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COORDINATE-FREE PERSONAL MEETINGS WITH PROFESSOR ROMAN ZMYŚLONY

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Abstract

This article describes some personal meetings and memories with Professor Roman Zmyślony, in celebration of his 70th birthday, 24th of February 2016. A list of selected publications of Professor Zmyślony is also included.

Keywords: Roman Zmyślony, linear statistical models, linear inference.

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1. MIGUEL FONSECA & ROMAN ZMYŚLONY

I met Roman Zmyślony in 2001, during his visit to the Center of Mathematics and Applications in the Faculty of Sciences and Technology of the Nova University of

Lisbon. He was visiting Portugal to take part in a seminar organized by Professor João Tiago Mexia, whom he had met in 1999 in Poland. This acquaintance was, we may put it, the beginning of a beautiful friendship, not only with João Tiago Mexia, but with a large Portuguese group.

The first thing to strike me about Roman was his kind and positive nature. Always armed with a compelling smile, he is a person with whom it is incredibly easy and stimulating to be and discuss any kind of matter, scientific or other. Being so, he stimulated and deepened my interest in mixed linear models and the infinite possibilities brought by the use of linear algebra in this field of statistics (and many others).

Soon after meeting him, in 2002, he kindly agreed to be the supervisor of my Ph.D. thesis, as well as of Ricardo Covas's thesis. After that, Roman's visits to Portugal became frequent, making our friendship and scientific cooperation grow immensely. My first participation in conferences was under his invitation, at StatLin-2003, held in the Będlewo Palace, the Research and Conference Center for the Mathematical Institute of the Polish Academy of Sciences. This project reached its apex in 2007, upon Ricardo's and my Ph.D. ceremony, culminating four years of scientific research and personal growth with Roman.

But like all good endings, this one was merely the beginning of another. Throughout the recent years, Roman's visits to Portugal have been regular, as well as my visits to Poland, to the workshops in Będlewo on mixed and multivariate linear models, MMLM, organised by Augustyn Markiewicz and Katarzyna Filipiak, and to Roman's university in Zielona Góra. These meetings have resulted in published work on univariate and multivariate linear mixed models and statistical inference.

Nevertheless, what I treasure more about Roman are the happy times in his company, his sympathy, his sense of humor and his warm friendship. And let's not forget, of course, his legendary cooking skills!

2. JÚLIA VOLAUFOVÁ & ROMAN ZMYŚLONY

It is my great pleasure and honor to add several lines into this Festschrift about my first encounters with Roman.

My memories of the first meetings with Roman go back to early 80s of the 20th century, but I cannot pin down the exact date of our very first meeting. At that time I was employed as a young research associate at the Department of Theoretical methods at the Institute of Theory of Measurement of the Slovak Academy of Sciences in Bratislava, Czechoslovakia. We had a small but professionally quite strong group of statisticians working in the area of linear models under Professor Lubomír Kubáček. In mid 70s, our group of statisticians started

to organize national conferences on probability and statistics called Probatat, which at the beginning took place yearly. As soon as the meetings were well established, we managed to have one or two invited participants from the neighboring countries: Poland, former GDR, and Hungary. It was at that time that here they came, these two jovial, extremely kind, heavily smoking, un-separable friends, the late Staszek Gnot and Roman Zmyślony. Almost immediately we became good friends. After the first encounter, many more followed.

Looking back, it was a bit of a strange time. During the 70s and mid 80s, after the 1968 invasion of Czechoslovakia, there was the so called normalization period in the country. For us it meant restrictions on travel and on professional contacts outside the Eastern Block.

In the early 80s, while I was working on my dissertation, I had the opportunity to spend a couple of weeks in East Berlin, visiting the Mathematical Institute of the German Academy of Sciences. Roman was at that time working on a paper with Jürgen Kleffe hence we had a lot of opportunities to interact socially and professionally. Between trips and swims at the lake, hosted mostly by Silvelyn Zwanzig, we talked about linear models and models with variance components. Roman and Staszek Gnot had quite an influence on my professional orientation, especially the papers published in late 70s and early 80s jointly with Gnot, Gnot and Klonecki, as well as those with Kleffe, with Kleffe and Gnot. The papers that came out maybe a decade later, published jointly with Andrzej Michalski on testing hypotheses in models with variance components, have been always very motivating. Shortly after my visit to Germany, I guess it was in about 1985 or 1986, I spent several weeks in Wrocław, under the umbrella of official collaboration between the Slovak Academy of Sciences and Polish Academy of Sciences. My hosts were, who else, Roman and Staszek, and I really enjoyed their company professionally but also socially. In the 1990s there came more visits and meetings at conferences. One of the memorable ones was the conference LinStat-1993, held in Poznań, which was the second conference in this series after the first one in 1984.

It is wonderful to be Roman's friend. He has been always passionate about his work and his passion is very infectious. I wish it continued that way for many years to come.

3. SIMO PUNTANEN & ROMAN ZMYŚLONY

Once upon a time, actually on 3 June, 1984, Erkki Liski and Simo Puntanen, a duo from Tampere, stepped out of the train at the Poznań Railway Station in order to attend the International Statistical Conference in Linear Inference, held in Poznań, 4–9 June 1984, the proceedings published as [3]. At the Railway

Station they were delightfully surprised to meet Barbara Bogacka, who was sent there by Professor Roman Zmyślony to welcome and guide the two humble Finns to the conference venue. It is worth mentioning, at least in passing, that since then we have had a great pleasure to meet Barbara in interesting conference places; one of them (in addition to Istanbul 1997, Helsinki 1999, Tomar 2006) being in Linköping, Sweden, 24–28 August 2014, LinStat-2014, where Barbara gave a talk about the old good times in Special Session to celebrate “Thirty Years of the Polish-Nordic Column Spaces”; see [1].

In Poznań, the highlight for us was the Nordic-Polish Session on Thursday, 7 June 1984, at the apartment of Jan Hauke, where the atmosphere was literally high-spirited as I described in [1], in my talk entitled “I know what you did in that party on the 7th of June 1984”.

That event in Poznań in 1984 was the first time we had an opportunity to meet the well-known Polish statisticians, particularly members of the famous Polish School of Linear Models. As described by Jan Hauke & Augustyn Markiewicz [6] and Anthony Atkinson & Barbara Bogacka [2], during the 1970s, there was a group of statisticians, created under the direction of Professor Tadeusz Caliński at the Agricultural University in Poznań, who started intensive research into matrix methods with applications in statistics. Among the leading forces were in particular Jerzy K. Baksalary (1944–2005) and Radosław Kala, and their PhD students. LinStat-1984 was a very international conference and there it was very convenient to meet for the first time such celebrities like Lynn Roy LaMotte, Thomas Mathew, and Friedrich Pukelsheim, for example.

Roman Zmyślony was in big part responsible for the LinStat-1984. Erkki and I were traveling on the basis of the exchange program between the Academy of Finland and the Mathematical Institute of the Polish Academy of Sciences, where Roman was then employed (in Wrocław branch). Thus we were involved in various mutual bureaucratic activities during our visit. No problems—Roman was easy-going, relaxed but accurate as well. When returning back to Finland, we had our first stories about Roman to tell our friends. Since then, Roman has had a good bunch of friends & fans in Tampere.

It was soon clear, once you became to know Roman a bit closer, that he was (and still is, of course) a *Man of Stories*. In 1980s it was quite a difficult time in Poland, and to hear about Roman’s colorful academic experiences was extremely interesting. At one moment Roman was seriously discussing some deep mathematical problem but then there came a “social opportunity” and in no time Roman was in full swing in the middle of some exotic experience, about which he was telling to the neighboring persons. It was typical, as all those present recall, that Roman added appropriate spicy humor into his stories. Somebody should record the *Collected Stories of Roman Zmyślony*!

- Air ticket adventures in New Delhi, Calcutta and Moscow in 1983 and 1985.

- True Real Ever-lasting Love Story in Soviet Union.
- Not-so-cheap beer in Tampere.
- Arranging refreshments for a conference in Poland in 1970s.
- Stolen clothes of Professor Hilmar Drygas.
- Wrong apartment in Baltimore.
- Don't go into details—in which city am I now?

The above stories, for example, would make enjoyable chapters in that book.

Since then, after 1984, in various conferences and workshops, it has been always a particular pleasure to meet Roman, who, as is well known, most of time is in good spirits, smiling, spreading positive feelings. One of his trademarks is that he has no difficulties to ask questions or give comments after a given talk. Gentle and constructive—that is the Roman style. An old-school-gentleman's style.

Over the recent years, I have had opportunities to meet Roman mostly outside Finland but Roman, being a great traveler, has been to Tampere several times. For example, he attended the First International Workshop on Matrices and Statistics (IWMS) and the Eight IWMS, which were held in Tampere in 1990 and 1999, respectively. In 1999 his talk was on “Testing hypotheses for parameters in mixed linear models”. Linear models with its related matters belong to his major fields of interest. And, as is well known, he is a great fan of the coordinate-free approach—this explains the title of this article! For Roman's contributions in this area, see, for example, [4, 5] and [7, 8, 9].

As an organizer, Roman has been exceptionally prolific. He has some 20–30 conferences and workshops on his belt. One big one was the StatLin-2003, which, as a matter of fact, belongs to the series of LinStat conferences. (You may ask Roman why the name StatLin was used in 2003!) In 2003, StatLin/LinStat was held in Będlewo (near Poznań) as well as in 2008 and 2012. In 2010, the LinStat was held in Tomar, Portugal. Interestingly, over the last years, Roman has been extremely actively collaborating with his Portuguese colleagues. Since 1999, Roman has made numerous scientific visits to Portugal resulting in a remarkable number of papers and completed PhDs in collaboration with Professor João Tiago Mexia's group in NOVA University of Lisbon. Correspondingly, the Portuguese team has been a frequent visitor to Poland.

There is one recent development worth special attention. Namely, in Będlewo, over some 4–5 years there has been an International Research Group Meeting on Multivariate and Mixed Linear Models, shortly MMLM, supported by the Stefan Banach International Mathematical Center, and organised by Katarzyna Filipiak and Augustyn Markiewicz. The number of participants has been mostly below 20

and the mutual discussions on joint problems are the main and most significant part of the meeting. I have had an opportunity to attend these biannual meetings since 2013 and each time the impact of Roman has been essential; he has been the driving force in scientific discussions and, needless to say, in the bit more relaxed social events.

4. PH.D. SUPERVISIONS

- Miguel Fonseca. *Inference and Hypothesis Testing in Mixed Linear Models*, Nova University of Lisbon, 2007.
- Ricardo Covas. *Orthogonal Mixed Models and Commutative Jordan Algebra*, Nova University of Lisbon, 2007.
- Jacek Bojarski. *Nonnegative Bayesian Estimation for Nonnegative Functions of Parameters in Linear Models*, Technical University of Zielona Góra, 2000.
- Edward Gąsiorek. *Estimation and testing hypothesis in Mixed Models*, Technical University of Zielona Góra, 2000.

5. SELECTED PUBLICATIONS OF PROFESSOR ROMAN ZMYŚLONY

5.1. Articles

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2. Francisco Carvalho, Roman Zmyślony, and João Tiago Mexia. Normal models with Orthogonal Block Structure. *International Journal of Mathematical and Computational Methods*, 1:159–164, 2016.
3. Anuradha Roy, Roman Zmyślony, Miguel Fonseca, and Ricardo Leiva. Optimal estimation for doubly multivariate data in blocked compound symmetric covariance structure. *J. Multivariate Anal.*, 144:81–90, 2016.
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5. Ricardo Covas, João Tiago Mexia, and Roman Zmyślony. Lattices of Jordan algebras. *Linear Algebra Appl.*, 432(10):2679–2690, 2010.

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14. Heinz Neudecker, Roman Zmyślony, and Götz Trenkler. Classroom note: Estimation of the cross-product of two mean vectors. *International Journal of Mathematical Education in Science and Technology*, 34(6):928–935, 2003.
15. Miguel Fonseca, João Tiago Mexia, and Roman Zmyślony. Estimators and tests for variance components in cross nested orthogonal designs. *Discuss. Math., Probab. Stat.*, 23(2):175–201, 2003.
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5.3. Books

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6. PHOTOGRAPHS



PHOTO 1. Zielona Góra, 12 March 2016, Jubilee of the 70th Birthday.



PHOTO 2. Poznań, June 1984, LinStat: Roman with Radosław Kala and Friedrich Pukelsheim.



PHOTO 3. Tampere, August 1990, IWMS#1: Jerzy K. Baksalary talking. 1st row: Shanti S. Gupta, J. N. Srivastava, Song-Gui Wang, Götz Trenkler, Stanisław Gnot; others from left: Jürgen Kleffe, Roman, Augustyn Markiewicz, Jan Hauke, Tonu Kõllo.



PHOTO 4. Tampere, August 1990, IWMS#1: Roman with Jerzy K. Baksalary and Götz Trenkler.

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PHOTO 5. Tampere, August 1999, IWMS#8: Tsuyoshi Ando, Roman, Theophilos Cacoulios, S.P.



PHOTO 6. Będlewo, August 2003, StatLin: Tadeusz Caliński, Radosław Kala, Götz Trenkler, Roman, Augustyn Markiewicz.



PHOTO 7. Będlewo, August 2003, StatLin: “Robin” Zmysłony hunting for Conference Dinner.



PHOTO 8. Będlewo, 25 September 2017, MatTriad: Júlia & Roman.



PHOTO 9. Będlewo, August 2004, IWMS#13: Audience listening.



PHOTO 10. Będlewo, 19–21 August 2004, IWMS#13. Celebrating Ingram Olkin's 80th birthday.



PHOTO 11. Będlewo, 21-25 April 2008, LinStat. Celebrating Tadeusz Caliński's 80th birthday.

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PHOTO 12. Tomar, 23–26 July 2008, IWMS#17. Celebrating T.W. Anderson's 90th birthday.



PHOTO 13. Tomar, July 2008, IWMS#17: Roman with Júlia, Jan Hauke and Lynn Roy LaMotte.



PHOTO 14. Smolenice, Slovakia, June 2009, IWMS#18: Roman & Frank J. Hall. In the background Alastair J. Scott.

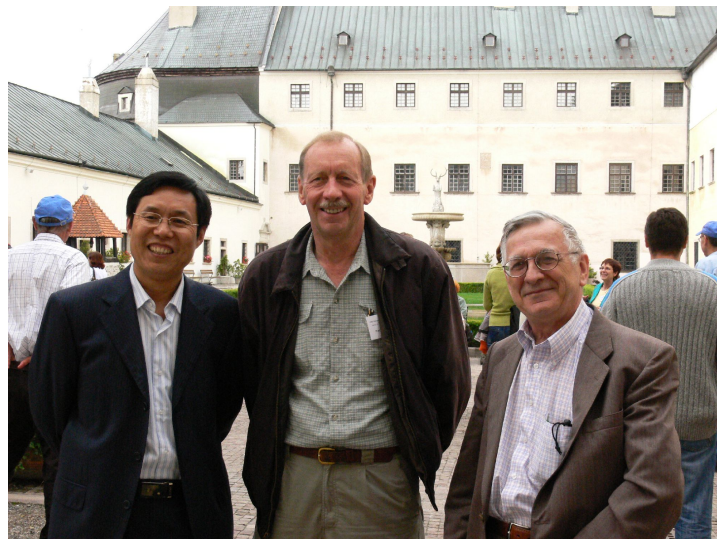


PHOTO 15. Smolenice, Slovakia, June 2009, IWMS#18: Yonghui Liu, Karl Gustafson.



PHOTO 16. Smolenice, Slovakia, June 2009, IWMS#18: Júlia, Roman & Soile P.



PHOTO 17. Będlewo, 22 October 2013, International Research Group Meeting on Multivariate and Mixed Linear Models (MMLM): Tadeusz Caliński, Miguel Fonseca & Roman.



PHOTO 18. Będlewo, 13 November 2014, MMLM Research Group Meeting: Augustyn Markiewicz, Dietrich von Rosen, Daniel Klein, S.P., Tonu Kõllo, Miguel Fonseca, Anuradha Roy, Martin Singull, Roman, Luis Fonseca.



PHOTO 19. Będlewo, 13 November 2014, MMLM Research Group Meeting: Roman with Miguel & Luis Fonseca in “Tiger’s Corner”, Anuradha Roy in the background.

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PHOTO 20. Będlewo, 14 November 2014.



PHOTO 21. Będlewo, 7 March 2015: Augustyn Markiewicz, Birgit & Götz Trenkler.



PHOTO 22. Będlewo, 10 November 2015, MMLM Research Group Meeting: Roman with Tadeusz Caliński & João Tiago Mexia.



PHOTO 23. Będlewo, 12 November 2015, MMLM Research Group Meeting: behind the table: Dietrich von Rosen, Francisco Carvalho, Augustyn Markiewicz, Katarzyna Filipiak.



PHOTO 24 Roman in his Jubilee speech. Zielona Góra, 12 March 2016.



PHOTO 25 Thomas Mathew, Miguel Fonseca, João Tiago Mexia and Roman. Baltimore, USA, 2011.



PHOTO 26 Thomas Mathew, Bimal K. Sinha and Roman. Baltimore, USA, 2011.

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PHOTO 27 Jan Hauke, Miguel Fonseca, Roman and Ricardo Covas. Tomar, Portugal, 2008.



PHOTO 28 Augustyn Markiewicz, Roman and Katarzyna Filipiak. Będlewo, 2007.



PHOTO 29 Roman with a smile. Tomar, Portugal, 2008.

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