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June 17, 1988

Dr. N. J. A. Sloane  
Bell Laboratories  
Murray Hill, NJ

Dear Dr. Sloane:

I enjoyed talking with you on June 15th about your integer sequence handbook. I told you about my two impending papers (co-authored with Dr. Cecil Alford) which contain integer sequences of possible interest to you. One paper, *On a Conjecture Due to Hoggatt with Extensions to Hoggatt Sums and Hoggatt Triangles* (accepted for *The Fibonacci Quarterly*), develops a class of integer sequences which includes such known sequences as the power of two sequence, Catalan sequence, and the Baxter sequence. The second paper, *An Investigation of Sequences Derived from Hoggatt Sums and Hoggatt Triangles*, is to be presented by me at the Third International Conference on Fibonacci Numbers in Pisa, Italy this coming July 24-29. As its name implies, it contains extensions of the sequences of the first paper. All the sequences are "brand new" and have (we think) very interesting properties and background, just waiting for an engineering use. Copies are enclosed.

In each paper we used computer experimentation with MUMATH to accomplish our goals. It is my personal hope that real mathematicians will explore the experimental features of computer algebra programs such as MUMATH or MACSYMA.

Both papers honor Vern Hoggatt, who with Brother Alfred Brousseau founded The Fibonacci Association twenty-six years ago. From the first paper you can see how Vern was very much responsible for the motivation even five or six years after his death. As a matter of interest, your Ron Graham knew Hoggatt and wrote a paper on Baxter permutation counts with Vern and others in the late seventies. When I was trying to assemble facts for my earlier paper, Dr. Graham gave me some leads on people who were working with Vern at the time.

I am retiring from Georgia Tech as of this June, but expect to continue a part-time association for a while. I still have a lot of integer related ideas which, if I am lucky, will result in publications of some sort. If I chance on any interesting sequence material, I'll keep in touch.

I enjoy your handbook. We have a copy in our library which I refer to often. You have made a welcome and useful contribution. Best of luck with the new book you mentioned.

Sincerely,

Daniel C. Fielder  
Professor of E. E. (retired)

Encl. h/w

Copy to: Cecil O. Alford