

**Professor Roman Teisseyre
– Honorary Doctor of AGH University of Science
and Technology, Kraków, Poland, December 2004**

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Senate of the AGH University of Science and Technology, Kraków, Poland, upon the request of the Faculty of the Geology Geophysics and Environmental Protection, conferred the dignity of the Honorary Doctor of AGH UST for Professor Roman Teisseyre on the 7 December 2004. Prof. Dr. Jerzy Kowalczyk (AGH UST) was the promotor of the Honorary Doctorate, two reviewers were: Prof. Dr. Marek Grad (University of Warsaw) and Prof. Dr. Waław Zuberek (University of Silesia). Professor Jerzy Kowalczyk was very grateful to the AGH UST Senate to entrust him with the laudation, i.e. the presentation of the Candidate. More than one hundred participants took place in the presentation: AGH UST Senate members with His Magnificence Rector Prof. Dr. Ryszard Tadeusiewicz, family members, colleagues from the Institute of Geophysics of the Polish Academy of Sciences (IG PAS), ordinary members and corresponding members of the Polish Academy of Sciences, co-workers from various scientific institutions, students and friends of the Professor and his family, and members of staff of the Faculty of Geology Geophysics and Environmental Protection at the AGH UST with then Dean – Prof. Dr. Tadeusz Słomka and, notably, the members of the Department of Geophysics which were the hosting institutions (Figs. 1–3).

The laudation of Prof. Kowalczyk was published in the journal *Geology* (Kowalczyk 2004). The same issue contained the Master Lecture of the Honorary Doctor (Teisseyre 2004). Some information about Prof. Roman Teisseyre presented here was taken from the above-mentioned laudation. Professor Kowalczyk mentioned that although the Senate members had the opportunity to be acquainted with the opinions of two Reviewers and knew almost all facts from Professor's scientific life, his duty and simultaneously great pleasure was to list once more the arguments for giving the highest academic distinction to Prof. Roman Teisseyre. The first argument was his high scientific position and authority, which was built throughout his whole life by hard work, intellectual abilities, and scientific skills (Kowalczyk 2002). Professor Kowalczyk with emotion underlined that his friendship with Roman Teisseyre lasted since 2004, i.e., for about 60 years! They met for the first time in the Lower Silesia area, where Prof. Henryk Orkisz, at that time a member of staff of the Polish Geological Institute in Warsaw, led



Fig. 1. Prof. Roman Teisseyre – Honorary Doctor of AGH University of Science and Technology, Kraków, Poland.

the geophysical-magnetic investigations in Kłodzko, Poland. At that moment Prof. Roman Teisseyre was a student of the Mathematical-Physical-Chemical Faculty of Warsaw University and Prof. Jerzy Kowalczyk was a young adept of the applied geophysics at the Geological-Surveying Faculty of the Mining Academy, then the Academy of Mining and Metallurgy, and now – the AGH UST. Both young men, learning then geophysical craft, were full of optimistic thoughts about their future with geophysics as their scientific discipline and goal.

In his laudation, Prof. Kowalczyk reached into the history of the Teisseyre family at the end of the XVIII century, when they left France and through Vienna came to Kraków and settled down there. In Prof. Kowalczyk's opinion, the history of the family and deep teaching and scientific traditions influenced the Roman Teisseyre's interests. Discussing the history of the



Fig. 2. At the beginning of the Honorary Doctorate celebration, the Choir of the Song and Dance Group “Krakus” sang the hymn *Gaude Mater Poloniae*, and at the end – the *Gaudeamus*.

Teisseyre family Prof. Kowalczyk deeply analysed Warzyniec Teisseyre’s geological achievements from the end of the XIX century and finished on the Teisseyre–Tornquist line/zone (TTZ) named for the memory of the Swedish magnetologist A.J.H. Tornquist and Wawrzyniec Teisseyre. The TTZ, a fault boundary between the East European Platform and geological structures of Western Europe was and still is the area of geophysical investigations led by international and Polish scientific groups, which involve the staff of the Institute of Geophysics, Polish Academy of Sciences (IG PAS). Wawrzyniec Teisseyre was the grandfather of the Honorary Doctor – Professor Roman Teisseyre.

Scientific curriculum vitae of Prof. Roman Teisseyre is the subject of other articles in this monograph, so we will not repeat the long list of his outstanding achievements. We only want to mention, after Prof. Kowalczyk’s laudation, that Roman Teisseyre had the unique opportunity to work as the assistant of the famous geophysicist Prof. Edward Stenz (Chair of Geophysics, Warsaw University) and famous physicist Prof. Leopold Infeld (Institute of Theoretical Physics at the same university). From the academic duty, we would like to underline that Prof. Roman Teisseyre in his rich scientific career not only worked as an academic teacher but was also engaged in making support materials for students, the most important being a co-edition of the carefully prepared script from Prof. Infeld’s lectures, published under the title *Theoretical Electrodynamics* by Polish Scientific Publishers (Suffczyński et al. 1953). Worth mentioning are also the educational materials prepared for the needs of the Geophysical Prospecting Enterprise (Przedsiębiorstwo Poszukiwań Geofizycznych), where he served as a consultant for interpreting geoelectric measurements, and the issue dedicated to Japanese students who attended his lectures on the mechanisms of earthquakes he delivered in Japan in 1965 (Kowalczyk 2004).



Fig. 3. Congratulations in the Main Hall of the AGH UST; Prof. Roman Teisseyre together with H.M. Rector of AGH UST Prof. Ryszard Tadeusiewicz (the first on the right), next Prof. Kaja Pietsch, and Prof. Adam Gawin.

Professor Roman Teisseyre was first of all a theoretician and the majority of his works concerned the physics of the Earth's interior, but among his academic achievements, there were also application works. We want to underline some of such works. Prof. Roman Teisseyre initiated the modern seismological observations in mining and was in that area a continuator of the works of Profs. K. Mainka and E.W. Janczewski. In his laudation, Prof. Kowalczyk mentioned the first such works implemented in the Miechowice mine in Bytom, Upper Silesia, Poland, in the sixties. The model developed, including the non-shearing mechanism of the mining shock source, explained the physical processes of the orogen destruction and confirmed the experimental results. Apart from practical works focused on organizing the seismic works in the Polish mining basins, Prof. Roman Teisseyre was also involved in the international investigations of electromagnetic precursors of earthquakes which have distinct utilitarian aspects.

The important parts of Prof. Roman Teisseyre's works were the training and promotion of academic staff. Many young adepts of applied geophysics at the Faculty of Geological Prospection at the Academy of Mining and Metallurgy, then the Faculty of Geology, Geophysics, and Environmental Protection, AGH UST, enjoyed the positive reviews from Prof. Roman Teisseyre in their doctoral dissertation or habilitation procedures. The authors of the present article also belong to those groups. In the tables below there are presented the lists of 39 persons for whom the Professor prepared the positive reviews for their doctoral dissertation, in habilitation procedures and conferring the title of professor carried out at the AGH UST in the period of 30 years: 1962–1992. Reviews were ordered by the Faculty Council of the Faculty of Geological Prospecting, then the Faculty of Geology, Geophysics, and

Environmental Protection, AGH UST. The titles were conferred in the technical sciences field and the Earth sciences field. Procedures were carried out at the AGH UST for members of the scientific staff of AGH University, the IG PAS, the Oil and Gas Institute, Polish Geological Institute, the University of Wrocław, and Kraków Technical University. Reviews were substantive, short, and focused on the main problems presented by candidates. There were no redundant words, no empty words, only important arguments but from each page the friendly attitude of the Reviewer to a Candidate was visible. Some of the outstanding geophysicists whose works were reviewed by Prof. Roman Teisseyre, e.g. Prof. Adam M. Dziewoński or Prof. Andrzej Kijko, continued their scientific career out of Poland. Prof. Roman Ney, an outstanding petroleum geologist, and the former Rector of AGH, was the founder of the Mineral and Energy Economy Institute, PAS, Kraków, Poland, where he continued his scientific career (Tables 1–3).

Table 1
Reviews in the doctoral dissertations

	Forename and name	University, Institute, Enterprise	Date of conferring a doctoral degree
1	M.Sc. Sławomir Gibowicz	Institute of Geophysics PAS, Warsaw, Poland	6 October 1962
2	M.Sc. Eng. Zygmunt Śliwiński	AGH, Polish Oil and Gas Company, Warsaw, Poland	25 March 1963
3	M.Sc. Eng. Jerzy Kowalczyk	AGH UST, Kraków, Poland	9 March 1964
4	M.Sc. Eng. Zbigniew Jaszczewski	University of Wrocław	21 December 1964
5	M.Sc. Eng. Juliusz Miecznik	AGH UST, Kraków, Poland	22 February 1965
6	M.Sc. Adam Dziewoński	Institute of Geophysics PAS, Warsaw, Poland; Harvard University, USA	15 March 1965
7	M.Sc. Andrzej Pepel	Geophysical Investigations Enterprise, Warsaw; Polish Geological Institute, Warsaw, Poland	28 June 1965
8	M.Sc. Jerzy Jankowski	Institute of Geophysics PAS, Warsaw, Poland	6 September 1965
9	M.Sc. Janusz Łaski	Oil and Gas Institute, Kraków, Poland	13 December 1965
10	M.Sc. Eng. Teresa Grabowska	AGH UST, Kraków, Poland	26 February 1968
11	M.Sc. Eng. Andrzej Kostecki	Oil and Gas Institute, Kraków, Poland	4 November 1968
12	M.Sc. Eng. Marek Lemberger	AGH UST, Kraków, Poland	30 June 1969
13	M.Sc. Eng. Bogdan Cianciara	AGH UST, Kraków, Poland	17 May 1971
14	M.Sc. Eng. Kaja Pietsch	AGH UST, Kraków, Poland	28 June 1971
15	M.Sc. Eng. Halina Jędrzejowska	Oil and Gas Institute, Kraków, Poland	3 June 1974
16	M.Sc. Eng. Maria Bała	AGH UST, Kraków, Poland	26 April 1973
17	M.Sc. Eng. Andrzej Marchewka	AGH UST, Kraków, Poland	20 September 1972
18	Eng. Czesław Twardowski		1 February 1971

Table 2
Reviews in the habilitation procedure

	Forename and name	University, Institute, Enterprise	Year of conferring a habilitation degree
1	Ph.D. Eng. Maria Bała	AGH UST, Kraków, Poland	1990
2	Ph.D. Eng. Maria Ciechanowska	Oil and Gas Institute, Kraków, Poland	1990
3	Ph.D. Jan Dzwinel	Oil and Gas Institute, Kraków, Poland	1969
4	Ph.D. Sławomir Gibowicz	Institute of Geophysics PAS, Warsaw, Poland	1976
5	Ph.D. Eng. Adam Gawin	AGH UST, Kraków, Poland	1971
6	Assoc. Prof. Ph.D. Aleksander Guterch	Institute of Geophysics PAS, Warsaw, Poland	1978
7	Ph.D. Eng. Wojciech Górecki	AGH UST, Kraków, Poland	1979
8	Ph.D. Eng. Jadwiga Jarzyna	AGH UST, Kraków, Poland	1990
9	Ph.D. Eng. Andrzej Kostecki	Oil and Gas Institute, Kraków, Poland	1971
10	Ph.D. Andrzej Kijko	Institute of Geophysics PAS, Warsaw, Poland; University of Pretoria, South Africa	1978
11	Ph.D. Eng. Marek Lemberger	AGH UST, Kraków, Poland	1991
12	Ph.D. Eng. Juliusz Miecznik	AGH UST, Kraków, Poland	1970
13	Ph.D. Adam Cichy	AGH UST, Kraków, Poland	1993

Table 3
Reviews for conferring the title of professor

	Forename and name	University, Institute, Enterprise	Year of conferring a the title of professor
1	Assoc. Prof. Dr. Eng. Zbigniew Fajkiewicz	AGH UST, Kraków, Poland	1973
2	Assoc. Prof. Dr. Eng. Teresa Grabowska	AGH UST, Kraków, Poland	1987
3	Assoc. Prof. Dr. Eng. Stanisław Małozzewski	AGH UST, Kraków, Poland	1969
4	Assoc. Prof. Dr. Eng. Henryk Marcak	AGH UST, Kraków, Poland	1988
5	Assoc. Prof. Dr. Eng. Roman Ney	AGH UST, Kraków, Poland; Mineral and Energy Economy Institute, PAS, Kraków, Poland	1971
6	Assoc. Prof. Dr. Henryk Orkisz	AGH UST, Kraków, Poland	1969
7	Dr hab. Eng. Kaja Pietsch	AGH UST, Kraków, Poland	1999
8	Dr hab. Eng. Edward Szaraniec	Kraków University of Technology	1992

The table was compiled by Mrs. Urszula Godyń, Dean's Office at the Faculty of Geology Geophysics and Environmental Protection, AGH UST.



Fot. 4. Contemporary photo of the deformation of the monument; earthquake in Tulbagh-Ceres, South Africa, 29 September 1969 (after R. Teisseyre's Master Lecture).

The Master Lecture presented by the Honorary Doctor of AGH UST, Prof. Roman Teisseyre, at the celebration of conferring the dignity was entitled "Seismic Rotational Effects". It was divided into parts comprising the following issues: Observation of the macroseismic effects – classic examples; Construction of the rotational seismographs; Rotational waves – theoretical considerations; The first seismogram of the rotational waves; The modern systems for rotation field registration: examples; Source of rotation waves and problems of their propagation; Microseismic fields vs. effects in macroscale – engineering seismology; Open problems. Professor illustrated his lecture with many schemes and plots to show the listeners how complicated the problem is, which troubled him for all his life. An example of monument deformation is shown in Fig. 4.

The authoresses of this article, geophysicists belonging to the staff of the AGH University of Science and Technology, Kraków, Poland, are very proud and happy that the dignity of the Honorary Doctor of our University had been conferred to the excellent scientist, geophysicist known all over the world – Professor Roman Teisseyre.

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