

Tribute to Professor Barbara Kołaczek

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Barbara Kołaczek, age 86, passed away on 19 February 2017, after a serious illness.

She was one of the outstanding researchers of her generation in geodynamics and astronomy, with the wide international reputation in the international scientific community.



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Barbara Kołaczek received the degree of Master of Science in physics, specialization of astronomy at the Jagiellonian University in Krakow. She started her professional carrier as a staff member of the Chair of Geodetic Astronomy at the Warsaw University of Technology (WUT).

Conducting an advanced research Barbara Kołaczek substantially contributed to the development of astrometry successfully affecting students and collaborators with her enthusiasm and dedication to research.

She was one of the major developers and organizers of the Astro-Geodetic Observatory of WUT in Jozefoslaw, near Warsaw.

At the Warsaw University of Technology she received her PhD, while the habilitation (degree of Doctor of Science) was given to her at her alma mater - the Jagiellonian University in Krakow.

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trip to the XIV IAU Congress in Brighton

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An important step in her professional life was to join in 1977 the team of just getting established Space Research Centre (SRC) of the Polish Academy of Sciences where within a number of years she created a Polish school of research in the field of the Earth's rotation.

Her scientific accomplishments were acknowledged. She was awarded a title of a professor by the President of Poland and then a title of full professor.

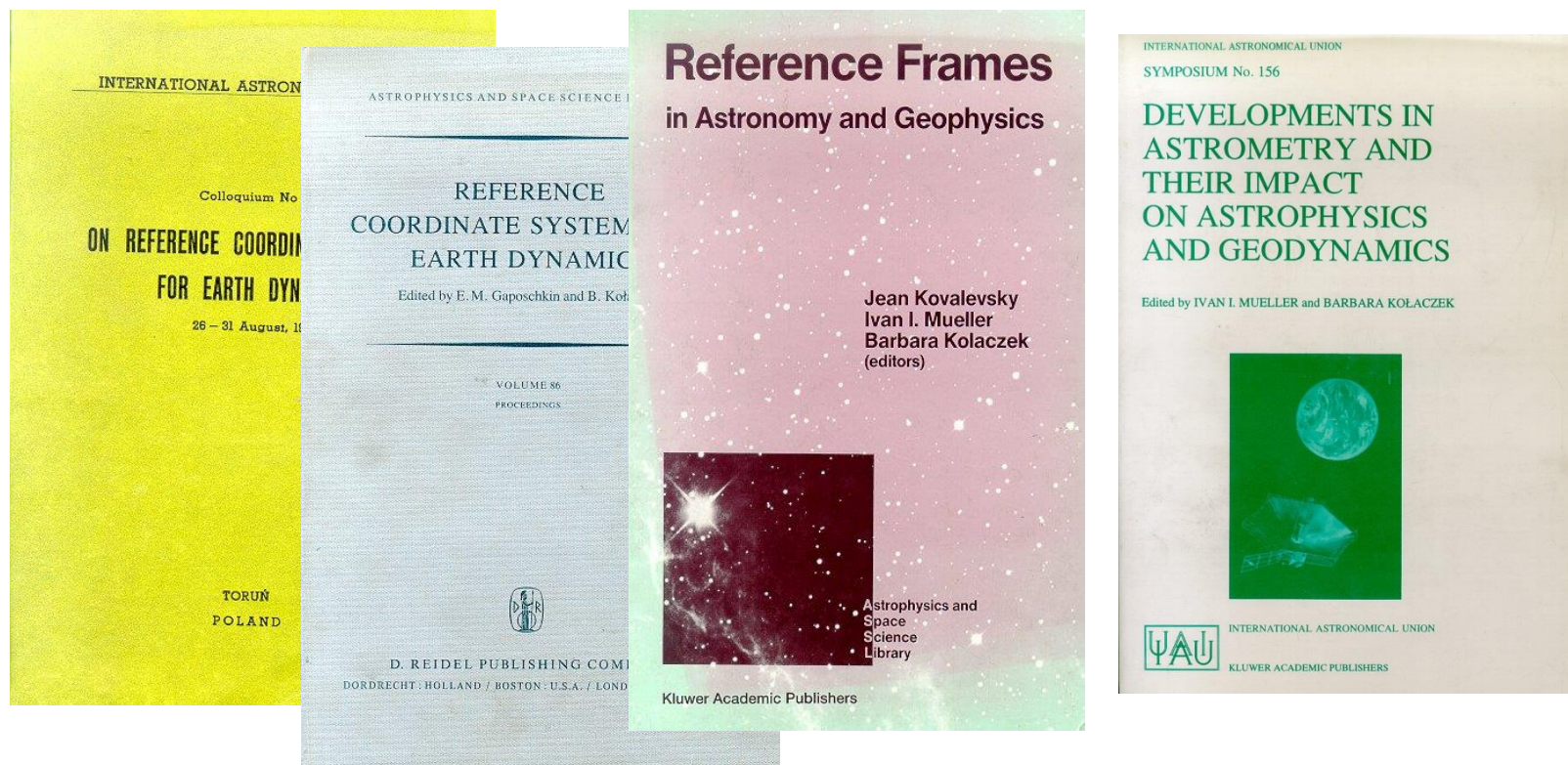
In SRC she was acting as a head of the Earth Rotation Department, a long-standing member of the Scientific Council and a Deputy Director for scientific affairs from 1990 to 1994.

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Prof. B. Kolaczek has carried on investigations of the following problems of the Earth's rotation:

- Seasonal, sub-seasonal, short-term periodic oscillations of the Earth's rotation variations,
- Geophysical interpretation of the Earth's rotation variations,
- Chandler wobble of polar motion,
- Methods of spectral analyses and filtration of short periodic oscillations in noisy stochastic processes,
- Prediction of the Earth's rotation variations,
- Optimisation of the Conventional Terrestrial Reference Frame.

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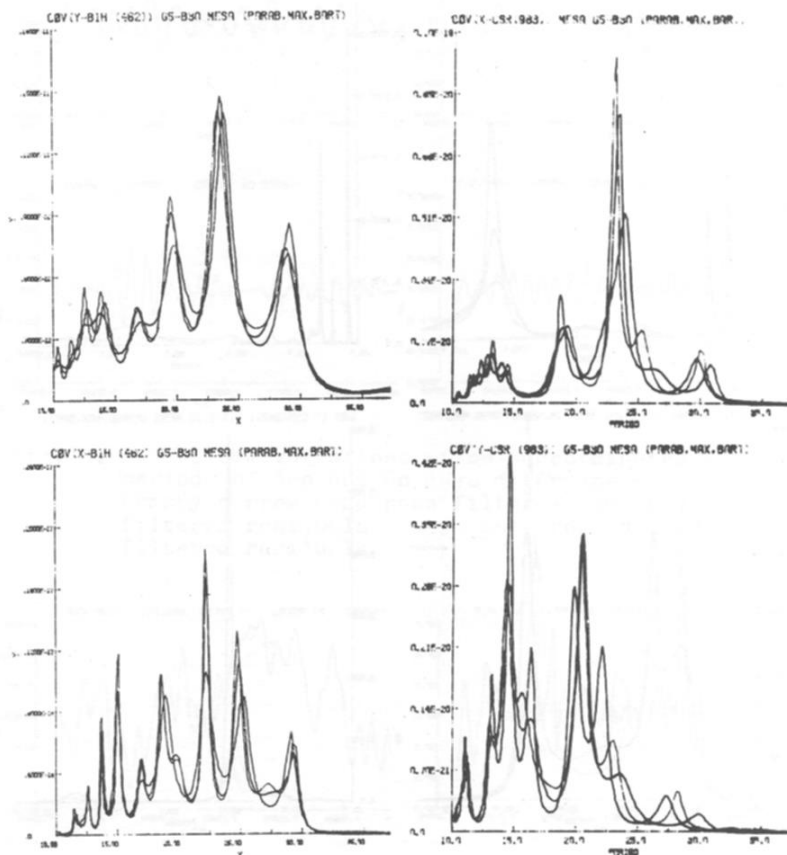


Fig. 1. Spectra of the filtered residuals of the BIH-ASTR and CSR-LALAR pole coordinates for the period range of 5-30 days obtained by the MESA, with different filter lengths, *Kołaczek, Kosek and Galas, 1986*.

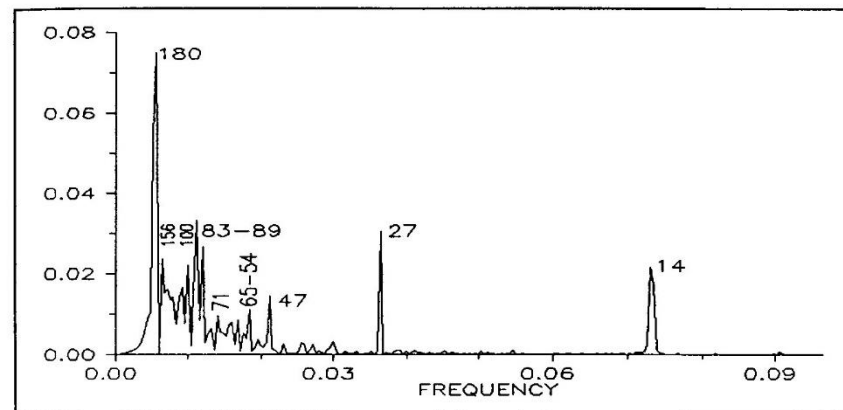


Fig. 2a. The FT Spectra of filtered residuals of x CSR91.L03 pole coordinate variations in years 1978-1991, *Kołaczek, 1993*.

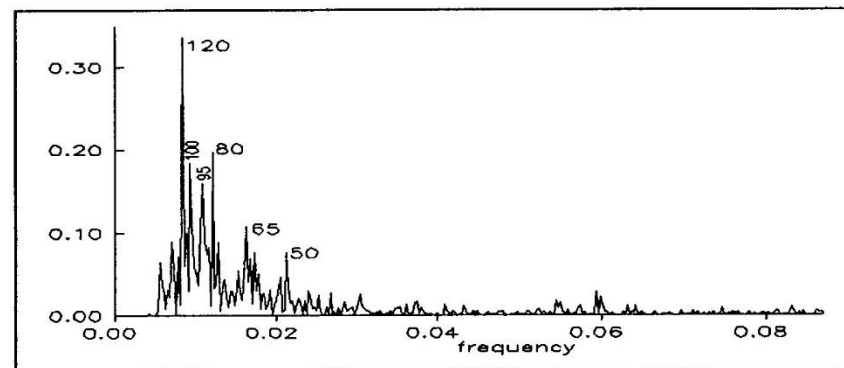


Fig. 2b. The FT Spectrum of filtered residuals of IRIS91 UT1-UTC variations in 1983-1990, *Kołaczek*

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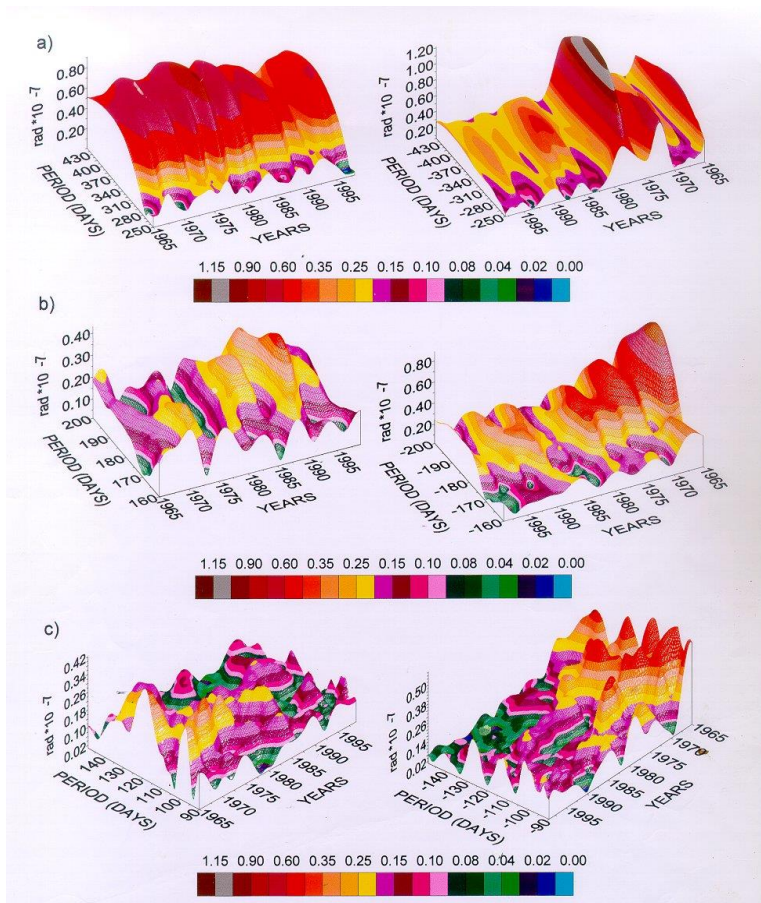


Fig. 14. Time variable amplitude spectra of (a) annual, (b) semi-annual, (c) 120 days oscillations of complex equatorial components of geodetic excitation function for the prograde (positive) and retrograde (negative) parts of spectrum. Units are $\text{rad} \cdot 10^{-7}$, Kołaczek, Nastula, 2001.

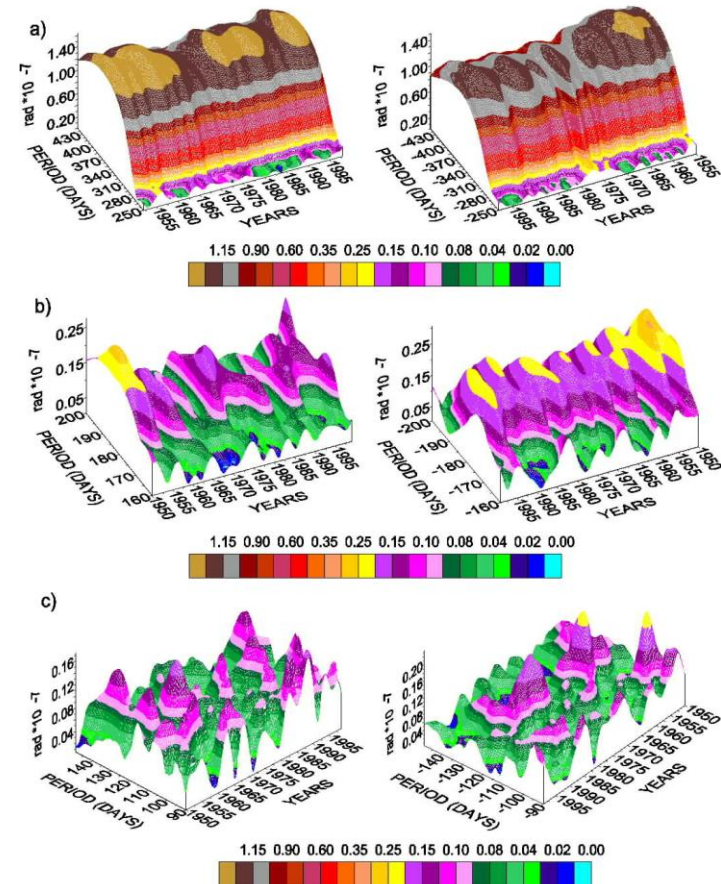


Fig.15. Time variable amplitude spectra of (a) annual, (b) semi-annual, (c) 120 days oscillations of complex equatorial components of global atmospheric (P+IB+W) excitation function for the prograde (positive) and retrograde (negative) parts of spectrum. Units are $\text{rad} \cdot 10^{-7}$, Kołaczek, Nastula, 2001.

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80th birthday



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In 1974 Barbara Kołaczek organized in Torun, Poland the first colloquium devoted to the Fundamental References Systems for Geodynamics, which was a milestone in communication of research in this topic.

In 1981 she organized in Warsaw the second IAU colloquium on Reference Systemes for Earth Dynamics.

She established close relations with French astronomical community, and initiated long-term collaborations with other groups in the international community.

Barbara was very involved and associated with the organization of numerous Journees.

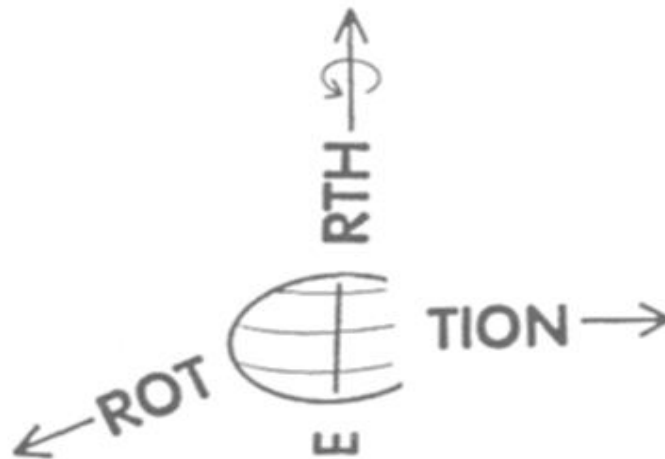
On the initiative of Professor Barbara Kołaczek, the first Journees Conference outside Paris was held in Warsaw in 1995. She was the organizer of the next meeting in Poland Journees 2005

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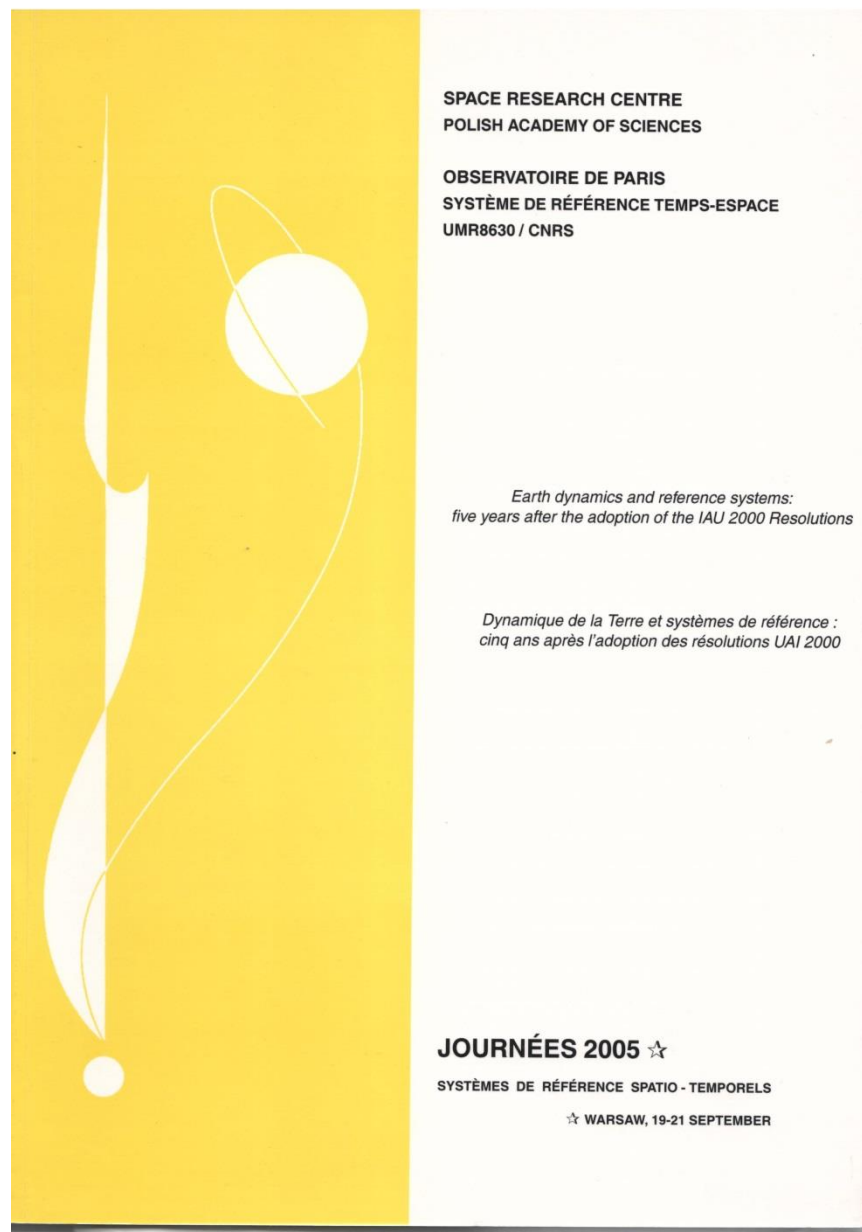
JOURNEES 1995 "Systemes de Reference Spatio-Temporels"

"EARTH ROTATION, REFERENCE SYSTEMS IN
GEODYNAMICS AND SOLAR SYSTEM"

Warsaw, Poland
September 18 - 20, 1995



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*Dynamique de la Terre et systèmes de référence :
cinq ans après l'adoption des résolutions UAI 2000*

JOURNÉES 2005 ★

SYSTÈMES DE RÉFÉRENCE SPATIO - TEMPORELS

★ WARSAW, 19-21 SEPTEMBER

Tribute to Professor Barbara Kołaczek



Journees 2005 Warsaw

Tribute to Professor Barbara Kołaczek



Journees 2005 Warsaw

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Journees 2005 Warsaw

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Professor Barbara Kołaczek served many important functions in international scientific organizations, in particular the International Association of Geodesy (IAG) and the International Astronomical Union (IAU). In the period 1987-1991 she was a president of the Section II of IAG and in the period 1991-94 – a president of the Commission 19 of IAU. In 1991 she was honoured with a fellowship of the IAG.

She also actively participated in the work of numerous national organizations and scientific societies. She was, among others, an active member of the Polish Astronomical Society (since 1953), and the Warsaw Society of Sciences (since 1983).

She was a member of the Committee on Geodesy of the Polish Academy of Sciences, and for almost two decades she was a chair of the Section of Geodynamics in that Committee. After her retirement, she was elected an honorary member of that Committee.

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She was the author of many recognized scientific publications.

Professor Barbara Kołaczek supervised the scientific development of numerous young researchers.

Among them there are four doctors (PhD) and two doctors of science.

She was awarded the Knights of the Order of Polonia Restituta and the Medal of Merit for Geodesy and Cartography.

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Professor Barbara Kołaczek was recognized as a respected scientist, involved in international scientific cooperation, always supporting interdisciplinary cooperation in research.

She was an unquestionable authority, and she was a wonderful, kind and generous person, extremely popular among her collaborators, students and alumni and respected.

She will be missed very much by many of her friends and collaborators.

She will be remembered in the academic community as unattainable model, outstanding scientist, honourable person and a true friend

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