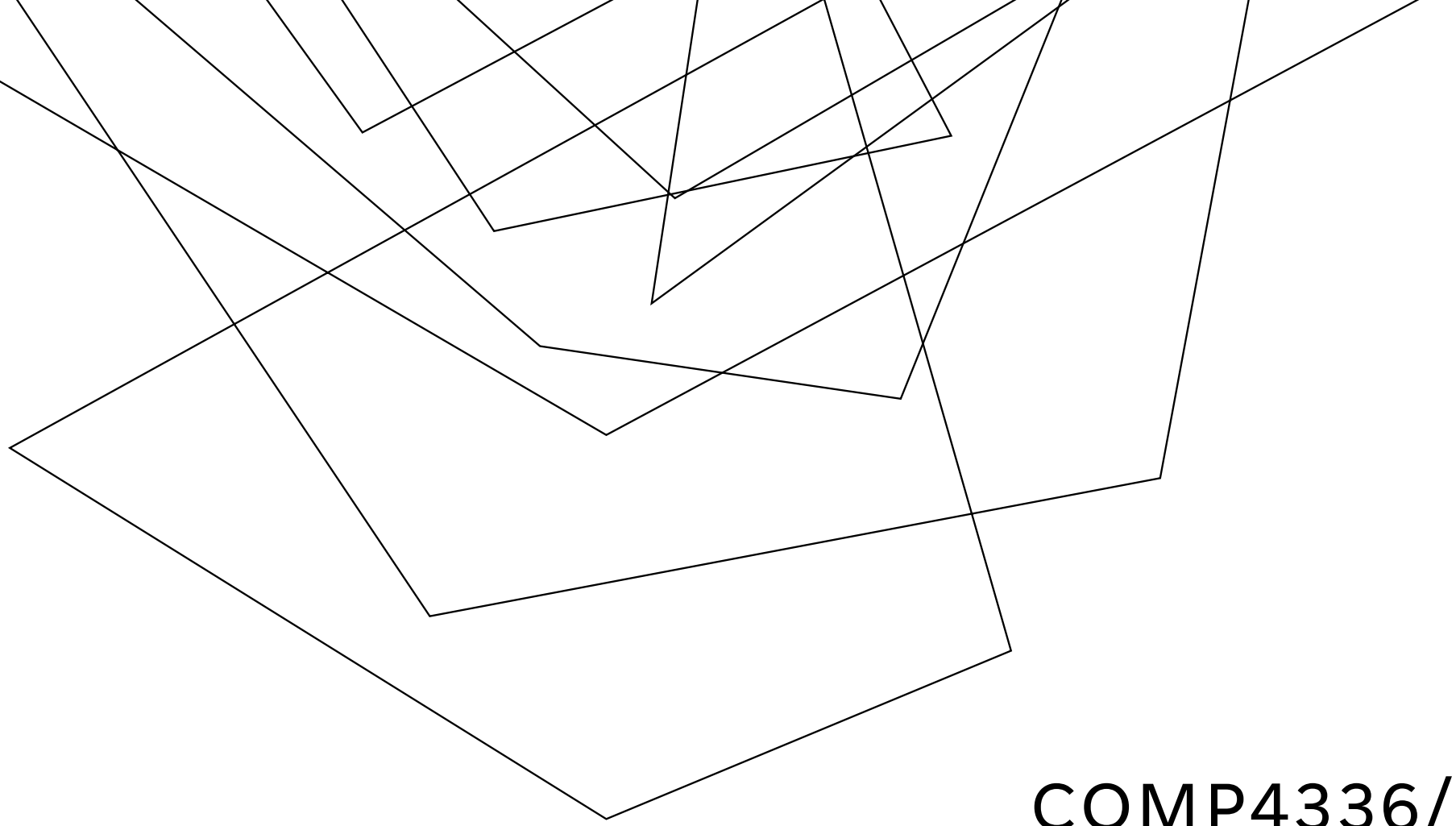
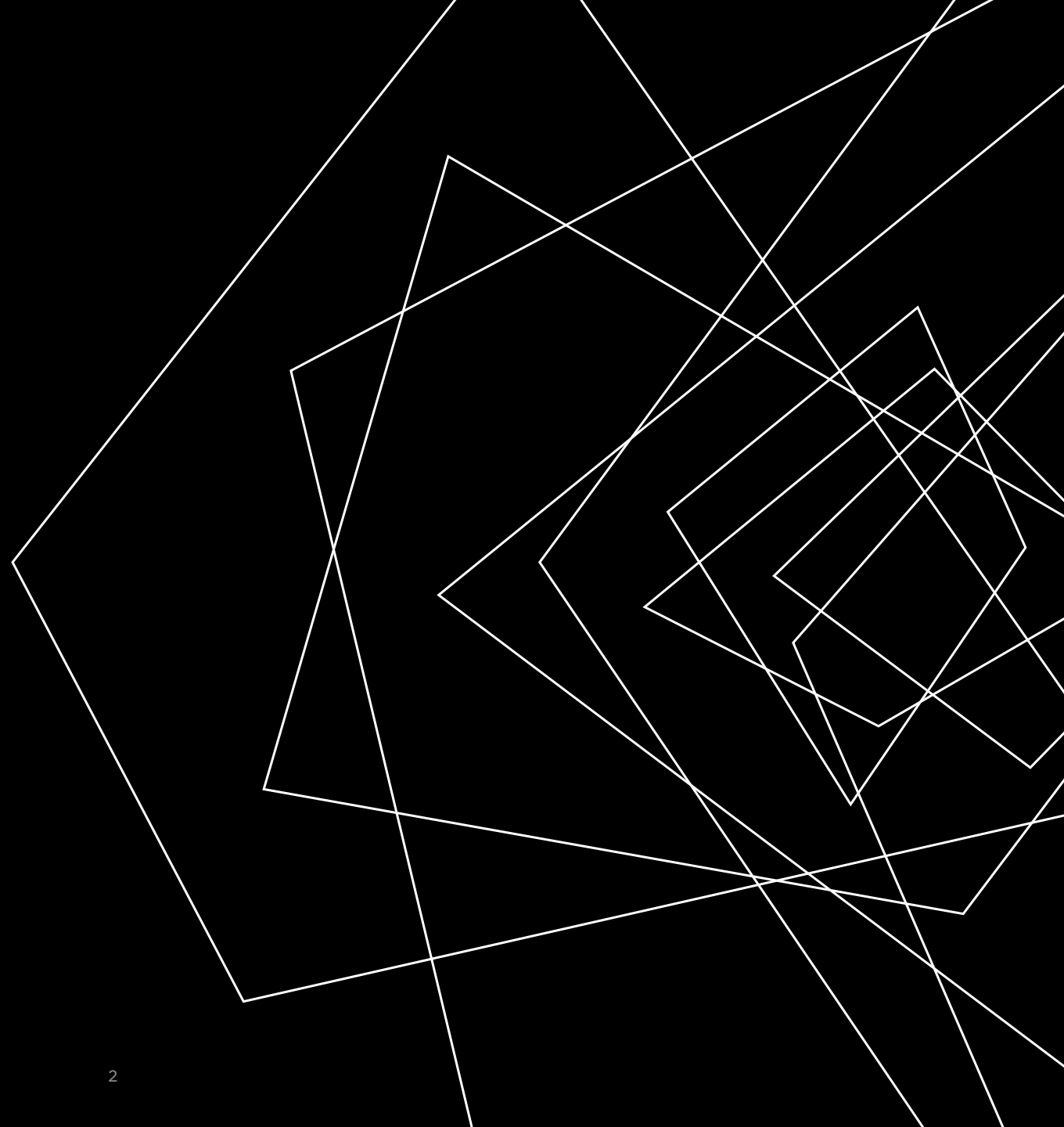


COMP4336/9336 FINAL EXAM PREP

Rui

CATALOG



EXAM INFO

When: 7 December (Thursday): 9:45pm – 12pm [2 hours + 15 mins]

Where: Online (Inspera)

How: 15 questions -- Majority Essay-type; and a few MCQ.

Ref: https://moodle.telt.unsw.edu.au/pluginfile.php/11093414/mod_resource/content/1/Recap.pdf

HOW TO PREP

Lecture Slides	Weekly Quizzes	Textbook	Lecture Video	Sample Questions
- Calculation Examples - Questions	- Redo the quiz	- Questions on book	- Recap the lecture video	- Online resources from previous years (github/reddit/friends..)

SAMPLE QUESTIONS

In 802.11ax, it is possible to allocate 2 or more resource units (RUs) to a given station.

- True
- False

Bluetooth 5 can advertise large amounts of information in a single advertisement because it

a.is very energy efficient
b.supports efficient data compression
c.supports high data rates
d.can chain multiple packets together
e.supports packet formats with very large payloads

In 802.11ax, the AP can prioritise OFDMA over EDCA by

a.advertising small values for OFDMA parameters
b.advertising large values for the CSMA/CA backoff parameters
c.decreasing the transmission powers of EDCA frames
d.increasing the transmission powers for OFDMA frames
e.decreasing the transmission powers of EDCA frames

SAMPLE QUESTIONS

Which feature of 802.11ax allows a station to filter out frames coming from a remote access point (AP), i.e., an AP other than the one the station is attached to, without even decoding the entire frame?

a. Preamble Puncturing

b. Dynamic Sensitivity Threshold

c. BSS Colour

d. Quiet Time Period

e. Dynamic Transmission Power Control

Which of the following statements is TRUE?

a. 802.11ax is the only WiFi technology that has the concept of BSS colour

b. 802.11ah is the only WiFi technology that has the concept of BSS colour

c. Both 802.11ah and 802.11ax use BSS colours, but 802.11ah can choose from more colours compared to 802.11ax

d. Both 802.11ah and 802.11ax use BSS colours, but 802.11ax can choose from more colours compared to 802.11ah

e. Both 802.11ah and 802.11ax use BSS colours, but 802.11ah can only choose from 16 different colours compared to 32 colours available to 802.11ax

SAMPLE QUESTIONS

Bluetooth 5 advertising

a. Transmits both the header and the payload of the advertising packet only once
b. Uses the data channels to transmit only the headers
c. Makes less use of the data channels but heavy use of the advertising channels
d. Does not transmit the headers at all
e. Makes less use of the advertising channels but heavy use of the data channels

The concept of buffered sensors refers to sensors that

a. often collect and buffer data for a long period before transferring them to another device
b. must buffer and process data before updating a database in the server
c. always remain connected to a server to clear the backlog of packets waiting in its buffer
d. must buffer a large quantity of data to learn from it
e. store all its firmware in buffers

SAMPLE QUESTIONS

It is possible for two neighbouring APs to select the same BSS colours.

- True
- False

Bluetooth 5 reduces the minimum advertising interval by

a.70%

b.40%

c.50%

d.80%

e.60%

In 802.11ax, what is the maximum number of users that can be assigned to the same resource unit (RU)?

a.8

b.16

c.1

d.2

e.4

SAMPLE QUESTIONS

A WLAN standard is employing a spread spectrum coding with only ½ rate, which produces chips at a rate of ½ chips per Hz. It uses eight chips to code a symbol and 16 QAM modulation to modulate the symbol stream. What would be the data rate for 22 MHz channels?

SAMPLE QUESTIONS

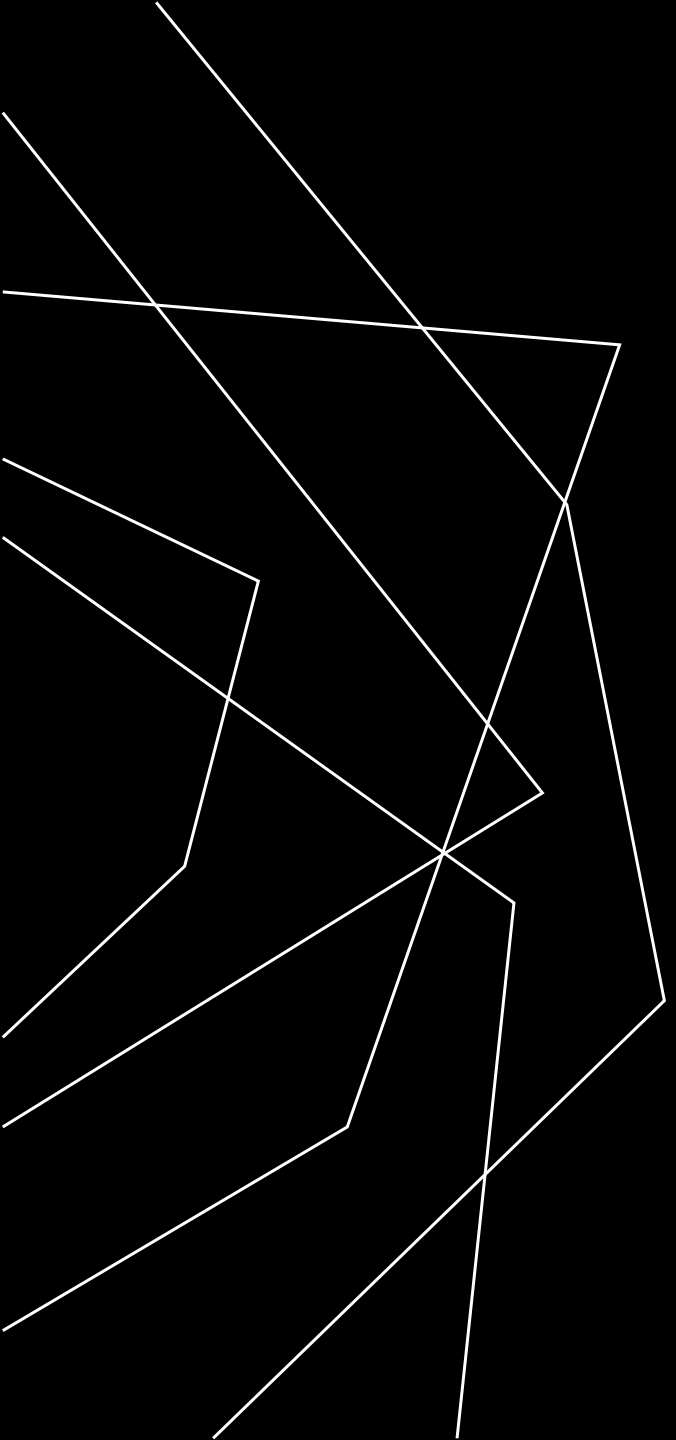
Compared to 802.11a/g, 802.11n has higher coding rate, wider channel bandwidth, lower coding overhead, and reduced guard interval. On top of this, 802.11n uses MIMO multiplexing to further boost the data rate. Given that 802.11a/g has a maximum data rate of 54 Mbps, can you estimate the maximum data rate for 802.11n that uses 4 MIMO streams (assume 64 QAM for both of them, i.e., there is no improvement in modulation)?

SUMMARY

1/ spend your time wisely: (calculation > theory) (Practice > Watch)

2/ answer all the questions!

3/ any doubt – use Ed forumn



THANK YOU