In memory of Prof. Jonathan Borwein

by Debashish Sharma - Sunday, August 07, 2016

http://gonitsora.com/memory-prof-jonathan-borwein/

Prof. Jonathan Borwein was a distinguished Scottish mathematician, widely known for his contribution to experimental mathematics, and reputed as the most renowned π expert. He left for his heavenly abode on 2nd August 2016. He was a Laureate Professor in the School of Mathematical and Physical Sciences at the University of Newcastle (NSW), Australia. He also had adjunct appointments at Chiang Mai University, Dalhousie University and Simon Fraser University. He was the director of the University of Newcastle's Priority Research Centre in *Computer Assisted Research Mathematics and its Applications* (CARMA).

Prof. Jonathan Borwein (Photo Source : http://experimentalmath.info/blog/2016/08/jonathan-borwein-dies-at-65/)

Born in 1951 in St. Andrews, Scotland, he received his B.A. with honours in Mathematics from the University of Western Ontario in 1971. Thereafter he received his D.Phil from Oxford University in 1974 as an Ontario Rhodes Scholar. Throughout his career he held academic positions in a number of reputed universities, notable among which are Dalhouise University, Carnegie-Mellon University , Simon Fraser University, University of Newcastle and Chiang Mai University. He was a co-founder of a software company **MathResources** , which produces highly interactive software primarily for school and university mathematics.

Prof. Jonathan belonged to a very learned family. His father David Borwein is a well known mathematician and his mother Bessie Borwein is a prominent anatomist, both associated with the University of western Ontario. Prof. David Borwein currently holds both an Emeritus and an Adjunct professorship at the University of Western Ontario. Even at the age of 92 he is still active in research, particularly in the fields of classical analysis and summability theory. Prof. Jonathan's brother Peter Benjamin Borwein is also a reputed mathematician, who is currently a professor at Simon Fraser University. Interestingly, the father son trio were co-researchers too.

Research interests of Prof. Jonathan included pure (analysis), applied (optimization), computational (numerical and computational analysis) mathematics, and high performance computing. He had authored more than a dozen books, recent ones being on *Experimental Mathematics* and mathematical computation. His 2010 book on Convex Functions was a *Choice* 2011 Outstanding Academic Book. His most recent coauthored books are "Lattice sums then and now" (2013) and "Neverending Fractions" (2014), both with Cambridge University Press. The Institute for Science Information had listed him as one of the 250 most cited mathematicians for the period 1980-1999 with more than 6,500 ISI citations; one of his papers being cited 666 times. Prof. Jonathan was a voracious researcher with 388 research papers in reputed journals and 103 articles in refereed or invited conference proceedings to his name. Apart from these academic accomplishments, he also contributed numerous articles on mathematics,

science and society for the Math Drudge blog, the Conversation and the Huffington Post.

Notable among the works of Prof. Jonathan is his fascination for π. The Borwein brothers had devised an algorithm known as Borwein's algorithm to calculate a precise value of $\dfrac{1}{\pi}$. In 1989, Jonathan Borwein, Peter Borwein and David H. Bailey of NASA published a paper which showed a proof for computing one billion digits of pi. For this achievement they were awarded the Chauvenet Prize and the Merten M. Hasse Prize in 1993.

Prof. Jonathan had received Fellowship in the Royal Society of Canada (94), Fellowship in the American Association for the Advancement of Science (02), an honorary degree from Limoges (99), and was a Foreign Member of the Bulgarian Academy of Sciences (03). In 2010 he was elected a Fellow of the Australian Academy of Sciences. He had also become a 2015 Fellow of the American Mathematical Society and of the Royal Society of New South Wales.

Unfortunately for the mathematics community, Prof. Jonathan left for his heavenly abode on 2nd August 2016. He was 65. He leaves behind his wife, Judith and his three daughters Rachel, Naomi and Tova. His untimely death is indeed a great loss for the entire mathematics community. His presence would have enriched the subject with many more ideas and discoveries. All members of GonitSora offer their sincere condolences to the departed mathematician. May his soul rest in peace !

Sources :

1. https://www.carma.newcastle.edu.au/jon/
2. http://experimentalmath.info/blog/2016/08/jonathan-borwein-dies-at-65/
3. http://www.newcastle.edu.au/newsroom/featured-news/vale-laureate-professor-jonathan-borwein

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