Network Programming Part 3

MCIT 595

Types of Sockets

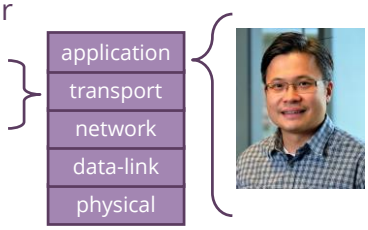
- Different types of sockets implement different service models
  - Stream vs datagram
- Stream Socket (aka TCP)
  - Connection-oriented (includes establishment + termination)
  - Reliable, in order delivery
  - At-most-once delivery, no duplicates
  - E.g., ssh, http
- Datagram Socket (aka UDP)
  - Connectionless (just data-transfer)
  - “Best-effort” delivery, possibly lower variance in delay
  - E.g., IP Telephony, streaming audio

Types of Sockets

- Stream Sockets
  - No need to packetize data
  - Data arrives in the form of a byte-stream
  - Receiver needs to separate messages in stream
- Datagram Sockets
  - User packetizes data before sending
  - Maximum size of 64Kbytes
  - “Hello there!” and “I love programming” will definitely be sent in separate packets at network layer

TCP sends messages joined together

i.e. “Hello there! I love programming”



User application sends messages “Hello there!” and “I love programming” separately