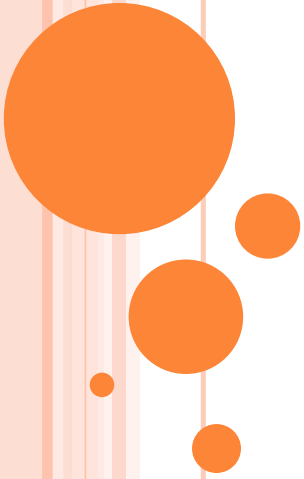# COMPUTER SCIENCE – TECHNICAL ENGLISH

Murat AYDEMİR

FIELDS

- Computer science is no more about computers than astronomy is about telescopes.

As a discipline, computer science spans a range of topics from theoretical studies of algorithms and the limits of computation to the practical issues of implementing computing systems in hardware and software.

- **CSAB**, formerly called Computing Sciences Accreditation Board—which is made up of representatives of the Association for Computing Machinery (ACM), and the IEEE Computer Society (IEEE CS)—identifies four areas that it considers crucial to the discipline of computer science: theory of computation, algorithms and data structures, programming methodology and languages, and computer elements and architecture.

- In addition to these four areas, CSAB also identifies fields such as software engineering, artificial intelligence, computer networking and communication, database systems, parallel computation, distributed computation, human–computer interaction, computer graphics, operating systems, and numerical and symbolic computation as being important areas of computer science.

THEORETICAL COMPUTER SCIENCE

- Theoretical Computer Science is mathematical and abstract in spirit, but it derives its motivation from the practical and everyday computation. Its aim is to understand the nature of computation and, as a consequence of this understanding, provide more efficient methodologies.

- All studies related to mathematical, logic and formal concepts and methods could be considered as theoretical computer science, provided that the motivation is clearly drawn from the field of computing.

DATA STRUCTURES AND ALGORITHMS

- Data structures and algorithms are the studies of commonly used computational methods and their computational efficiency.

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