For a calendar of technical society meetings in the Mid-Hudson Valley go to:
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Poughkeepsie Chapter of the Association For Computing Machinery

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Topic: **Predictions About Computer Memory Models**

Speaker: **Bill Collier**

When: **Tuesday, May 27th, 2025, 6:30 pm**

Where: **Panera Bread, 2020 South Road, Poughkeepsie** (corner of Spring Road).

This is a dinner meeting.

About the Topic:

1. Memory models (MM) will continue to evolve.
   Sequential Consistency (SC) (Lamport, 1978) says: do not visibly violate Program Order (PO).
   SCII (RAPA Plus) Obey rules of computation (CMP), PO, and write atomicity (WA). Show how to unrelax relaxable rules.
   Scheurich's problem. Architecture by fiat.

2. Single copy write atomicity (SCWA) will be seen as simply part of the CMP rule. "data-race free" will disappear from architecture manuals.

3. Long thread tests (LTT's) will almost entirely replace short thread tests (STT's).

4. Indistinguishable architectures. The fundamental goal of computer architectures. The WSisWA theorem.

5. X=X program. What happens when two threads write into each other's instruction stream?

6. The table-based approach of oeis.org/A299741 will result in finding many new integer sequences.

7. Work with Bill Rubin to see structures in LTT output.

The lecture notes will appear here in case you want to print them out beforehand.

About the Speaker: Bill Collier was a programmer at IBM 1960-93. He is the author of Reasoning About Parallel Architectures (Prentice-Hall, 1992). He has an A.B. in math from Harvard and masters degrees from Syracuse University in both math and computer science. He has been a member of the ACM since 1960.

More Information:

Cost: **Our meeting is Free and open to the public.**

Attendees should RSVP at Meetup.com.

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