# Józef Siciak: a great mathematician and a faithful friend

Kraków, 2019 February 18

Christer Oscar Kiselman



#### **People**

Bogdan Bojarski (1931–2018),

Jan Krzyż (1923–2009),

Stanisław Łojasiewicz (1926–2002),

Czesław Olech (1931–2015),

Andrzej Pelczar (1937–2010),

Jerzy Smolicz, University of Adelaide (1935–2006),

Lucien Waelbroeck (1929–2009),

Bogdan Ziemian (1953–1997).

**▼ロト ◆御 ト ◆ 恵 ト ◆ 恵 ・ 夕** ♀ ○

#### 1974, Karków

I met Józef Siciak the first time here in Kraków in 1974, when he invited me to the *Conference on Analytic Functions* 1974 September 04–11.

According to the list of participants, there were 119 of them. No less than 57 talks where given.

During the conference we visited *Kopalnia soli Wieliczka*.

I lectured on September 06: *On the radius of convergence of an entire function in a normed space.* 

I chaired the morning session of September 05. The first speaker was Pierre Lelong, 09:00–10:00. He lectured in French.

Józef said: "You are a very good chairman."

2



#### More people I have met (in Poland)

Zbigniew Błocki, Jacek Bochnak,

Rafał Czyż, Małgorzata Downarowicz,

Ludwik Drużkowski, Armen Edigarian,

Adam Janik, Piotr Jakóbczak,

Marek Jarnicki, Jerzy Kalina,

Giorgio Khimshiashvili, Sławomir Kołodziej,

Marta Kosek, Ewa Ligocka,

Julian Ławrynowicz, Peter Pflug,

Wiesław Pleśniak, Kamil Rusek,

Małgorzata Stawiska, Bolesław Szafirski,

Tadeusz Winiarski, Włodzimierz Zwonek,

. .

#### People I have met in Stockholm

Bogdan Bojarski (already  $\approx 1960$ ),

Wojciech "Wojtek" Gościcki → Paul Vaderlind,

Bronek Krakus,

Krystyna M. Kuperberg, Włodzimierz Kuperberg (now in the US),

Nina Świerszczyńska,

Pepe Winkler, his wife Ewa.



#### The Pluricomplex Seminar 1974–1998

Wojciech Abramczuk = Richard Bonner 840323, 840924

Zbigniew Błocki 941013, 950517, 951016, 960506,970407

Bogdan Bojarski 830321, 850306, 910225

Jerzy Kalina 770525, 770531

George Khimshiashvili 960219, 970307

Maciej Klimek 930330, 930920, 940321, 940418, 940516, 941024, 941212, 960415, 960923, 961111, 961125, 971201,

980209, 981019

Sławomir Kołodziej 920526, 930510, 941031, 950522, 960506

#### People I have met in Uppsala

Wojciech Abramczuk → Richard F. Bonner (now in Västerås).

Maciej Klimek, his wife Grażyna,

Michał Kwieciński,

Grzegorz Łysik,

Czesław Olech.

Wiesław Pawłucki

Ryszard Rubinsztein,

Maciej Sikorski, his wife Wanda (later in Västerås; now in Stockholm),

Małgorzata Stawiska,

Hanna "Hania" Uscka-Wehlou, my doctor #16 (since 2013 officially Hania),

Pepe Winkler, his wife Ewa.



#### The Pluricomplex Seminar 1974-1998, cont'd

Michał Kwieciński 950523

Grzegorz Łysik 911111

Wiesław Pawłucki 890313

Wiesław Pleśniak 820426, 931102, 971027

Józef Siciak

840410: Balanced domains of holomorphy of type  $H^{\infty}$ ,

960514: Families of compact sets in  $\mathbb{C}^n$  with equicontinuous pluricomplex Green function

Bogdan Ziemian 841022, 850327

7

0

#### 1967, Paris

Let us jump back a little. On 1967 December 04, Józef was invited by Pierre Lelong to talk at his *Séminaire*. His title was *Separately analytic functions and envelopes of holomorphy of some lower dimensional subsets of*  $\mathbb{C}^n$  (LNM 71, 1968).

We did not meet there; I gave a talk later, on 1968 March 13.

◆ロ > ◆ 部 > ◆ 重 > ◆ 重 ・ 夕 Q で

## 1976, Uppsala

Józef Siciak was invited as a guest professor to Uppsala University during six weeks.

11

#### 1971, Paris

On 1971 February 24 and March 03, Józef was invited again to talk at *Séminaire Lelong*. His title was *A polynomial lemma and analytic mappings in topological vector spaces* (LNM 275, 1972).

10



#### 1976, Kraków, Łódź

In 1976 I went to Gdańsk by ship and then flew to Kraków on September 14.  $\mid$ 

Lecture at the meeting of the Polish Math Society in Kraków September 20:  $\delta$ -plurisubharmonic functions, announced as Funkcje  $\delta$ -plursubharmoniczne. The venue was UJ, Reymonta 4.

To Łódź September 20, invited by Julian Ławrynowicz. A short visit to Kielce and a lecture there.

Left Poland on September 28.

12

#### 1977, Paris

Józef was a guest professor at Paris VI for two months in the spring.

13



### 1978, Joensuu

After the big congress in Helsinki, Ilpo Laine invited us to Joensuu for the *Colloquium on Complex Analysis*, August 24–27.

Józef's talk, on August 24, had the title *On holomorphic extendability of functions on generic real analytic submanifolds*.

My talk, on August 26, had the title *On the density of plurisubharmonic functions: a short proof of Siu's theorem.* 

As mentioned, I came by car from Uppsala. I could drive also Józef to Joensuu, but he went back to Helsinki by train.

15

#### オロトオポトオミトオミト ミ からで

#### 1978, Helsinki

Both Józef and I participated in the International Congress of Mathematicians (ICM) in Helsinki, August 15–23.

The participants from Poland came in a ship and slept in the harbor of Helsinki, a very practical arrangement ...

I came with my car from Uppsala with Urban Cegrell (my doctor #2, 1975) and Aboubakr Bayoumi (then a PhD student; my doctor #4, 1979).

14



## 1978, Uppsala

Józef was invited to Uppsala University for about two weeks in November.

He lectured on *Approximation of rational functions with a fixed finite set of poles*.

16

#### 1979, Kozubnik, Warsaw

Meeting in (Pluri)Kozubnik: 7th Conference on Analytic Functions, April 18–26.

Lecture: *Growth of plurisubharmonic functions.* 

To Warsaw April 26: *Semester on Complex Analysis*, Banach Center, April 26 — May 09.

Józef's talk had the title *On the equivalence between locally polar and globally polar sets in*  $\mathbb{C}^n$ .

I talked on *The use of conjugate convex functions in complex analysis*.

17



#### 1981, Wimereux

A big conference in honor of Pierre Lelong. Many people from several complex variables were there (LNM 919, 1982).

19

#### 1979 December 14, Kraków

Karolina is born!

(Ten years minus three days after my daughter Vanda Karolina.)

18



## 1982, Warsaw

Delegate at the General Assembly of the International Mathematical Union in Warsaw, August 8–9.

Delegate at the European Mathematical Council, Warsaw, August 10.





#### 1982, Błażejewko

To Poznań and Błażejewko August 19: 8<sup>th</sup> Conference on Analytic Functions (LNM 1039, 1983).

We could all swim in a nice lake!

Józef's talk: *Pluripolar sets and capacities in*  $\mathbb{C}^N$  (not published in LNM 1039).

My talks: *On the growth of restrictions of plurisubharmonic functions* (not published in LNM 1039);

The growth of compositions of a plurisubhharmonic function with entire mappings (published in LNM 1039).

Leaving Błażejewko August 27.

21



## 1983, Toulouse

In Toulouse May 24–27, there was a conference with 77 participants and 22 lectures.

Józef talked on *Highly noncontinuable functions on polynomially convex sets.* 

My title was: Sur la définition de l'opérateur de Monge-Ampère complexe.

#### 1982, Tokyo

Józef was invited to Sophia University in Tokyo around October. As a result the university published in October 1982 his lectures:

Siciak, J. 1982. Extremal plurisubharmonic functions and capacities in  $\mathbb{C}^n$ . Sophia Kokyuroku in Mathematics 14. Tokyo: Sophia University, 97 pp.

22



#### Toulouse, but when?

Józef was invited to conferences in Toulouse in 1976, 1983, 2004 and 2008 ... maybe more times. Once, maybe in 1983, he had trouble with his knees. We went to a pharmacy ... without a prescription ...

Vive la France!

24

**▼ロト ◆御 ト ◆ 恵 ト ◆ 恵 ・ 夕** ♀ ○

## 1984, Uppsala, Umeå

Józef was invited to Uppsala University April 02–13. Also in Umeå.

Lecture: Approximation by transcendental polynomials.

25

#### 1987, Warsaw

72nd World Congress of Esperanto (UK 72): Warsaw July 25 — August 02.

There were 5946 participants.

#### 1985, Varna

Józef and I—and many others—participated in the *International Conference on Complex Analysis and Applications* in Varna, May 05–11.

Józef talked about *An extension of Abel's lemma to the n-dimensional case with examples of applications.* 

My title was Asymptotic approximation of plurisubharmonic functions in pseudoconvex domains.

26



#### 1988, Uppsala

Józef was elected a foreign member of the Royal Society of Sciences of Uppsala.

28

27

オロトオポトオミトオミト ミ からで

4□ > 4回 > 4 巨 > 4 巨 > 0 Q ○

#### 1988, Institut Mittag-Leffler

In the spring, Józef was invited as a visitor to the program of several complex variables at Institut Mittag-Leffler by John Erik Fornaess and me.

The whole academic year 1987/88 at IML was devoted to several complex variables.

29

#### 1990, Beskid Żywiecki

Józef was one of the organizers of a conference, May 30 – June 07. (I could not go.)

#### 1988, Halle

Józef was an invited speaker at a conference in Halle, December 12–17.

30



## 1990, Warsaw

Semester on Partial Differential Equations at the Banach Center in Warsaw, November 19–30.

Lecture on November 28: *Analytic continuation of fundamental solutions*.

31

32

**→□→→□→→車→車→車の**900

**▼ロト→御ト→草ト→草→ 草 り**90℃

#### 1992, Warsaw

Semester on Complex Analysis at the Banach Center in Warsaw, November 22 — December 05.

Lecture on December 03: Attenuating the singularities of plurisubharmonic functions.

33

イロトイ団トイミトイミト ミ めのぐ

### 1996, Uppsala

Józef was appointed to be the official faculty opponent at the thesis defense of Stefan Halvarsson on May 15 (my doctor #10).

Title of Stefan's thesis: Duality in Convexity Theory Applied to Growth Problems in Complex Analysis.

#### 1993, Uppsala

Józef Siciak's former doctoral student Sławomir Kołodziej was appointed to be the official faculty opponent at Stanley Einstein-Matthews' thesis defense on May 08 (my doctor #9).

Title of Stanley's thesis: *Extremal Plurisubharmonic Functions* and Complex Monge–Ampère Operators.

34

4□ > 4回 > 4 = > 4 = > = 900

#### 1997, Kraków

Kraków May 10-17.

My lecture: Lineal convexity.

36

30

→□→→□→→□→→□→□ → へへ○

**▼ロト→御ト→草ト→草→ 草 り**90℃

#### 1999, Saltsjöbaden

Józef was one of many invited speakers at a conference April 22–25, held in Saltsjöbaden, southeast of Stockholm: *Nordan 3, A Marcus Wallenberg Symposium on Complex Analysis in Several Variables*.

## 2001, Uppsala

Józef receives the title of *Doctor honoris causa* at Uppsala University, 2001 January 26. (I am the promotor.) Karolina is with him in Uppsala.

38

4□ > 4□ > 4□ > 4□ > 4□ > 4□



37

#### 2001, Bielsko-Biała

In September: Conference on Complex Analysis.

Lecture: Lineal convexity.

"The toast proposed by Christer O. Kiselman". [Speech at the occasion of a conference in honor Józef Siciak, Bielsko-Biała, September, 2001.] *Annales Polonici Mathematici* **80** (2003), 19–20.

#### 2002

Elected member of the *Polska Akademia Umiejętności* (Polish Academy of Arts and Sciences, PAU). Confirmed by the President of the Republic of Poland on July 12.

40

39

◆ロト ◆御 ト ◆ 恵 ト ◆ 恵 ・ 夕 Q ②

**▼ロト→御ト→草ト→草→ 草 り**90℃

#### 2003, Stockholm

I received the Diploma of Membership in the *Polska Akademia Umiejętności* from the ambassador of the Republic of Poland to Sweden, Marek Prawda, on June 10.

Piotr Cegielski, Councellor, Director of the Polish Insitute. Aleksandra Czapiewska, Councellor. |

I gave a speech in Swedish; Hanna "Hania" Uscka-Wehlou translated it into Polish.

41

◆□ > ◆□ > ◆豆 > ◆豆 > 豆 め Q @

#### 2011, Kraków

Conference in honor of Józef in Kraków 2011 July 04–08. I was a member of the Scientific Committee.

Banquet in the salt mine Kopalnia soli Wieliczka.

#### 2006, Kraków

To Kraków on December 03.

Lecture on December 04: *Holomorphic functions on discrete sets in one and several variables.* 

Lecture on December 06 at the *Polska Akademia Umiejętności* (PAU) on Esperanto: *Esperanto: its origins and early history*.

Later published in 2008 in *Prace Komisji Spraw Europejskich PAU*. Tom II, pp. 39–56. Ed. Andrzej Pelczar. Kraków: Polska Akademia Umiejętności, 2008, 79 pp. |

Józef suggested the topic.

Chair and Editor: Andrzej Pelczar.

42



## 2012, Kraków

Congress of the European Mathematical Society (ECM) in Kraków July 02–06.

44

43

オロトオポトオミトオミト ミ からで

4日 → 4団 → 4 重 → 4 重 → 9 Q (\*)

## 2014, Będlewo, Poznań, Warsaw

June 30 — July 05. Będlewo: *Conference on Constructive Approximation of Functions* in honor of Wiesław Pleśniak.

Main organizer: Marta Kosek.

Lecture on July 04: Weak lineal convexity.

July 05 to Poznań, Adam Mickiewicz University. Meeting with Ilona Koutny, professor of Finno-Ugric languages. She informs me about her work on interlinguistics.

July 06 to Warsaw. Visit to a small museum directed by Bolesław Szenicer, President of the *Gmina Wyznaniowa Starozakonnych w RP*.

Visit to the Muzeum Historii Żydów Polskich (POLIN).

45



#### 2017, Warsaw

December 13–15: Conference at the *Muzeum Historii Żydów Polskich* (POLIN).

Lecture on December 13: Zamenhof's Yiddish grammar and his Universal Language

47

#### 2017, Wrocław

To Wrocław December 08, invited by Małgorzata Komarnicka. On December 10, visit to the *Synagoga Pod Białym Bocianem we Wrocławiu*, guided by Aleksander Gleichgewicht, who shows us the synagogue and tells us about the history of the Jews in Silesia, Śląsk.

Roman Dobrzyński talks about his book Zamenhof in Warsaw.

Lecture on December 11: La genezo de esperanto: la lingvoj de Zamenhof (The origin of Esperanto: Zamenhof's languages) at the Klub Muzyki i Literatury.

Train Wrocław – Warsaw on December 12.

46



## Józef Siciak: a great mathematician and a faithful friend

So many meetings, so many encounters, so many discussions,

in Kraków, Uppsala, Helsinki, Joensuu, Kuzubnik, Warsaw, Wimereux, Błażejewko, Toulouse, Bielsko-Biała, Institut Mittag-Leffler, . . .

Eighteen doctors (1971–1995) and 113 descendants in the *Mathematics Genealogy Project*;

85 + 4 items in *MathSciNet* (1957–2016).

## A very rich life







## Dziękuję bardzo!

49

(□▶◀♬▶◀불▶◀불▶ 불 쒸٩♡