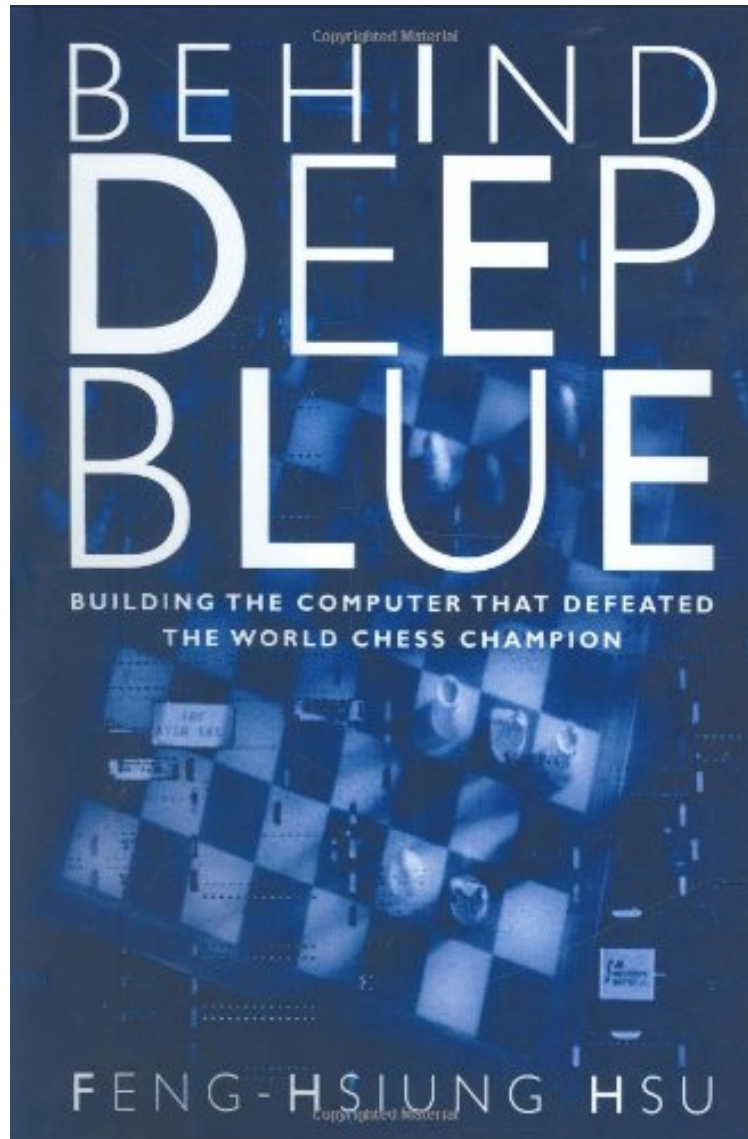


(Read now) Behind Deep Blue: Building the Computer that Defeated the World Chess Champion

## Behind Deep Blue: Building the Computer that Defeated the World Chess Champion

*Feng-Hsiung Hsu*

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**Feng-Hsiung Hsu : Behind Deep Blue: Building the Computer that Defeated the World Chess Champion** before purchasing it in order to gauge whether or not it would be worth my time, and all praised Behind Deep Blue: Building the Computer that Defeated the World Chess Champion:

3 of 3 people found the following review helpful. Good story but a little too hardware focused By CL This book was an entertaining read but my one criticism was that it is a little too hardware focused. Hsu spent a lot of time talking about

the custom VLSI design he did that sped up the processing. However he gave only cursory treatment to the software design: the opening books, the AI, deep blue's ability to "learn" from other games played with grandmasters, and how the programmers adjusted the "weighting" of different components (such as an open rook file) to improve deep blue's positional capabilities. I was hoping to get a little more insight into how chess programs work and what made deep blue unique and special besides its custom circuits and hardware. It is a bit quaint reading about his hand drawn layout on 3 micron cmos and his hand soldered circuit boards. I remember those days and it is a fun reminder. However it makes the book dated because naturally computer processing has sped up so fast that you can essentially run deep blue today on a generic PC, and it is the software design, not the custom hardware enables a computer to play at the grandmaster level.

0 of 0 people found the following review helpful. Love the bugs and issues this covered  
By Samson Yiu  
Love the bugs and issues this covered. As a Software Engineer ( and an old avid chess player) seeing products developed in an agile space it was awesome to see live changes and troubleshooting to get s/w right . The insight it gives on development was fantastic and the intrigue/conspiracy due to "bugs" made me laugh as I was reading. Yeah I bought this 5-6 years ago only just read it.....

1 of 1 people found the following review helpful. Good, but not great.  
By A Customer  
This is the story of the history behind the development of IBM's "Deep Blue" computer and its 1997 match against Garry Kasparov. We start in the mid-1980s with some of the happenings at Carnegie Mellon University (CMU) and how the author got drawn into this saga. After describing his thought process on why the design behind the top chess computer at CMU did not make sense, and how he developed his own chip, the author describes the initial successes and failures of that machine (ChipTest). This is the best part of the book as we are privileged to much detail about the development and the author's as well the reader's anticipation level is kept high. The rest of the book is somewhat downhill as we are not privy to additional interesting details behind the transition from ChipTest to Deep Thought. Also, when ChipTest was being developed the author didn't have anything to lose--once the author had ChipTest the stakes were higher--and the narration takes on a bit of a defensive tone (not outright defensive, but we can read it between the lines). Anyway, my interest in chess is revived thanks to reading this book--I am playing again with friends and have also lined up a couple of books on improving my game in my [.com] shopping cart.

On May 11, 1997, as millions worldwide watched a stunning victory unfold on television, a machine shocked the chess world by defeating the defending world champion, Garry Kasparov. Written by the man who started the adventure, *Behind Deep Blue* reveals the inside story of what happened behind the scenes at the two historic Deep Blue vs. Kasparov matches. This is also the story behind the quest to create the mother of all chess machines. The book unveils how a modest student project eventually produced a multimillion dollar supercomputer, from the development of the scientific ideas through technical setbacks, rivalry in the race to develop the ultimate chess machine, and wild controversies to the final triumph over the world's greatest human player. In nontechnical, conversational prose, Feng-hsiung Hsu, the system architect of Deep Blue, tells us how he and a small team of fellow researchers forged ahead at IBM with a project they'd begun as students at Carnegie Mellon in the mid-1980s: the search for one of the oldest holy grails in artificial intelligence--a machine that could beat any human chess player in a bona fide match. Back in 1949 science had conceived the foundations of modern chess computers but not until almost fifty years later--until Deep Blue--would the quest be realized. Hsu refutes Kasparov's controversial claim that only human intervention could have allowed Deep Blue to make its decisive, "uncomputerlike" moves. In riveting detail he describes the heightening tension in this war of brains and nerves, the "smoldering fire" in Kasparov's eyes. *Behind Deep Blue* is not just another tale of man versus machine. This fascinating book tells us how man as genius was given an ultimate, unforgettable run for his mind, no, not by the genius of a computer, but of man as toolmaker.

From *Library Journal*  
In 1997, a computer developed by a team of researchers at IBM shocked the world by defeating world chess champion Gary Kasparov in a six-game match. Hsu began developing Deep Blue, the first computer to achieve such a feat, as a graduate student at Carnegie Mellon University. Here he focuses on the events in his career that led to his involvement with the project. He tells the story of how the basic technical ideas took shape in the computer science department and describes the further evolution and culmination of the project at IBM. Not merely a rehashing of the engineering that was poured into creating the "mother of all chess machines," Hsu's account goes beyond the typical man vs. machine angle and attempts to capture the true essence of the contest between men in two distinct roles: Kasparov as performer and Hsu's team as toolmaker. The result is an intelligent, well-written account of a milestone in the history of computer science that stands out from the other books on Deep Blue. Recommended for general readers attracted to the history of chess and computing.  
Joe J. Accardi, William Rainey Harper Coll. Lib., Palatine, IL  
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From *Scientific American*  
It was 1949 when the eminent mathematician Claude E. Shannon suggested how to program a computer to play chess. "At that time, many renowned computer scientists believed that the Computer Chess Problem-- creating a chess computer that could beat the World Champion-- would be solved within a few years." It was, in fact, 48 years before the IBM computer Deep Blue-- capable of searching 200 million possible chess positions per second-- defeated world champion Garry Kasparov. Hsu, now a research scientist at the Western Research Lab of Compaq Computer, was the system architect for Deep Blue.

He makes an exciting tale of computer chess evolution and the Kasparov match. Is Deep Blue intelligent? No, Hsu says: "It is only a finely-crafted tool that exhibits intelligent behavior in a limited domain." Editors of Scientific American  
From Booklist  
Because the two matches that chess champ Garry Kasparov played six years ago against the author's supercomputer were so widely publicized, there's probably going to be a large audience for Hsu's behind-the-scenes account of the epic man-against-machine showdowns. Despite the arcane technical nature of both top-echelon chess and computer programming, Hsu's narrative does not suffer from indecipherable jargon, because he hews to human-interest-oriented storytelling. He starts with his student days at Carnegie-Mellon University, where he had to choose whether his future lay in designing chips for copiers or chess-playing computers. Taking the flashier option, he and his colleagues' first chess products caught IBM's publicity-seeking eye, and Hsu's group decamped for Big Blue. Hsu admits to his competitive desire to defeat Kasparov, who styled his rout of Hsu's first version of Deep Blue in 1996 as a defense of humanity. Stung, Hsu and his mates re-jiggered Deep Blue for the following year's grudge match, a battle regaled with drama and ripostes to Kasparov's disparagement of the electronic victor. A fascinating story.  
Gilbert Taylor  
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