POISSON GEOMETRY
BANACH CENTER PUBLICATIONS, VOLUME 51
INSTITUTE OF MATHEMATICS
POLISH ACADEMY OF SCIENCES
WARSZAWA 2000

STANISŁAW ZAKRZEWSKI (28.6.1951–30.4.1998)

It is not easy to write about a friend in the past tense when the normal workday started with a conversation with him. The room in which he worked was the first place to visit after coming to the Institute. It was a time to exchange the newest ideas and doubts, which more often than not turned into ideas. It was a time of mutual inspiration. We miss those moments very much. Staś Zakrzewski came to Warsaw as a student of UAM (Adam Mickiewicz University) in Poznań to write his master's thesis under the supervision of one of us (JK) at the Chair of Mathematical Methods in Physics. After obtaining his M.Sc. diploma in Physics at UAM he started to work (on October 1, 1974) at the Chair. From the very beginning, his interests focused on geometric fundamentals of classical mechanics and field theory, and especially around the language of correspondence between classical and quantum physics. This was also the subject of his doctoral thesis, written under the direction of JK and defended on October 5, 1981. Work with W. M. Tulczyjew in the eighties exerted a significant influence on Staś. Despite a small number of publications, Staś acquired a profound understanding of symplectic geometry and the relations (not just mappings) in mathematical physics. His original results in pseudo-categories of differentiable relations and their phase lifts permitted him to find his own point of view on problems concerning the correspondence between classical and quantum physics. It turned out to be especially successful in linking the theory of quantum groups and their quasi-classic version (i.e. Lie-Poisson groups). S. L. Woronowicz discusses this in detail. Results in this field brought Staś fame and well-deserved renown. We shall long remember the Thursday morning when news of his death reached us. Only the previous day we exchanged e-mail, discussing plans after his return. And now only his work remains, and memories, and the awareness that there was so much more we could have learned from him.

Jerzy Kijowski, Paweł Urbański

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My closer scientific collaboration with Stasio began in the late eighties and involved the theory of quantum groups. His path to quantum groups led through differential geometry, symplectic structures and groupoids. I, on the other hand, delved into the theory from the side of algebra of operators. We therefore complemented each other perfectly, except that Stasio knew his way around my "backyard" much better than I did around his. Quite early, he acquired profound understanding of relations between certain defects in the theory on the geometric level (noncompleteness of certain vector fields) and

difficulties with the construction of specific quantum groups on the level of C^* algebras. This permitted him to anticipate which groups will allow quantization. For example, in agreement with his forecasts for the group sequence of $SU(2)$, $E(2)$ and $SU(1,1)$ only the first allows direct quantization. Certain problems may appear in the second, and for the third, quantization on the level of C^* algebras does not exist. Initially, I regarded these forecasts with certain skepticism, but I quickly found out that Stasio was correct in each case and his suggestions were very helpful. Unfortunately, busy with my work, I did not go to the trouble of even casually acquainting myself with his theory. It did not seem necessary. After all, I could peek anytime into the neighbouring room where Stasio would put aside his work and deal with my question.

I have two joint publications with Stasio, both on the quantum Lorentz groups. In one we classified all quantum deformations of the classic Lorentz group, while the other contains a complete description (on the C^* level) of the quantum Lorentz group permitting a Gauss decomposition. Death interrupted work on our third publication. In it, we have managed to construct a quantum deformation of the "$ax + b$" group, i.e. the group of affine transformations of the straight line. This is one of those cases where analysis on a quasi-classic level shows that significant difficulties are to be expected. Thanks to Stasio's finesse, the analysis also showed how to overcome those difficulties. The publication is almost finished and we obtained most of the results together. Stasio had time to write the introduction. Unfortunately I was not able to relate to it in the current version of the text written by myself. That is the reason the work has not yet been submitted for publication.

Discussions with Stasio were very interesting. He could speak very clearly and he emphasized precisely the significant landmarks in his thought process. This happened when he knew his interlocutor well and had enough time on his hands. When he spoke to an unknown group of listeners though, and was also constrained by time, he wanted to get across too much information at once and became hard to follow because of too many digressions. It is a fact, though, that with time his lectures and readings became better. His last reading at IHES at Bures-sur-Yvette was highly praised.

Stasio was always open to problems appearing in his colleagues' work. The best example of this is the theory of kappa-deformation of the Poincaré group developed in Wrocław and Łódź. In its original form, it was the enveloping algebra of the Poincaré group that was subject to deformation. It seemed a difficult task to find an appropriate deformation of the algebra of functions on the group. Stasio solved the problem in passing, working it out on his favourite quasi-classic level.

I was one of the reviewers of Stasio's habilitation thesis. Based on the knowledge I possessed at the time, I marked it very highly. As I see it now, though, I was not then able to judge all the merits of his work and its potential uses. Stasio always tackled difficult and important issues. He was somewhat ahead of those who read his work. That is why their value was not immediately apparent. As time passed, Stasio gained more and more esteem among the experts dealing with symplectic geometry, groupoid theory and quantum groups. At the moment of his death he was already a renowned and highly valued scientist.

Stanisław L. Woronowicz