

JIRÍ MATOUŠEK

1963 – 2015

Memories of Jiří Matoušek in Japan

I first saw Jirka at SOCG1990 in Berkeley, where he gave the opening talk on his seminal work on cutting hyperplane arrangement. He wore white casual shirts, looked delicate, and spoke dispassionately with low and characteristic voice (with good contrast to Pankaj, another young star in the conference). I felt that I was seeing a picture of a young genius.

Fortunately, Prof. Hiroshi Imai of U. Tokyo invited him to Japan in 1991, and I had opportunity to guide him. After talking in my office, we attended a workshop, where he whispered to me 'Takeshi, I think I have a solution to your problem, if I understand it correctly.' We escaped from the workshop, and wrote a small paper (Complexity of Projected Images of Convex Subdivisions. CGTA (1994)).

Jirka visited us many times after that, sometimes with his family. His talks given calmly using a blackboard and a small memo in his hand enchanted us, and his books were eagerly read and translated into Japanese.

I found Jirka was delicate, scholastic, curious, faithful and unique, and it was fun to work with him. He often spoke euphemistic, and considered carefully before making action. I remember the first time I took him to the cafeteria of my office (IBM Tokyo Research) for lunch. He gazed at the samples (partially plastic imitations) displayed in the showcase, wanted me to take time to explain each of them, and then asked 'Then Takeshi, what is your recommendation'. He replied 'Well, it looks promising' to my suggestion, grinned happily, and enjoyed lunch. Ms. Mary Inaba, who evidenced it and later became an associate professor of U. Tokyo, described him as a 'charming and complicated boy', and became a good friend of Jirka's family.

In 2005, a research project named New Horizon of Computing lead by Kazuo Iwama started in Japan, and we invited him to its kick-off symposium in Kyoto. Since it was his policy not to travel for a symposium/conference, we persuaded him to come to give a talk on the last day and then work privately with Tetsuo Asano (currently the president of Japan Advanced Institute of Science of Technology) and me. At a nice coffee shop in Kyoto, Tetsuo showed us a picture of the distance trisector curve, which he had just invented. To our surprise, the first

action of Jirka was to compute the Taylor expansion of the curve using Mathematica. He grinned and told us that he loved to do such experiments to investigate problems. The research was successful, and we submitted a paper to STOC. I was a little afraid that it might be out-of-scope, but Jirka did not consider any possibility of rejection, and proposed to submit its journal version to a good mathematical journal without waiting for STOC's acceptance. The suggestion was wise since the paper (The distance trisector curve. *Advances in Math.* 212 (2007), no. 1, 338-360) has been widely read and a group of mathematicians resolved one of our conjectures.

Jirka had his own aesthetic sense in selecting the journals to publish papers. The following is his email (with some editing) replying my suggestion to submit another paper to *Advances in Mathematics*.

"I'm not so keen about *Advances* since it's an Elsevier journal (which is the worst, in terms of prices and policy, among the publishers, I think). Some other possibilities might be, say, *Israel J. Math.*, *GAGA*, *JOURNAL FUR DIE REINE UND ANGEWANDTE MATHEMATIK* (Crelle), or *Math. Annalen*. For *Annalen* or *Crelle* I've never tried, so we could try just for the fun of it. but *DCG* of course is a natural place too. or still something else ... what do you think? best, Jirka"

I naturally liked his idea to have a paper in one of those legendary journals, and we published the paper in *Math. Annalen* (Zone diagrams in Euclidean spaces and in other normed spaces. *Math. Ann.* 354 (2012), no. 4, 1201-1221.)

Jirka was interested in not only mathematics but also culture, history, life, and even politics. The following is the reply to my invitation in 2008.

"Thanks for the invitation, I'm seriously interested in coming. I can't promise 100% I'll make it but I hope so. Best, Jirka

P.S. one thing that slightly discourages me - I've heard that Japan now takes (or will take) fingerprints of all visitors, like the US. Do you know anything about it? I find it very unpleasant (even though I probably have nothing to hide...)."

I really miss Jirka, a friend with humanity, kindness, leadership, and sense of humor. However, a privilege of great mathematicians is that they will live forever as legends by their works, and our research community will never forget him. I feel I hear his voice saying "Takeshi, do not worry. I will manage to find papers and a blackboard in the heaven".

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