend the candidate, it should be a qualified person in rotor dynamics and there must be an approval by the IFToMM Executive Committee.

Chong-Won Lee introduced Chang-Ho Kim, South Korea as candidate for becoming a member of the committee. A motion for Dr. Chang-Ho Kim as a new voting member was made and supported by C.W. Lee. In the following discussion, the motion was voted on and passed unanimously.
Chairman Rainer Nordmann introduced Dr. René Larsonneur, Switzerland as candidate for becoming a member of the committee and reported on the support from resigned member Gerhard Schweitzer. A motion for René Larsonneur as a new voting member was made and in the following brief discussion, the motion was voted on and passed unanimously.

Régis Dufour introduced Dr. Alain Gelin, France as candidate for becoming a member of the committee. A motion for Alain Gelin as a new voting member was made and supported by Régis Dufour. In the following brief discussion, the motion was voted on and passed unanimously.

Chairman Rainer Nordmann introduced Dr. Horst Ecker, Austria as candidate for becoming a member of the committee. Helmut Springer and Rainer Nordmann supported the nomination. A motion for Horst Ecker as a new voting member was made and in the following brief discussion, the motion was voted on and passed unanimously.

The Chairman will contact the IFToMM EC Secretary to get approval for the new four members by the Executive Council.

Chairman Rainer Nordmann and David Ewins recommended the nomination of Izhak Bucher, for becoming a member of the TC Rotordynamics for Israel. A discussion was started and the decision was adjourned to the next meeting for providing the documentation for a nomination (CV). A similar procedure was suggested for the nomination of Dr. Julio Gómez-Mancilla as a second representative for Mexico.

The TC members were encouraged to make proposals and suggestions for the nomination of additional members.

AGENDA ITEM 8

Chairman Rainer Nordmann outlined that a new TC secretary needs to be elected, since T. Smalley has expressed his wish to resign after this meeting. The Chairman reported on his search activities for a new secretary and, as the result, proposed Horst Ecker to be appointed as TC secretary. There were several motions for this proposal and all voting members were in favor. Horst Ecker was asked and he accepted the nomination. The Chairman will contact the IFToMM EC Secretary to get approval for the new TC Secretary by the Executive Council.

AGENDA ITEM 9

Helmut Springer, Chairman of the ongoing IFToMM-Conference on Rotor Dynamics reported on the conference and presented facts and figures on the successful organization of the conference. There were about 200 participants from 29 different countries. The paper selection process started out from 240 abstracts submitted to the conference organizers. From these abstracts 160 were accepted and 150 draft papers received for peer review. Finally, 128 full papers were accepted, and three distinguished Professors (K.C. Hall, D. Ewins and C.-W. Lee)
were invited for keynote lectures. The scientific program comprised 128 plenary lectures, each of 30 minutes length (including discussion) and 3 keynote lectures of 45 minutes length.

Support from IFToMM was received in the amount of Euro 1900.- and was used to support four young participants of the conference. In addition a total of Euro 2840.- was raised by the Local Organizing Committee and used for travel support and fee reduction of indigent participants.

A book of abstracts was printed, including nearly 300 pages. Since there were too many scientific papers for printed conference proceedings, a CD-ROM proceeding was produced and registered with an ISBN-number. The CD-ROM proceeding contains about 137 MB of data and features comprehensive search functions across the entire database. A short demonstration of the various features of the CD-ROM proceedings was given by Conference Co-Chair Horst Ecker.

Chairman R. Nordmann thanked Prof. Springer and his team for the excellent organization and management of this Vienna conference.

AGENDA ITEM 10

Conference Chairman Helmut Springer reported and explained the selection process for the best paper to be bestowed the J.W. Lund award at the ongoing conference. In a multi-step procedure, which did involve the TC members as well as personnel from the hosting institution the following paper was selected as the candidate for the J.W. Lund award: “Detuning of Pelton Runners”, authored by J. Schmied, T. Weiss and R. Angehrn.

Additionally, four outstanding contributions were selected and proposed for being honoured and to receive monetary prices:
“Robust model based identification of faults in rotor dynamics using M-estimators”
authored by P. Pennacchi, A. Vania, N. Bachchmid.

“Stabilization of a Rubbing Rotor using a Robust Feedback Control”
authored by H. Ulbrich, L. Ginzinger

“Wavelet Based Adaptation of H-infinity Control in Flexible Rotor/Magnetic Bearing Systems”
authored by P.S. Keogh, M.N. Sahinkaya, C.R. Burrows, S. Prabhakar,

“Effect of Angular Spring and Angular Damping of Oil Film on the Stability Characteristics of Tilting-Pad Journal Bearings”
authored by H. Taura, M. Tanaka

Chairman Rainer Nordmann suggested to accept the evaluation and all voting members were in favour. It was announced by the Conference Chairman that the prices will be handed over to the winners during the closing ceremony of the conference.

AGENDA ITEM 11
Nicolo Bachschmid reported on the possibility to publish selected papers of the conference in the Journal Mechanical Systems and Signal Processing (MSSP). Helmut Springer and David Ewins supported this idea and encouraged Nicolo Bachschmid to become active in this matter.

**AGENDA ITEM 12**

Chon-Won Lee reported on the first steps in preparing the next (8th) Conference on Rotordynamics to be held from September 12 to 15, 2010 in Seoul/Korea. A video presentation showed the location, the conference site and the facilities. The preliminary announcement and Call for Papers was presented and a copy is attached to the minutes.

**AGENDA ITEM 13**

David Ewins reported on the next IMECHE conference in 2008 in Exeter/UK. The 9th International Conference on Vibrations in Rotating Machinery will be a 3 day Conference, from 09 September to 11 September 2008.

Its primary focus is on the latest research and case studies of vibration in rotating machines and its influence on their commercial viability, life, reliability and environmental impact. The 9th conference will be addressing four key areas: electric machines, smart machines and diagnostics, micro machines, damping treatments.

**AGENDA ITEM 14**

A discussion was started on the location for the 9th IFToMM Conference in 2014. It was debated whether the sequence of the previous years (Europe – not Europe – Europe …) should be followed and that after Seoul/Korea a location in Europe should be seeked for, or the conference should be held in America. J.S. Rao and A. El-Shafei expressed some interest in organizing the conference. The suggestion by Tony Smalley was widely accepted that groups who wish to organize this conference should make proposals at the IMECHE conference in 2008 in Exceter and the final decision will be made 2010 in Seoul.

**AGENDA ITEM 15**

N. Bachschmid reported on the activities of the subcommittee on Diagnostics. He proposed a conference to be held in 2009 dedicated to “Diagnostics in Rotor Dynamics”. In the following discussion some members did foresee difficulties to attract enough participants in a “crowded market” of conferences. After discussing pros and cons there was no clear result of the discussion, since only a few members would probably participate in such a conference. It was basically left to N. Bachschmid’s discretion whether he should proceed with this idea or not.

Seamus Garvey reported on activities concerning outreach and membership. It was debated whether he reported on only a small degree of progress since the Swansea meeting. He had examined the contributions to the Vienna conference carefully and had noted a number of conspicuous absences of paper contributions from countries which could reasonably be expected
to have made some contribution. This assessment was based on a combination of the size of the country, its general level of academic activity, its level of usage of rotating machines and finally its level of production of rotating machines.

S. Garvey proposed to the Chairman that it would be beneficial to try to engage representatives from all of these countries actively in the running of the conference. He noted a personal view that it may be appropriate to have two different levels of involvement in the IFToMM Rotordynamics group: one being full membership of the technical committee and a second one being perhaps a “country representative” for the group. There was a short discussion on this point and at the suggestion of Emeritus Chairman, N. Rieger, it was decided that a detailed discussion would be held during the IFToMM World Congress meeting in June 2007 with the committee members present.

S. Garvey proposed that in the interim period, he would combine the list of countries which he had identified with the larger list that Chairman R. Nordmann might consider including the combined list as an attachment to the minutes with the request to all committee members that they might identify any scientists or engineers active in the field of rotordynamics in these countries in particular and that they would communicate suggestions to the Chairman through S. Garvey.

Countries on S. Garvey’s list (based on no contributions at the conference) are: Ireland, Portugal, Jordan/Saudi-Arabia, Singapore/Indonesia/Malaysia, Bulgaria, Romania, Israel, Argentina, Turkey, Taiwan.

The list of countries of the Chairman was presented during the next agenda item and it is therefore referred to item 16 for further discussion and strategy of acquiring new member countries.

**AGENDA ITEM 16**

Due to time restrictions it was not possible to discuss all sub-items of this agenda item. However, a short discussion was held on criteria for country membership in the TC Rotordynamics. The Chairman presented an analysis of actual member countries, recommended or not represented member countries for the continents of Europe, Asia and Middle East and The Americas. Two slides showing this analysis are attached to these minutes.

The discussion on this topic was postponed to the next meetings (Besançon, 2007, Exeter, 2008) and has to be continued there.

**AGENDA ITEM 17**

Chairman Rainer Nordmann reported on an initiative of IFToMM EC to enhance the IFToMM web presence by creating individual homepages of each technical committee. At present only 3 out of 13 committees offer a separate homepage. In a first step the TC Rotordynamics has implemented a preliminary version of such a “Rotordynamics homepage”, which can be accessed by [http://www.tcrotdyn.tu-darmstadt.de/](http://www.tcrotdyn.tu-darmstadt.de/). All members were invited to visit this
web page and make comments and recommendations for enlarging and improving the web presence of our committee.

**AGENDA ITEM 18**

Chairman Nordmann started a discussion on the participation of members of the rotor dynamics community at the IFToMM World Conference 2008 in Besançon/France. At this point in time papers were submitted only uncoordinatedly to the conference organizers. It was common consent that these activities should be concentrated and rotor dynamics contributions should be organized by the TC Rotordynamics. Therefore, the Chairman was asked to take the initiative and to negotiate with the local conference committee in Besançon how papers on rotor dynamics and related fields (diagnostics) can be organized effectively within the conference schedule.

**AGENDA ITEMS 19**

There was no further business and a motion to adjourn was passed unanimously at about 8:30 p.m. Thanks to all attending for their hard work and sustained attention.
 Agenda for Meeting of  
IFToMM Rotor Dynamics Committee  
IFToMM – 7th Int. Conference on Rotor Dynamics  
Vienna, Austria – September 26, 2006

------ Agenda Topics ------

1. Call to Order at 18:00.
2. Additions to Agenda.
3. Change of Chairman and Secretary TC Rotordynamics
5. Business Arising from Swansea Minutes.
7. T.C. Committee Membership List:
   (a) Resignations and Retirements.
   (b) Newly Elected Members.
8. Election of new TC Secretary.
10. Best five paper awards: Lund Medal, prizes.
15. Subcommittee Reports: Diagnostics, Outreach & Membership.
   (a) New research areas.
   (b) Research cooperations.
   (c) Teaching activities.
   (d) Need for other subcommittees.
17. Internet presentation of IFToMM TC Rotordynamics.
18. Additional Business.
19. Adjourn; Target: 20:00.
Annex to agenda item 12

IFToMM - International Federation for the Promotion of Mechanisms and Machine Science

Preliminary Announcement and Call for Papers

8th INTERNATIONAL CONFERENCE ON ROTOR DYNAMICS

September 12~15, 2010
Seoul, Korea

The eighth conference, IFToMM 2010, will take place in KIST (Korea Institute of Science and Technology), Seoul, Korea, from September 12~15, 2010. The primary purposes of IFToMM 2010 are to promote scientific and technological exchange between researchers from around the world, and to enhance the understanding and the dissemination of relevant research in the dynamics of rotating machinery. The organizing committee cordially invites oral and poster presentations from all sectors of research institutes, industry and academia.

Special sessions will be organized. We will also invite renowned experts to give keynote speeches. Bring your research findings to IFToMM 2010, enjoy our programs and appreciate the attractions and cultural heritages of the ancient city, Seoul.

More information will be posted as it becomes available at http://IFToMM-rotordynamics2010.kist.re.kr.

TOPICS OF INTEREST

The main topics of the conference are as follows:

- Active components and vibration control
- Balancing
- Bearings and seals
- Bending and torsional systems
- Bladed systems
- Condition monitoring and machine diagnostics
- Cracked rotors
- Dynamic analysis and stability
- Geared systems
- Electromechanical Interactions
- Modal testing and identification
- Nonlinear phenomena
- Signal processing
- Other topics meeting the conference's objectives

Correspondence

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- Dr. Chang-Ho Kim (Program Chair, KIST), +82-2-958-5652

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Annex to agenda item 16

16. Strategy of TC Rotordynamics and Discussion

**Actual members in TC**
- Italy
- France
- UK
- Germany
- Austria
- Switzerland
- Czech
- Hungary
- Denmark
- Sweden
- Norway

**Recommended members**
- Finland
- Russia
- Poland
- Spain
- Ireland
- Belgium
- Netherlands
- Portugal
- Croatia

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**America**
- Actual: USA
- Recommended: Canada

**Middle East**
- Actual: Egypt
- Recommended: Saudi Arabia

**Asia**
- Actual: Japan
- Recommended: South Korea
- China
- Australia
- India
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