

Designing and Managing Secure Systems

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Mihai Ordean

Interested in systems security, ICS & IoT security, fuzzing, cloud security



Ian Batten

Interested in where computer security and networking meet.

Module structure

Module will have two parts:

1st Part: How to design secure systems

2nd Part: How to assess security risk in systems

Part 1: Secure systems designs

User authentication

Device security

Local Data security

Cloud Data security

Metadata security

Lectures overview (Mihai Ordean)

Authentication, user authentication and access control:

- Are humans really the weakest link when it comes to security?
- Do we have alternatives to passwords?

Lectures overview (Mihai Ordean)

Device security:

- Building a root of trust
- Building a chain of trust
- Using signatures in everyday computing

Lectures overview (Mihai Ordean)

Local data security:

- Using encryption in everyday computing
- Protecting data on local devices

Lectures overview (Mihai Ordean)

Cloud data security:

- Protecting data in the cloud
- Confidentiality from the cloud provider

Lectures overview (Mihai Ordean)

- Metadata security:
 - What is metadata?
 - Security issues related to metadata
 - Can metadata be protected?

1st part structure

- Content will be covered in the first 5 weeks.
 - Video recordings.
 - Additional info will be provided via Canvas.
- Week 6: Assessment week for the first part
- Week 7 – Week 11: Part 2: Security risk management (Ian Batten)