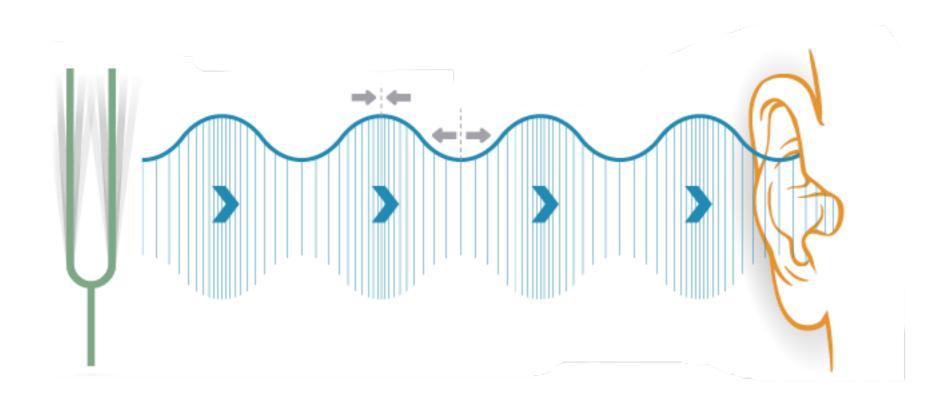
# Decoding distortions using frequency analysis

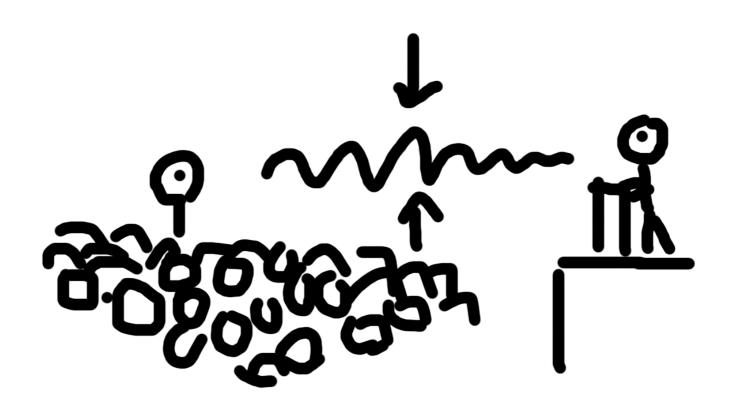
Julia Hesse (TU Darmstadt)

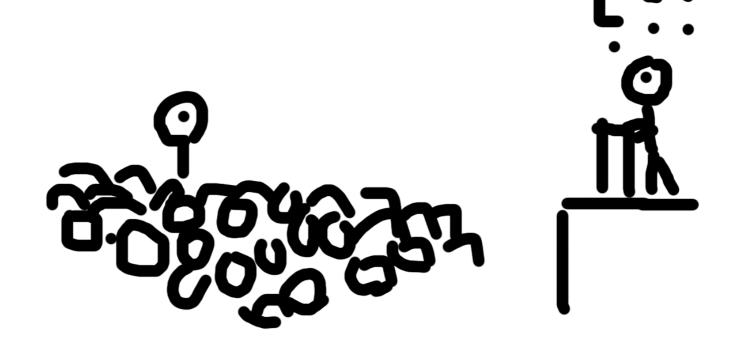
# The setting











• A: This is a very interesting question.

A: This is a very interesting question.

Q: Have you tried it with obfuscation?

A: This is a very interesting question

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A: This is a very interesting question

Q: Have you tried it with obfuscation



A: We haven't really looked into that.

• A: This is a very interesting question

Q: Have you tried it with obfuscation



A: We haven't really looked into that.

Q: Can you please show us the proof?

• A: This is a very interesting question

Q: Have you tried it with obfuscation



A: We haven't really looked into that.

Q: Can you please show us the proof?



• A: This is a very interesting question

Q: Have you tried it with obfuscation



A: We haven't really looked into that.

Q: Can you please show us the proof?



A: Let's take this offline.

• A: This is a very interesting question

Q: Have you tried it with obfuscation



A: We haven't really looked into that.

Q: Can you please show us the proof?



A: Let's take this offline.

Q: You should have cited my work!!

• A: This is a very interesting question

Q: Have you tried it with obfuscation



A: We haven't really looked into that.

Q: Can you please show us the proof?



A: Let's take this offline.

Q: You should have cited my work!!



## **Observation: low entropy!**

Can you please explain the complicated part of your **proof** again?

## Observation: low entropy!

Can you please explain the complicated part of your **proof** again?

→ Just explain whole proof again! ✓



## Observation: low entropy!

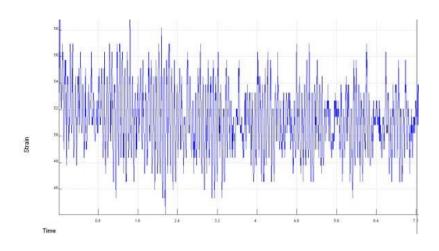
Can you please explain the complicated part of your **proof** again?

→ Just explain whole proof again! ✓

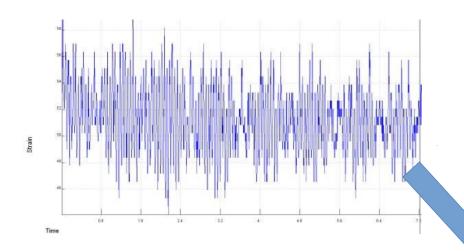


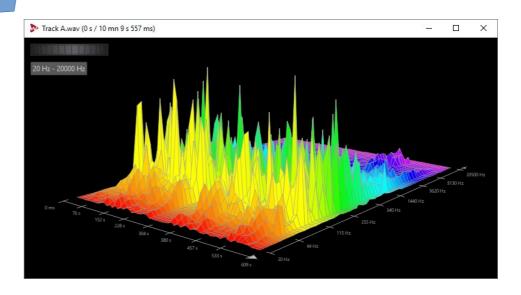
→ our approach: decode only crucial words

## **Decoding techniques**



# Decoding techniques





SAVE THE NATION

WHERE'S THE STATION?

SAVE THE NATION

WHERE'S THE STATION?

U SHOULD TAKE SOME!

SAVE THE NATION

WHERE'S THE STATION?

U SHOULD TAKE SOME!

SAVE THE NATION

Obfuscation

WHERE'S THE STATION?

U SHOULD TAKE SOME! Dec SAVE THE NATION

WHERE'S TED?
POO IS WET

Obfuscation

WHERE'S THE STATION?

U SHOULD TAKE SOME!

SAVE THE NATION

Obfuscation

Proof step

WHERE'S TED?
POO IS WET

WHERE'S THE STATION? Obfuscation

U SHOULD TAKE SOME! Dec SAVE THE NATION

Proof step

WHERE'S TED? POO IS WET

EAST RIMINI
PATRICIA TREE
THE FISH'S FEE

WHERE'S THE STATION?

U SHOULD TAKE SOME! Dec SAVE THE NATION

Obfuscation

Proof step

WHERE'S TED? POO IS WET

efficiency

EAST RIMINI
PATRICIA TREE
THE FISH'S FFE

WHERE'S THE STATION?

U SHOULD TAKE SOME!

SAVE THE NATION

Obfuscation

Proof step

WHERE'S TED? POO IS WET

EAST RIMINI
PATRICIA TREE
THE FISH'S FFE

efficiency

90% covered 50/3

# Questions?

