

Reminiscence from the old IMPA

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I spent there the academic year 1979/1980. I was invited by Jacob Palis; it resulted in particular from his contacts with Czeslaw Olech, then director of IMPAN in Warsaw, whom Jacob always mentioned as his good friend. The building of IMPA was that time at Rua Luis de Camoes in the center of Rio. I was with my wife Jolanta, also a mathematician. We shared an office in the basement with Bierstone. Neighbour office was shared by Maria Jose Pacifico (Zeze) and Ricardo Mane. I did not meet Ricardo often, he was coming afternoon when I was leaving early to have a time to swim in the ocean. The bus ride from and to Copacabana where I was living was quite exhausting, in the heat and congested streets. I run a small seminar with Ricardo on suggestion of Jacob related to entropy conjecture. This was the time short after I proved the upper estimate of the topological entropy by growth of integrals of volumes of images of hypercubes under dynamics Invent math. (1980) and when Mane invented his elementary proof of Pesin entropy formula.

During my year at IMPA I read carefully the fundamental paper S.Newhouse, J.Palis, F.Takens, „Bifurcations and stability of families of diffeomorphisms”, Publ. IHES 1983, that time in a preprint form. It resulted with my „Chaos after bifurcation of a Morse-Smale diffeomorphisms through a one cycle saddle-node and iterations of multivalued mappings of an interval and a circle” Bol. Soc. Bras. Mat. (1987). Jacob with coauthors proved instability in dimension 2 with in particular Henon-like attractor phenomena, which I attempted to do in 3D saddle-like Henon.

I remember a long session with Jacob answering my numerous questions, in his big office, interrupted from time to time by telephone calls to him. I admired how he could concentrate in such circumstances to understand me and give exhausting answers. I understood that I was discussing with a great mathematician. We have maintained contacts by my several visits to already new IMPA and fruitful participation in Trieste ICTP schools and conferences.