

Internet of Things

Technical Material Prime

a.a 2018/2019

Un. of Rome "La Sapienza"

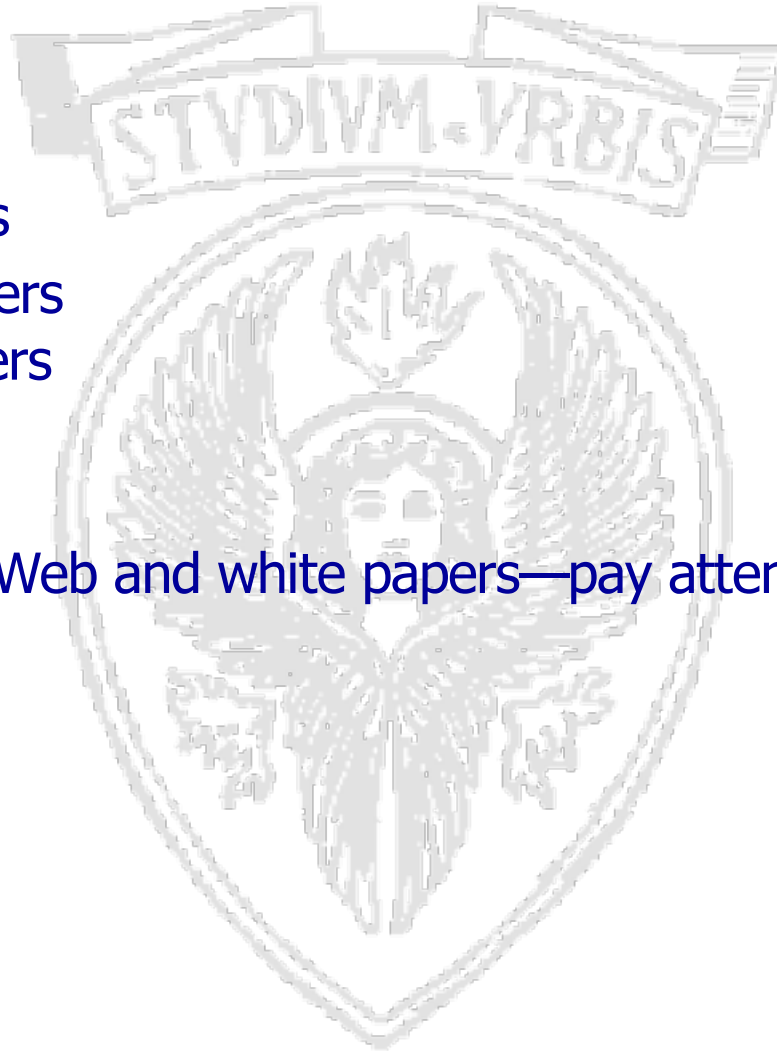
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- Books
- Book Chapters
- Magazine papers
- Scientific Papers
- Standards

(material on the Web and white papers—pay attention to the source!!)





✓ Books

- ☐ Book Chapters
- ☐ Magazine papers

Often provide an overview of a subject and list of sources to get a deeper understanding, rather than the deeper understanding itself

- Scientific Papers
- Standards

(material on the Web and white papers—pay attention to the source!!)



- Written for different types of readers
- You should learn how to browse through
 - Get a general understanding focus on first part, general description)
 - Skip details you are not interested in (e.g., aspects that are not core, details of packet format, stay focus only on main aspects)
 - Fast browse through the all document (only main aspects), then after getting a general understanding reread
 - Focus on details on aspects only when you really need to understand them better e.g., because on a module you need a fine grain understanding e.g., as you have to implement it).
- Over time you should develop the ability to understand a protocol, ask yourselves the right questions as you read (i.e., be aware of what is still unclear) and searching for answers as you go (or browse again only to get the answers to your questions)!

First example: OLSR standard



Typical paper organization

- Abstract & Introduction –read fast→ they give general context
- **Solution description** → read well → read in iterations.
 - First get the idea, then reread, ask yourselves questions on what is unclear, reread to get your questions answered
- Performance evaluation section→ not really needed for the course, browse through when interesting to get an idea of what is the achieved performance improvement over state of the art and to get the methodology of performance evaluation (if you have time, for selected papers; you can ask me for good examples)
- Bibliography→ farther sources to read, but not needed to read through for the course, will be important to get additional source e.g., when you have to do your thesis
- **In summary: focus on the tech part (problem statement, solution description)**



Scientific papers – which to read?

The art of bibliography search ☺

Not all papers are equal

- In the course we mix up pioneering works from the state of the art and recent papers from good venues
- How are papers selected?
- In Computer Science there are some topnotch venues which are highly selective and reference for area development.
 - Which ones?
 - In the networking field examples are IEEE INFOCOM, ACM SIGCOMM, ACM MOBICOM, ACM SENSYS, IEEE IPSN, ...
- There are also topnotch journals
 - Typically for instance ACM Transactions On... /IEEE Transactions On...
 - In the networking field: IEEE Transactions on Mobile Computing, ACM Transactions On Sensor Networks, IEEE Transactions on Wireless Communications, IEEE Transactions on Networking, IEEE Transactions on Parallel and Distributed Systems,...
- To get a feeling of SoA: IEEE EXPLORE / ACM Digital Library, search for keywords, read abstracts
- Search last few years of topnotch venues
- Google Scholar helps identifying recent papers citing the selected papers, and highly cited papers



- In Computer Science there are some topnotch venues which are highly selective and reference for area development.
 - Which ones? According to GRIN <http://www.consortio-cini.it:8080/consultazioneclassificazioni/ratingSearch.jsf>

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
ACM-SIAM SYMPOSIUM ON DISCRETE ALGORITHMS	SODA	1	A++	A++, A+, A	CORE:A++, MAS:A++, SHINE:A++
A Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
ADVANCES IN CRYPTOLOGY	CRYPTO	1	A++	A++, A+, A	CORE:A++, MAS:A++, SHINE:A++
A Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
ANNUAL JOINT CONFERENCE OF THE IEEE COMPUTER AND COMMUNICATIONS SOCIETIES	INFOCOM	1	A++	A++, A+, A	CORE:A++, MAS:A++, SHINE:A++
A Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
ASSOCIATION OF COMPUTATIONAL LINGUISTICS	ACL	1	A++	A++, A+, A	CORE:A++, MAS:A++, SHINE:A++
A Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
COMPUTER AIDED VERIFICATION	CAV	1	A++	A++, A+, A	CORE:A++, MAS:A++, SHINE:A++
A Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
COMPUTER HUMAN INTERACTION	CHI	1	A++	A++, A+, A	CORE:A++, MAS:A+, SHINE:A++
A Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
CONFERENCE ON ARTIFICIAL INTELLIGENCE	AAAI	1	A++	A++, A+, A	CORE:A++, MAS:A++, SHINE:A++



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Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
ACM INTERNATIONAL SYMPOSIUM ON COMPUTER ARCHITECTURE	ISCA	1	A++	A++, A++, A+	CORE:A++, MAS:A+, SHINE:A++
Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
ACM MULTIMEDIA CONFERENCE	ACMMM	1	A++	A++, A++, A+	CORE:A++, MAS:A+, SHINE:A++
Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
ACM SIGACT-SIGMOD-SIGART SYMPOSIUM ON PRINCIPLES OF DATABASE SYSTEMS	PODS	1	A++	A++, A++, A+	CORE:A++, MAS:A++, SHINE:A+
Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
ACM SIGMOD INTERNATIONAL CONFERENCE ON MANAGEMENT OF DATA	SIGMOD	1	A++	A++, A++, A++	CORE:A++, MAS:A++, SHINE:A++
Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
ACM SIGPLAN CONFERENCE ON PROGRAMMING LANGUAGE DESIGN AND IMPLEMENTATION	PLDI	1	A++	A++, A++, A+	CORE:A++, MAS:A+, SHINE:A++
Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
ACM SIGPLAN-SIGACT SYMPOSIUM ON PRINCIPLES OF PROGRAMMING LANGUAGES	POPL	1	A++	A++, A++, A++	CORE:A++, MAS:A++, SHINE:A++
Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
ACM SYMPOSIUM ON THEORY OF COMPUTING	STOC	1	A++	A++, A++, A++	CORE:A++, MAS:A++, SHINE:A++



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Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
ACM CONFERENCE ON APPLICATIONS, TECHNOLOGIES, ARCHITECTURES, AND PROTOCOLS FOR COMPUTER COMMUNICATION	SIGCOMM	1	A++	A++, A++, A++	CORE:A++, MAS:A++, SHINE:A++
A Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
ACM CONFERENCE ON COMPUTER AND COMMUNICATIONS SECURITY	CCS	1	A++	A++, A++, A++	CORE:A++, MAS:A++, SHINE:A++
A Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
ACM CONFERENCE ON EMBEDDED NETWORKED SENSOR SYSTEMS	SENSYS	1	A++	A++, A++, A+	CORE:A++, MAS:A+, SHINE:A++
A Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
ACM INTERNATIONAL CONFERENCE ON COMPUTER GRAPHICS AND INTERACTIVE TECHNIQUES	SIGGRAPH	1	A++	A++, A++, A++	CORE:A++, MAS:A++, SHINE:A++
A Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
ACM INTERNATIONAL CONFERENCE ON KNOWLEDGE DISCOVERY AND DATA MINING	KDD	1	A++	A++, A++, A++	CORE:A++, MAS:A++, SHINE:A++
A Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
ACM INTERNATIONAL CONFERENCE ON MOBILE COMPUTING AND NETWORKING	MOBICOM	1	A++	A++, A++, A++	CORE:A++, MAS:A++, SHINE:A++
A Detailed Ratings (click to expand)					



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Title INTERNATIONAL CONFERENCE ON VERY LARGE DATA BASES	Acronym VLDB	Class 1	Rating A++	Collected Classes A++, A++, A++	Qualified Classes CORE:A++, MAS:A++, SHINE:A++
▲ Detailed Ratings (click to expand)					
Title INTERNATIONAL JOINT CONFERENCE ON ARTIFICIAL INTELLIGENCE	Acronym IJCAI	Class 1	Rating A++	Collected Classes A++, A++, A++	Qualified Classes CORE:A++, MAS:A++, SHINE:A++
▲ Detailed Ratings (click to expand)					
Title INTERNATIONAL WORLD WIDE WEB CONFERENCE	Acronym WWW	Class 1	Rating A++	Collected Classes A++, A++, A++	Qualified Classes CORE:A++, MAS:A++, SHINE:A++
▲ Detailed Ratings (click to expand)					
Title NEURAL INFORMATION PROCESSING SYSTEMS	Acronym NIPS	Class 1	Rating A++	Collected Classes A++, A++, A++	Qualified Classes CORE:A++, MAS:A++, SHINE:A++
▲ Detailed Ratings (click to expand)					
Title REAL TIME SYSTEMS SYMPOSIUM	Acronym RTSS	Class 1	Rating A++	Collected Classes A++, A++, A+	Qualified Classes CORE:A++, MAS:A++, SHINE:A+
▲ Detailed Ratings (click to expand)					
Title RESEARCH AND DEVELOPMENT IN INFORMATION RETRIEVAL	Acronym SIGIR	Class 1	Rating A++	Collected Classes A++, A++, A++	Qualified Classes CORE:A++, MAS:A++, SHINE:A++
▲ Detailed Ratings (click to expand)					



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IEEE INTERNATIONAL CONFERENCE ON COMPUTER VISION	ICCV	1	A++	A++, A++, A++	CORE A++, MAS A++, SHINE A++
Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
IEEE SYMPOSIUM ON FOUNDATIONS OF COMPUTER SCIENCE	FOCS	1	A++	A++, A++, A++	CORE A++, MAS A++, SHINE A++
Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
INFORMATION PROCESSING IN SENSOR NETWORKS	IPSN	1	A++	A++, A++, A+	CORE A++, MAS A+, SHINE A++
Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
INTERNATIONAL CONFERENCE ON DATA ENGINEERING	ICDE	1	A++	A++, A++, A++	CORE A++, MAS A++, SHINE A++
Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
INTERNATIONAL CONFERENCE ON MACHINE LEARNING	ICML	1	A++	A++, A++, A++	CORE A++, MAS A++, SHINE A++
Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
INTERNATIONAL CONFERENCE ON MULTIAGENT SYSTEMS	AAMAS	1	A++	A++, A++, A+	CORE A++, MAS A+, SHINE A++
Detailed Ratings (click to expand)					

Title	Acronym	Class	Rating	Collected Classes	Qualified Classes
INTERNATIONAL CONFERENCE ON SOFTWARE ENGINEERING	ICSE	1	A++	A++, A++, A+	CORE A++, MAS A+, SHINE A++



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- Search last few years of topnotch venues
- Google Scholar helps identifying recent papers citing the selected papers, and highly cited papers