

WMT _ from a personal perspective

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For older generation computers scientists “WMT” is like a trade-mark _ one can hardly find a person from this community who does not know (directly or indirectly: by his lectures, presentations, papers and books) Professor Władysław Marek Turski, i.e. WMT.



Professor Turski, called by friends Wlad, was born on the 17th October 1938 in Cracow and has had an interesting, colourful and eventful life. His own view on it is presented in the paper entitled “It was fun” in this issue. Having the privilege of knowing personally WMT for over 40 years, I would like to share with you some selected snapshots from my own perspective on Wlad’s activities, interleaved with actual facts from his live. However, before I start, let me quote a letter I received from an old friend of WMT, Doug McIllroy:

I recall no first encounter more vividly than that with Wlad Turski, my esteemed fellow member of IFIP Working Group 2.3 on Programming Methodology. In fact my acquaintance with him coincides exactly with the lifetime of the working group. The group's meeting number zero took place in Oslo in 1969. Important as the meeting zero was, it was overshadowed by an epochal event: the Apollo astronauts were on their way to the Moon.

As I was strolling through the hotel grounds with some fellow delegates, a new arrival approached. He was a bear of a man, and he accosted us with a roar, "The Americans are going to land on the Moon and I am going to lose a case of vodka." It seems Wlad had long since made a bet¹ that nobody would reach the Moon within a decade and Apollo was proving him wrong. Yet his loss was wreathed in hearty mirth: "Losing a case of vodka is nothing," he guffawed. "The guy who won the bet will lose his job _ he works for Russian NASA."

Since that memorable meeting, I've often marvelled as the same gravel voice behind the same walrus moustache with the same sardonic, yet enthusiastic, tone declared trenchant insights into foundational and practical issues in computing, politics, and life. Wlad Turski is not just a shaping figure in the world of computing. He is an authentic force of nature.

My memories are different, of course. We met for the very first time over 40 years ago in the Palace of Culture and Science (those of you who ever visited Warsaw know the place pretty well) on the 6th floor, where in early 60s of the previous century a huge Russian computer – URAL-2 – was placed. Wlad was jumping up (can you imagine?) with joy since he just managed to complete a calculation on URAL-2, what was a rare case indeed (this computer had several thousand tubes and

¹ JM: the bet, in fact, was about a case of **cognac**, and not vodka — cf. the preface to Wlad’s book: *Computer Programming Methodology*.

the average time between hardware failures was below one hour). It was the “electronic brain” of the Computation Centre of the Polish Academy of Sciences of those days.

- 1960: WMT received MSc in astronomy at the Lomonosov University in Moscow
- 1960-1961: WMT spent 10 months at the University of Manchester, as a British Council scholar, doing astronomical research in Jordell Bank with the help of Mercury computer
- 1962: WMT received PhD at Warsaw University (the thesis was based on the research done in Manchester)
- 1961–1972: WMT was employed by the Computation Centre of the Polish Academy of Sciences and worked on astronomical and space computations, on compilers and operating systems, and on data basis

Shortly afterwards (winter of 1963) a new computer was installed in the same building, but this time at Warsaw University. It was a Danish GIER computer, with a very good Algol 60 compiler (designed and implemented by Peter Naur, a computer scientist who also – like Wlad – began his scientific activities as an astronomer). GIER was heavily used not only by the University but by the whole scientific community, including of course astronomers, and hence Wlad as well.

- 1965: WMT spent a year in Imperial College, London, UK (invited by S. Gill) doing research on pattern recognition which resulted in his DSc degree granted in 1966

In September 1966 an important event happened — the WG.2.1 (IFIP Working Group on Alogl) met in Warsaw to discuss proposals for the successor of Algol 60. Being an observer at this meeting I can still remember some discussions by the participants, world pioneers in the area of programming languages and computer science (in particular: Tony Hoare, John McCarthy, Brian Randell, Aad van Wijngaarden). The local organizer was WMT, who also served as a perfect secretary of the group. The outcome of this meeting determined to certain degree the future development of Algol, i.e. the birth of Algol 68 and the death of the unity within the WG.2.1.

- 1966–1968: WMT was the Secretary of the IFIP WG.2.1
- 1968: WMT spent 7 months at the University of Kentucky in Lexington, USA, doing research on data structures which resulted in a book published in Poland and translated into German

In the summer of 1968 Wlad came to London (where I was finishing my visit to London University as a British Council scholar) and we had a marvellous adventure — a trip in his new Wolseley from London via Cambridge and York to North Berwick. We were accompanied by my wife, Dorota. I have very nice memories from those days. Wlad, being a young father for the second time, was a warm, family man.

In North Berwick there was yet another meeting of the IFIP WG.2.1 devoted to the successor of Algol 60. After heated discussions, despite the strong criticism of some participants, Algol 68 got the official IFIP blessing. This resulted in the “minority report” signed by seven WG2.1 members, and a new IFIP Working Group, WG2.3. The event in North Berwick was followed by the IFIP Congress 68 in Edinburgh (we drove there again in Wlad’s car with yet another friend — Antoni Mazurkiewicz), where during a plenary session Algol 68 was successfully presented by Aad Wijngaarden.

- 1969-1999: WMT was a member of the IFIP WG2.3 on Programming Methodology (he resigned in 1999)

One of the very important Wlad’s initiative was the “Library of Software Engineering” published by the Polish Scientific-Technical Publisher. This was a series of over 80 texts and monographs, being either translations of the best books in the area of programming or original works by Polish authors. Since its beginning in 1969, for over 20 years, Wlad was chairing the editorial board. Being a member of this board I was able to witness his commitment to this very important activity — one could say that practically the entire Polish “élite” of computer scientists and software engineers were educated with the help of these books.

As one could already noticed, Wlad has always had an adventurous nature, and hence his decision in 1972 to join the Polish computer industry for a while. During this “incident” (lasting 5 years) Wlad was heading the Software Research Department being responsible for the design of large data systems and for implementation of OS/360 on a Polish-made RIAD mainframe (R32). Especially the latter was a painful experience.

- 1972-1977: WMT was employed by the Union of Polish Computer Manufactures MERA

Though working in the industry, Wlad was all the time closely cooperating with the scientific community in Poland and abroad. For instance, he was a member of the Program Committee of the IFIP Congress 74 in Stockholm, the Chairman of the Program Committee of the IFIP Congress 77 in Toronto, and then the Vice-Chairman of the Program Committee of the IFIP Congress 80 in Tokyo and Melbourne. Let me, however, mention also three important events in Poland organized by Wlad, which I had a pleasure of witnessing.

The first event, the international conference *Efficient Production of Large Programs*, took place in summer of 1971 in the neighbourhood of Warsaw. Besides its interesting and stimulating scientific sessions, there were also special “jokes” sessions in the evenings. Among the participants there were two persons who knew hundreds of the national-specific jokes: Brian Randell from UK, and Gennady Stolyarov from USSR. There was, however, a linguistic problem — Stolyarov’s English was not good enough for jokes, so Wlad was translating them in the both directions. Yet even for Wlad (who studied for 5 years in Moscow) this was a hard task but unexpectedly he got a help from ... Tony Hoare. The even bigger surprise came some hours – and bottles of vodka – later when Tony started to tell jokes in pure Russian (and some of them he did not dare to translate into English).

The second event was the conference *Programming Teaching Techniques* in Zakopane (the winter capital of Poland) in autumn of 1972. Many top scientists from the whole world attended, the discussions were very interesting (also often quite heated!), and – especially for the Polish participants – it was an unforgettable experience.

- 1973: WMT received the title of the extraordinary professor
- 1974: WMT received a prestigious award — the IFIP Silver Core
- 1975: WMT became a Fellow of the British Computer Society

The third one, *IFIP-INFOPOL International Conference on Information Processing*, was supposed to begin a new format of IFIP events: the main objective was to invite a number of international experts to give survey-type papers to the audience from the host country. It was Wlad’s idea, he chaired the International Program Committee and managed to a encouraged many world-class specialists to visit Warsaw in March of 1976 for a week. Again, the event was very successful and the proceedings published by North-Holland present an interesting collection of papers grouped in the following categories: Computer Networks, Computers and Universities, Computer Oriented Linguistics, Software, and Applications.

Enough is enough — in 1977 Wlad quits the industry and takes a full-time job as a professor at Warsaw University and as the Director of the Institute of Informatics. The next few years I remember pretty well, being the only Deputy-Director of the Institute of Informatics and developing with Wlad and our colleagues a new curriculum for informatics. The point was not just to propose *what to teach* but also *how to teach*. We were working on methodology and supporting material (software tools and text-books). From that time there are two important books written by Wlad: *Computer Programming Methodology*, which had an English edition (1979), two Polish editions (1980 an 1985), and the Russian edition (1982), and *Informatics: A Propaedeutic View*, which had several Polish editions and an English one (1985).

- 1977-1982: WMT was the Director of the Institute of Informatics oft Warsaw University

In 1981 another important event happened. After over 12 years of endeavours, the Polish Information Processing Society was officially established. It is not difficult to guess who became its

first President — Wlad, of course. He chaired this Society for two terms, then twice in a row was its Vice-president, and is its very first Honorary Member.

- 1981: WMT received the title of the ordinary professor

In 1983 a new adventure — Wlad was offered a joint appointment position of a Visiting Professor in Imperial College and became a real-life “implementation” of the time-sharing technique (sharing for 5 years his time between Warsaw and London). It was a very fruitful time in Wlad’s life. He became actively interested in program specifications what resulted in a well-known book (with Tom Maibaum): *Specification of Computer Programs*, 1987 and in a number of important scientific papers.

- 1983-1987: WMT was a Visiting Professor in the Department of Computing of the Imperial College of Science and Technology in London, UK

In addition to the facts which I have addressed explicitly, there were many other Wlad’s activities. Let me just point out that he was teaching and/or doing research and/or enjoying life not only in almost all countries of Europe but also in Argentina, Australia, Brazil, Canada, Egypt, Indonesia, Israel, Macau, Thailand, and the United States of North America.

- 1985-1986: WMT was a UNIDO expert for IT in Arabic countries
- 1989: WMT was elected a Distinguished Fellow of the British Computer Society
- 1991: WMT was elected a Foreign Member of the Royal Academy of Engineering in London

Besides the earlier mentioned Wlad’s involvement in editorial work, one should not forget that he is the chief editor (for over a quarter of century) of journal *Acta Informatica*, and one of the three managing editors (for over 15 years) of the *Information Processing Letters*.

As far as his academic carrier is concerned, Wlad supervised 18 PhD Theses (in Poland and abroad), wrote over 100 PhD/DSc reviews (for institutions in Australia, Canada, Great Britain, and Poland) and many reviews on grants sponsored by National Committee for Scientific Research (Poland), National Science Foundation (USA), European Commission in Brussels.

- 1993: WMT received the Officer's Cross of Polonia Restituta by the Decree of the President of Poland

Let’s now look again at some of Wlad’s more recent activities in Poland. Yet another international conference co-chaired by WMT, Andrzej Tarlecki and myself, took place in Konstancin near Warsaw in May 1995: *FMTA’94 — Formal Specifications: Foundations, Methods, Tools and Applications*. It differed from other conferences by the fact that both speakers and participants were personally invited. The conference was so interesting and successful an event that we intended to repeat it every few years. However, since 1966 all three chairpersons became involved in such time-consuming administration functions at Warsaw University that our plans have not materialized.

- 1996-1999: WMT was the Dean of Mathematics, Informatics and Mechanics Faculty of Warsaw University
- 2002: WMT received the Medal of the Commission for the National Education in Poland

How should I end my reminiscences? Very simple — Wlad is married since 1962 and has two sons and two granddaughters. I am sure that without a happy family it would be impossible to be so successful and to have all the achievements. Thus, we should all be grateful to Wlad’s wife. Thank you, Hanka!

The final version of this article was published in *Information Processing Letters* 88 (2003) to celebrate W.M. Turski’s 65th Birthday.

At the Special Event to Honour Professor W. M. Turski's 65th Birthday

SE-WMT - Structured Programming: The Hard Core of Software Engineering,
Warsaw, April 2003.



W. M. Turski standing at the table and (from the right): Tom Maibaum, Tony Hoare, Michel Sintzoff, Dines Bjørner, Niklaus Wirth, Brian Randell, Jan Madey, Michael Jackson, Cliff Jones, Manny Lehman, Andrzej Tarlecki.

For other photos from the event see: <https://etaps.org/2003/Gallery/turski/index.htm>