

Hill, Ted

Pushing limits. From West Point to Berkeley & beyond. (English) Zbl 1369.01001

Providence, RI: American Mathematical Society (AMS); Washington, DC: The Mathematical Association of America (MAA) (ISBN 978-1-4704-3584-4/hbk; 978-1-4704-3671-1/ebook). viii, 294 p. (2017).

This is the autobiography of a successful American mathematician (born 1943), who took his Ph.D. in 1977 with the famous Berkeley probabilist Lester Dubins. This was most unusual for someone with only marginal mathematical education from Westpoint Military Academy and being a veteran of the Vietnam War. Hill is now known in broader, also non-mathematical circles for his book [with {it A. Berger}, An introduction to Benford's law. Princeton, NJ: Princeton University Press (2015; Zbl 06446720)]. His extraordinary career is related to his peculiar character which can probably be best described as an adventurer who all along the way seeks challenges, life-threatening ones and intellectual ones alike. Being a man of many talents (though not a universalist when he admits not having much sense for the arts or classical music) he is very practical minded (he has repeatedly rebuilt and renovated houses from scratch) but at the same time attracted by very theoretical mathematics. He emphasizes several times that mathematics can still be done with paper and pencil. All this is described in a rather sober and self-inspecting manner, relating for instance his insubordination in the military to "subconsciously rebelling against a strict disciplinarian father" (p. 35) whose lack of support for academic aspirations had brought him into the military in the first place. His description of the inhuman treatment of young men at Westpoint and other places belongs to the most vivid among such reports the reviewer has ever read, and it is an implicit indictment of not just American conditions but of the dehumanizing effects of military and war in general. Taking part in California's flower power and free love, the author undertakes a car trip through the Soviet Union of the 1970s and describes the often gloomy political and repressive situation quite vividly, though admitting political naivety in his youthful years as well. At the same time, he feels attracted by the globe-trotting and free-wheeling academic life, and he loves the freedom of abstract mathematical thought. In order to join this attractive intellectual lifestyle he takes the challenge and the risk of becoming a Ph.D. in mathematics at a leading department (Berkeley) without proper preparation, comparing the "high attrition rate among math grad students" (p. 182) to the "high casualty rates" in the war. He describes his adventurous academic and non-academic life with a very versatile and colorful language, reporting in great detail and apparently drawing on records in personal diaries. Describing his research visits to Göttingen, Leiden and other places he relates interesting reflections about intellectual life and educational systems abroad, with only minor errors (which could have been eliminated by the publisher), such as claiming that Oberwolfach belongs to Bavaria (p. 222) or that in "Germany there is only one `professor' in each department" (p. 224). He makes a strong and largely successful effort to describe his daily fight for proofs in mathematics and gives illuminating explanations of some of his most abstract mathematical results which, for instance, "led other researchers to general theories about `decoupling', or removing independence requirements, of many types of random processes" (p. 211). One of the most intense chapters is Chapter 13 "The Penn State syndrome", the title apparently alluding to psychological processes of idealizing and covering up certain criminal practices which had taken place at Penn State University. In this chapter, the author describes his fight against corruption at his institution Georgia Tech, where he noticed and publicly spoke out against money being siphoned off, particularly the misuse of travel funds, which had been occurring for many years to the detriment of students. As in the military, he stands up for the youth, but he soon discovers "the loneliness of the whistle blower" (p. 258) and the loss of friends. In the end, he acknowledges defeat and agrees to a settlement:

“Benefits from the battle may not be realized until many years later. All I know was that on the eve of my sixtieth birthday, speaking up had just cost me my job in a damn fine university.” (p. 270). He makes it clear in the rest of the book that he was, and still is, able to use what he calls his “permanent Sabbatical” (p. 271) for the benefit of further personal and scientific adventures. The book has interesting photographs from the author’s life but, unfortunately, it lacks any index or bibliography. In spite of this shortcoming, however, this reviewer has no doubt that in a hundred years or so this autobiography will be read as an attractive, vivid and generally reliable description of political and academic, in particular mathematical life in the United States of America in the second half of the 20th century.

Reviewer: Reinhard Siegmund-Schultze (Kristiansand)

MSC:

- 01–02 Research monographs (history)
- 01A60 Mathematics in the 20th century
- 01A70 Biographies, obituaries, personalia, bibliographies
- 01A80 Sociology (and profession) of mathematics

Keywords:

mathematics at West Point and Berkeley; Georgia Tech; Vietnam War; Benford’s law; corruption in academia

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