

NETWORK MANAGEMENT

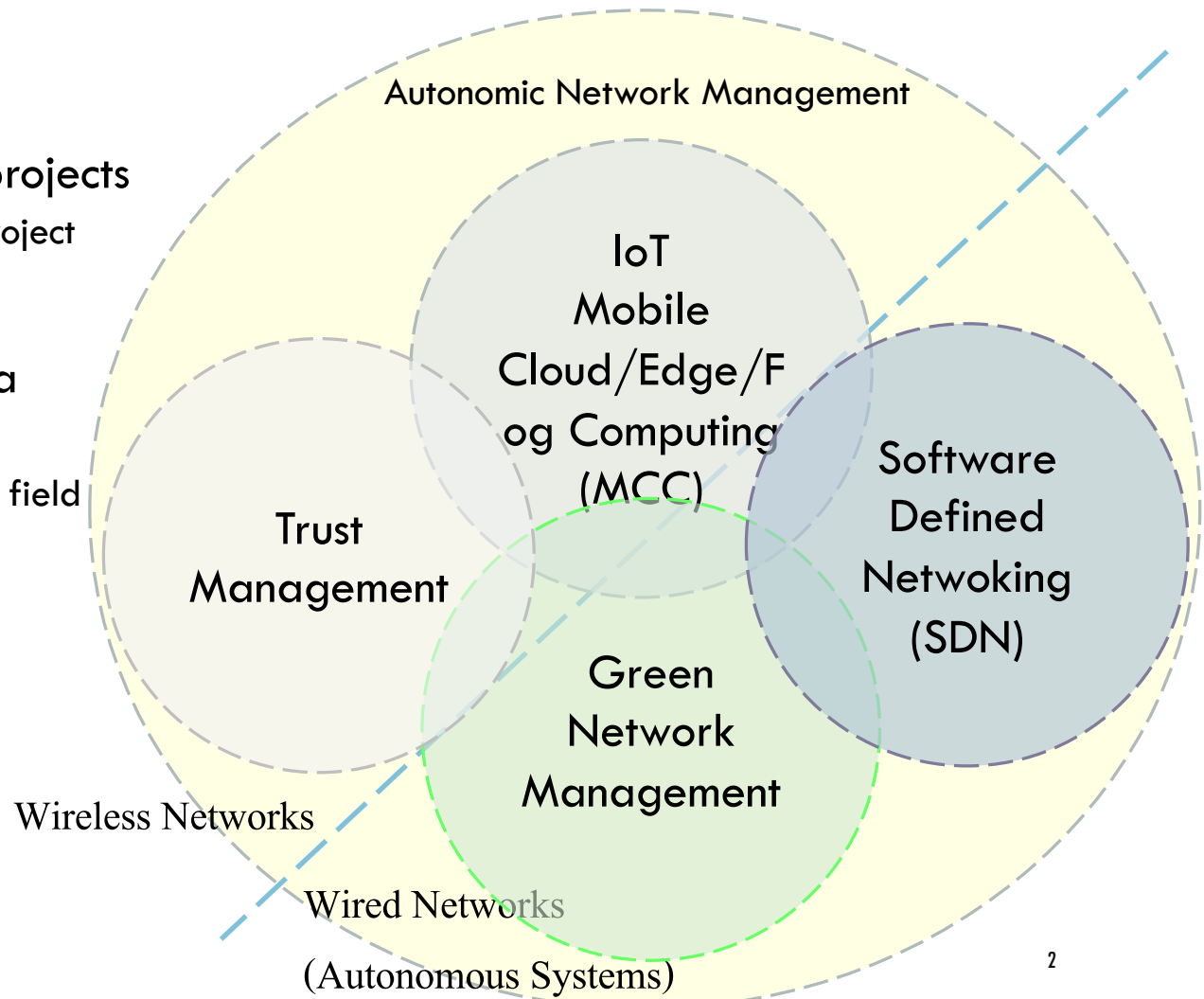
Zeinab Movahedi

School of Computer Engineering



WHY ME AS THIS COURSE LECTURER

- ☐ PhD thesis subject
- ☐ Participation in FP7 projects
 - ✓ Autonomic Internet FP7 project
 - ✓ 4WARD FP7 project
- ☐ My lab research area
 - ✓ published related papers
 - ✓ supervised students in this field
- ☐ Teaching this course
 - ✓ More than 10 times



COURSE OBJECTIVE

- ☐ Acquire a profound knowledge of network operations
- ☐ Know the required management functions
- ☐ Know the principles of network management
- ☐ Know main network management protocols

Prerequisites

- ✓ Computer Network course of BSc level

Time

- ✓ Main course: Sundays and Tuesdays: 13-14:30
- ✓ TA course: ?

HISTORY OF INTERNET MANAGEMENT

❑ 1970 - Internet control Message Protocol (ICMP)

- ✓ proposed by Advanced Research Project Agency Network (ARPANET)

❑ 1980 - Unix & client-server architecture

- ✓ ARPANET developed into the inter-networking (ARPANET → Internet)
- ✓ Growth in the Internet, remote monitoring and configuration required
 - Simple Gateway Monitoring Protocol (SGMP)
 - Simple Network Management Protocol (SNMP)
 - Interim solution → de facto standard
 - Extensive implementation, Enormous simplicity
 - ✓ SNMPv2
 - ✓ SNMPv3

TEXTBOOK

☐ Prerequisite

- ✓ Forouzan, TCP/IP - Protocol Suite

☐ ICMP protocol

- ✓ Forouzan, TCP/IP - Protocol Suite (Chapter 9)

☐ Principles of Network Management

- ✓ M. Subramanian, Network management principles & practices, Pearson Addison Wesley

☐ SNMP protocol

- ✓ Douglas R. Mauro & Kevin J. Schmidt, Essential SNMP, O'Reilly

CONTENTS

❑ Internet Control Message Protocol

- ✓ TCP/IP - Protocol Suite, Forouzan, chapter IX

❑ Data communication & network management overview

- ✓ Case histories of networking and management – chapter I 2d textbook
- ✓ Network management goals and functions – chapter I 2d textbook

❑ Basic standards, models and languages – chapter III

❑ SNMPv1

- ✓ Organization & information models – chapter IV 2d textbook
- ✓ Communication and functional models – chapter V 2d textbook

❑ SNMPv2 – chapter VI 2d textbook

COURSE POLICIES (TENTATIVE)

- ☐ Homework 2 pts
- ☐ Seminar.....3 pts
 - ✓ Voice-recorded Materials.....1 pts
 - ✓ Oral presentation.....2 pts
- ☐ Workshop activities.....2 pts
 - ✓ Workshop responsibility.....1 pts
 - ✓ Workshop outcome.....1 pts
- ☐ continued evaluations.....2 pts
- ☐ Midterm..... 4 pts
- ☐ Final exam 8 pts