

50 years

ICNO and ENOC 1961 - 2011

ICNO International Conference on Nonlinear Oscillations
(Conferences I – XII, 1961 – 1990)

ENOC European Nonlinear Oscillations Conference
(Conferences I – VII, 1993 – 2011)

EUROMECH
European Mechanics Society

ENOC VII
July 24 – 29, 2011, Rome



Yu. A. Mitropolski

ICNO 1:

September 12-18, 1961, Kiev, USSR
IUTAM Symposium on the Theory of Non-Linear Vibrations
Academy of Sciences of the Ukrainian SSR
Institute of Mathematics
Chairman: Prof. Dr. Yu. Mitropolsky

Committee: N.N. Bogolyubov (USSR, Chair),
M.L. Cartwright (UK), C. Hayashi (Japan), K. Klotter (USA),
S. Lefschets (USA), Yu.A. Mitropolski (USSR), T. Vogel

Participants: 92 scientists from 13 countries, amongst them
A.I. Lurie (USSR), A.N. Tikhonov (USSR), Yu.A.
Mitropolski (USSR), M.L. Cartwright (UK), S. Lefschetz
(USA), S. Smale (USA)

ICNO I	September 1961	Kiev (USSR)	Chair: Mitropolsky
ICNO II	September 1962	Warsaw (Poland)	Chair: Ziembra
ICNO III	May 1964	Berlin (GDR)	Chair: Reißig
ICNO IV	September 1967	Prague (Czechoslovakia)	Chair: Djadkov
ICNO V	August 1969	Kiev (USSR)	Chair: Mitropolsky
ICNO VI	September 1972	Poznan (Poland)	Chair: Ziembra
ICNO VII	September 1975	Berlin (GDR)	Chair: Schmidt
ICNO VIII	September 1978	Prague (Czechoslovakia)	Chair: Pust
ICNO IX	September 1981	Kiev (USSR)	Chair: Mitropolsky
ICNO X	September 1984	Varna (Bulgaria)	Chair: Brankov
ICNO XI	August 1987	Budapest (Hungary)	Chair: Farkas
ICNO XII	September 1990	Cracow (Poland)	Chair: Gutowski



The last activities of ICNO



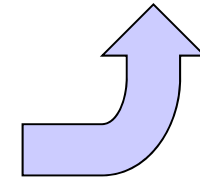
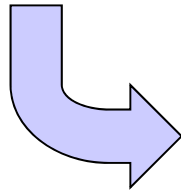
Yu. A. Mitropolski



D. G. Crighton



The first activities of ENOC



November 28, 1991

Recommendation of Prof. G. Schmidt and Prof. E. Kreuzer to the President of the European Mechanics Society, Professor David G. Crighton, Cambridge, to include ICNO into EUROMECH's Conference Activities.

Decision 1992 to continue ICNO (International Conference on Nonlinear Oscillations) as the EUROMECH Conference ENOC (European Nonlinear Oscillations Conference) with the first ENOC held in Hamburg 1993 under the Chair of Professor Edwin Kreuzer

ENOCC European Nonlinear Oscillations Conference Committee

F.L. Chernousko	Moscow, Russia
J. Engelbrecht	Tallinn, Estonia
R. Gutowski	Warsaw, Poland
E. Kreuzer	Hamburg, Germany
Yu. Mitropolski	Kiev, Ukraine
F. Pfeiffer (Chairman)	Munich, Germany
L. Pust	Prague, Czech Republic
G. Rega	L'Aquila, Italy
M. Roseau	Paris, France
G. Schmidt	Berlin, Germany
K. Sobczyk	Warsaw, Poland
J.M.T. Thompson	London, UK
H. Troger	Vienna, Austria

„May this and all future ENOC-Conferences be a meeting-place for mathematicians, engineers and physicists to exchange their knowledge and their experiences for the best of our Science, for more progress in understanding nonlinear behaviour.“

Friedrich Pfeiffer, Opening ENOC Hamburg 1993

„I have received your letter on the 24-th of April and appreciated your offer to serve as a member of the Nonlinear Oscillations Conference Committee.

I have accepted your proposal most willingly and I will try to do my best in preparing and conducting the Conference. It is a pleasure for me to know that the 1-st European Nonlinear Oscillations Conference continues the tradition of the 12-th International Conference on Nonlinear Oscillations (ICNO).

According to the proposal of the International Council on Theoretical and Applied Mechanics the first Conference of this series was held in Kiev in 1961 and others were held in the capitals of the Eastern European Countries. I think that the 1-st ENOC in Hamburg will be interesting and useful and I sincerely hope, that it will bring together scientists not only from European countries but those from other continents and first of all scientists from USA and Japan who always took an active part in ICNO's work.“

Letter Prof. Mitropolski to Prof. Pfeiffer at May 11, 1992



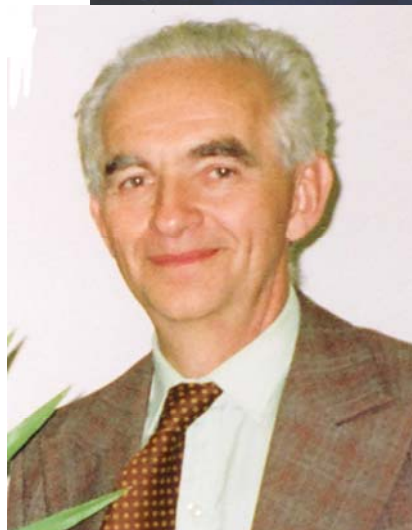
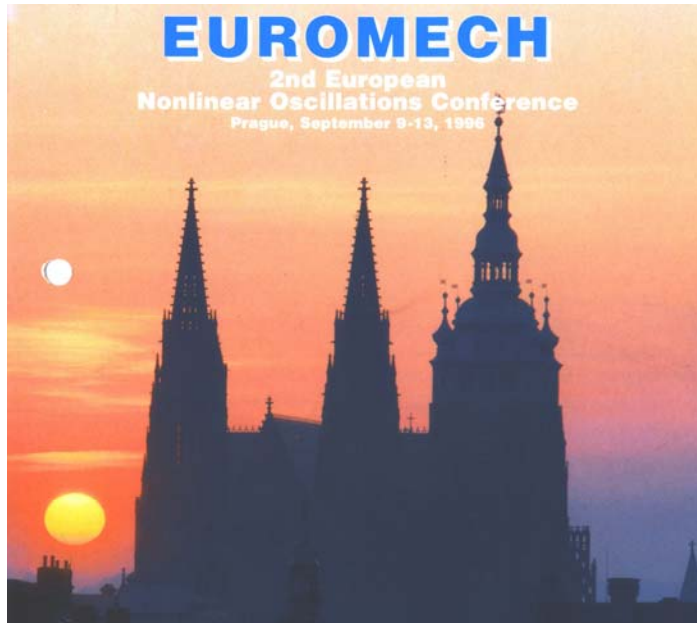
- **ENOC I** Hamburg, August 16 - 20, 1993, Chairman Professor Edwin Kreuzer
- **ENOC II** Prague, September 9 - 13, 1996, Chairman Professor Ladislav Pust,
Secretary Professor Frantisek Peterka
- **ENOC III** Copenhagen, August 8 - 12, 1999, Chairman Professor Hans True
- **ENOC IV** Moscow, August 19 - 23, 2002, Chairman Professor Klimov
- **ENOC V** Eindhoven, August 7 - 12, 2005, Chairman Professor Dick van Campen
- **ENOC VI** St. Petersburg, June 30 - July 4, 2008, Chairman Professor Alexander Fradkov
- **ENOC VII** Rome, July 24 - 29, 2011, Chairman Professor Giuseppe Rega

**Technical University Hamburg-Harburg
Chair Edwin Kreuzer
August 16-20 1993**



**228 participants from 33 countries
9 invited presentations
180 contributed papers**

- | | |
|---|--|
| <ul style="list-style-type: none"> ☞ Qualitative analysis of nonlinear dynamic systems ☞ Quantitative methods for nonlinear systems ☞ Bifurcation theory ☞ Numerical methods in nonlinear dynamics ☞ Nonlinear random vibrations | <ul style="list-style-type: none"> ☞ Phenomena and criteria of chaotic oscillations ☞ Computer aided symbolic methods in dynamics ☞ Vibration control ☞ Experimental methods in vibrations ☞ Applications |
|---|--|



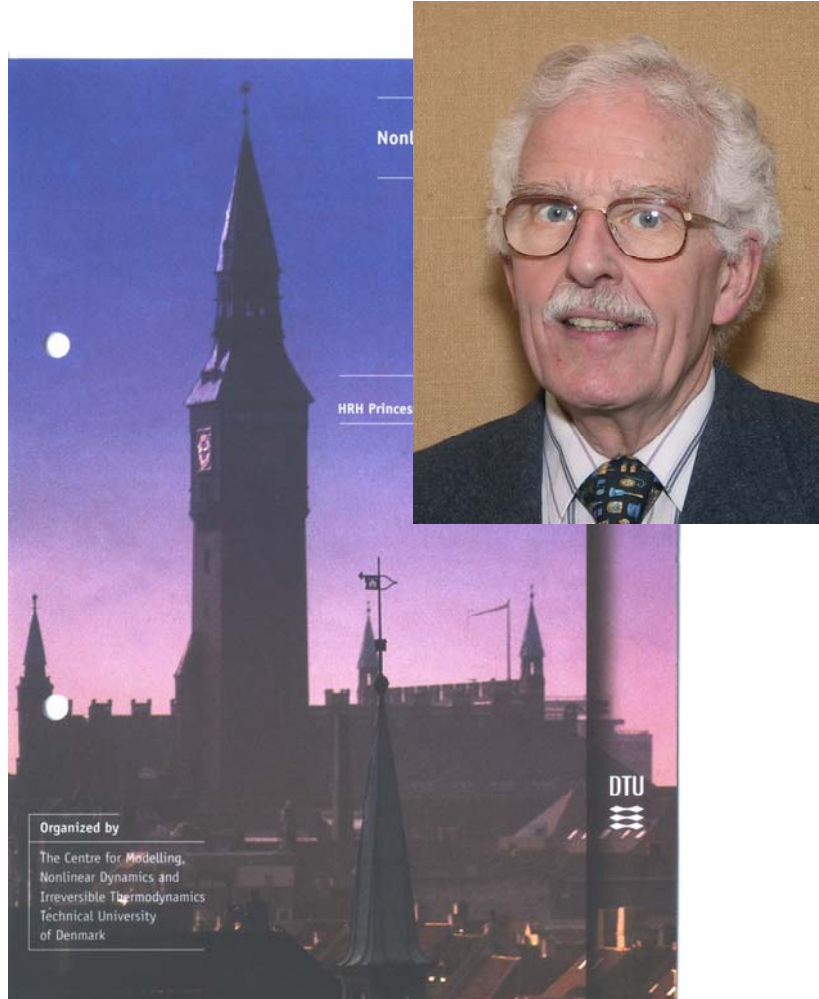

 CONTACT ADDRESS
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 Prague 8, Czech Republic
 160 000; E-mail: peterka@biv.ij.cas.cz

Institute of Thermomechanics
Academy of Sciences of the Czech Republic, Prague
Chair Ladislav Pust, Secretariat Frantisek Peterka
September 9-13, 1996

205 participants from 36 countries
7 invited lectures
157 contributed papers

qualitative analysis
quantitative methods
bifurcation
chaotic oscillations
random vibrations
vibration control
mechanics of bodies
numerical methods
experimental methods
identification
continuous systems

rotordynamics
gearing
means of transport
impact motion
parametric oscillations
technological processes
vibro-isolation, damping
friction
fluidoelasticity
applications
education



**Technical University of Denmark
Copenhagen (Lyngby)
Chair Hans True
August 8-12, 1999**

**153 participants from 27 countries
6 invited presentations
97 contributed papers**

- 👉 **Qualitative analysis of nonlinear dynamics**
- 👉 **Quantitative methods for nonlinear systems**
- 👉 **Bifurcation theory**
- 👉 **Numerical methods in nonlinear dynamics**
- 👉 **Nonlinear random vibrations**
- 👉 **Chaotic oscillations**
- 👉 **Discrete and continuous systems**
- 👉 **Stability**
- 👉 **Wave motion**
- 👉 **Impacts and Friction**
- 👉 **Applications**



**Institute for Problems in Mechanics
Russian Academy of Sciences
Chair D. M. Klimov
Moscow, August 19-23, 2002**

**101 participants from 21 countries
9 invited presentations
133 contributed papers**

- 👉 **General Theory of Oscillations**
- 👉 **Control of Complex Systems**
- 👉 **Nonlinear Oscillations in Continuous Media**
- 👉 **Applied Problems of Nonlinear Oscillations**
- 👉 **Stochastic and Chaotic Oscillations**





Eindhoven University of Technology
Eindhoven, The Netherlands
Chair Dick van Campen
August 7-12, 2005

346 participants from 42 countries
6 general lecturers
357 contributed papers

- ↳ **Quantitative analysis of nonlinear dynamics**
- ↳ **Quantitative methods for nonlinear systems**
- ↳ **Bifurcation theory**
- ↳ **Numerical methods in nonlinear dynamics**
- ↳ **Nonlinear random vibrations**
- ↳ **Chaotic oscillations**
- ↳ **Discrete and continuous systems**
- ↳ **Stability**
- ↳ **Wave motion**
- ↳ **Impacts and Friction**
- ↳ **Applications**





**The Institute for Problems
of Mechanical Engineering
Chair Prof. A. Fradkov
St. Petersburg, Russia
June 30 – July 4, 2008**

**302 participants from 38 countries
5 general lecturers
275 contributed papers
45 poster talks**

- **nonlinear dynamics of continuous, discontinuous and hybrid systems**
- **qualitative and quantitative analysis of nonlinear dynamic systems**
- **analysis of bifurcations and chaos**
- **numerical and geometrical methods of nonlinear dynamics**
- **phenomena and criteria of chaotic oscillations**
- **control of oscillations and chaos**
- **experimental methods in nonlinear dynamics**
- **applications in all areas of engineering and natural sciences**





**Dipartimento di Ingegneria
Strutturale e Geotecnica,
Sapienza University of Rome,
Chair Prof. G. Rega
July 24 – 29, 2011**

**359 participants from 41 countries
6 general lecturers
437 contributed papers**

- **models and methods in nonlinear dynamics**
- **qualitative and quantitative analysis**
- **nonlinear dynamics of continuous, discontinuous and hybrid systems**
- **bifurcations and chaos**
- **nonlinear stochastic systems**
- **control of oscillations and chaos**
- **applications**
- **cross-disciplinary topics**



Chairmen EUROMECH

👉 **George K. Batchelor** 1965 – 1987

👉 **David G. Crighton** 1988 - 1993

Presidents EUROMECH

👉 **David G. Crighton** 1994 - 1997

👉 **Hans H. Fernholz** 1998 – 2002

👉 **Patrick Huerre** 2003 -

Chairmen ENOCC

👉 **Friedrich Pfeiffer** 1992 – 1999

👉 **Edwin Kreuzer** 1999 – 2002

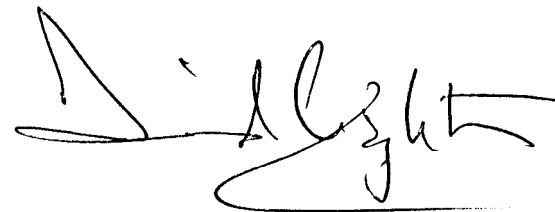
👉 **Dick van Campen** 2002 - 2014

EUROMECH – European Mechanics Society Discussion document of European Mechanics Council, December 1991

“Mechanics is an old and highly multi-disciplinary subject. This is at once its strength and its weakness. Physicists have repeatedly written the subject of mechanics off in this century, as capable of no further interesting development, yet again and again our subject throws up striking new discoveries which subsequently turn out to be important for vast areas of science. The multidisciplinary aspect often leads to situations in which mechanics is assumed to be spoken for by physics, by mathematics, or by engineering, always to the detriment of mechanics when it is regarded as simply a part of some other discipline. The fact is that our subject is an enduringly topical field, with characteristics entirely of its own, and with widespread and ever-growing connections with other fields. Little of this is appreciated by scientists in fields outside mechanics, however, and there is a need for workers in the field to give the subject of mechanics a much enhanced visibility worldwide.”



April 12, 2000

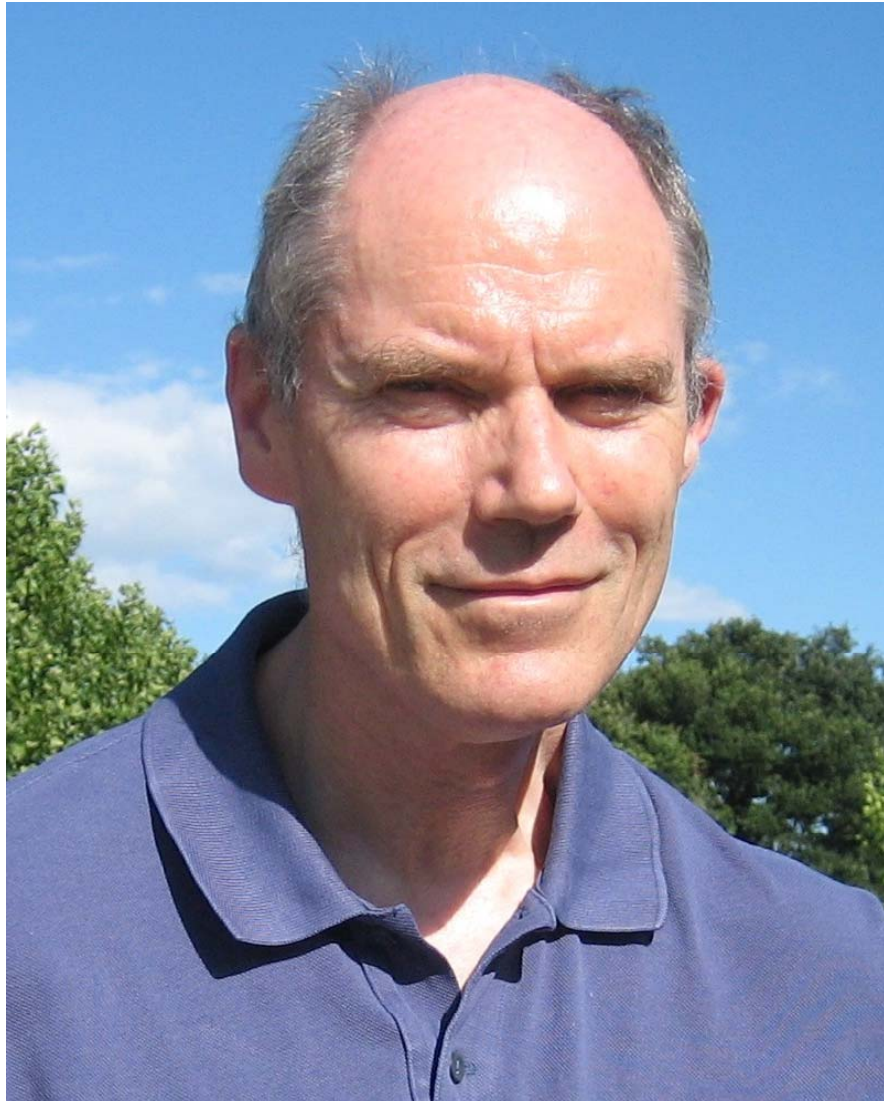


D.G. Crighton
Chairman
European Mechanics Council
December 1991

Thank you for your attention!

EUROMECH
European Mechanics Society

ENOC VII
July 24 – 29, 2011, Rome



born March 11, 1943 in Villach, Austria

**1963 Technical University Vienna,
Mechanical Engineering**

**1970 Dr.-Techn. Mechanics, TU-Vienna,
Assistant at the Institute Mechanics**

1977 Habilitation Mechanics

1979 Full Professor Mechanics, TU-Vienna

**1985-91 Dean and Vice-dean Faculty of
Mechanical Engineering, TU-Vienna**

**1988-99 Visiting Professor of the Universities
Metz, Pavia, Rome, Hamburg, Illinois,
Rio de Janeiro**

> 200 publications, 3 books

**Main interests: system dynamics, nonlinear
dynamics, space dynamics,
tethered satellites**

February 22, 2010, death by cancer