

TOWARDS THE KNOWLEDGE-BASED SOCIETY @ SEIP LAB

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WHO WE ARE?



12th Workshop "Software engineering Education
and Reverse Engineering", Opatija, Croatia, 2-8
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FACULTY OF ENGINEERING UNIVERSITY OF RIJEKA

- ◉ 1960. Faculty of Mechanical Engineering
- ◉ 1969. Faculty of Mechanical Engineering and Naval Architecture
- ◉ Study programmes @ Faculty of Engineering
 - Mechanical Eng. (Bachelor's and Master's degree)
 - Naval Eng. (Bachelor's and Master's degree)
 - Electrical Eng. (Bachelor's and Master's degree)
 - Computer Science
 - ◉ 2007 Bachelor's degree
 - ◉ 2011 Master's degree
 - Doctor degree in Engineering Sciences

STUDENTS AND PERSPECTIVE

- ◉ Mostly from **North-Adriatic** counties
- ◉ Some ten thousands of economy and other subjects faced with clear necessity of employing information, communication and computer educated personel
- ◉ People as tool for easier integration into EU
- ◉ Global need for ICT educated personel



ORGANIZATION OF DEPARTMENT OF COMPUTER SCIENCE

◉ Research Groups:

- **Software Engineering Group**
- Intelligent Computing Systems Group
- Communication Systems Group

◉ Laboratories:

- Artificial Perception and Autonomous Systems Lab
- Laboratory for Applications of Information Technologies
- Communications and Network Systems Lab
- **Software Engineering and Information Processing Lab (SEIP Lab)**

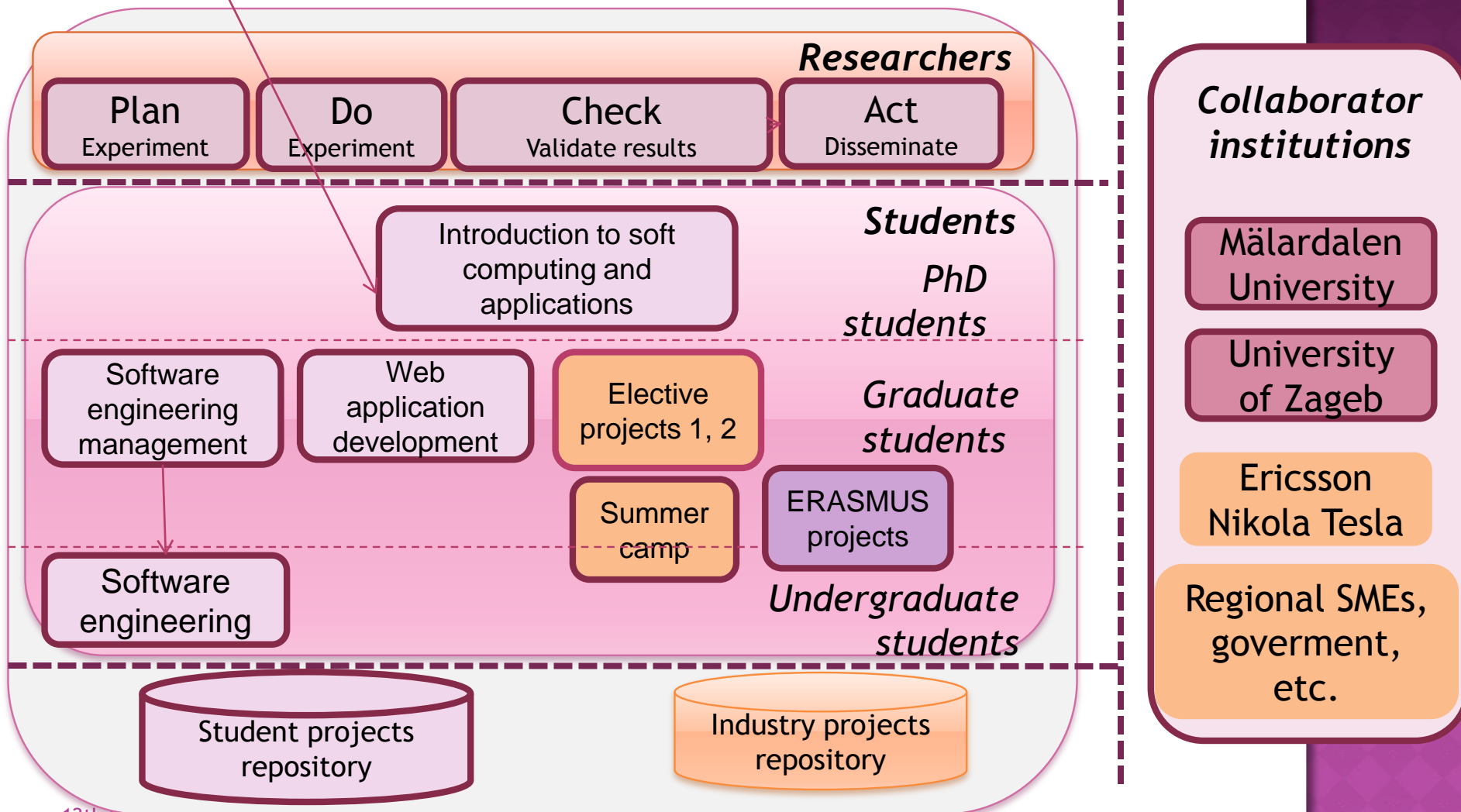
SOFTWARE ENGINEERING AND INFORMATION PROCESSING LAB

- ◉ What should be the main goals for SE Laboratory?
- ◉ Our Mission is
 - the synergy of research and education in the field of software engineering and information processing.
 - the research motivated by the collaboration with other research groups and the real problems and needs through the collaboration projects with industry partners
 - Providing practical experience and challenges, these collaboration projects with industry strongly support the education of young scientists and professionals in the field
- ◉ Through research, education and technology transfer, the SEIP Lab aims to become the regional excellence centre that produces scientists able to compete in the European Research Area, and software professionals that would contribute to the regional software development capability.

courses

interfaces

ORGANIZATION OF SEIP LAB



SEIP LAB

- ◉ Knowledge based society is a society that creates, shares and uses knowledge for the prosperity and well-being of its people
- ◉ To be able to act in that maner we have to:
 - Develop interfaces to
 - ◉ Our collaborators
 - ◉ Between researchers and students
 - ◉ To repositories for systematic data collection
 - Develop services for
 - ◉ Research process (based on PDCA cycle)
 - ◉ Education
 - ◉ Industry
 - Share team spirit and discuss ethical rules

OUR EXPERTISE

- ◉ Leading software process improvements in global companies (Lean, Six Sigma, CMMI)
- ◉ Moving to global software development (processes and tools)
- ◉ Verification of complex systems (how to organize verification and correction process)
- ◉ Modeling of complex systems (developing system rules for the benefit of system evolution, maintain)
- ◉ Implementing reliability
- ◉ Next generation movement in networks and related technologies

RESEARCH INTERESTS

- ◉ Behaviour of complex systems
- ◉ Reliability and evolvability
- ◉ Search based software engineering
- ◉ Verification of complex systems
- ◉ Software Process Improvements
- ◉ Software Engineering Management

OUR SELECTED PUBLICATIONS

- ◉ Galinac Grbac, T., Runeson, P., Huljenic, D., [A Second Replicated Quantitative Analysis of Fault Distributions in Complex Software Systems](#), IEEE Transactions on Software Engineering, [10.1109/TSE.2012.46](#)
- ◉ Galinac Grbac, Tihana, Car, Zeljka, Huljenic, Darko, [Quantifying Value of Adding Inspection Effort Early in the Development Process: a Case Study](#), IET Software, 3 (2012), 6, pp. 249-259.
- ◉ Mauša G., Galinac Grbac T., Dalbelo Bašić B., [Multivariate Logistic Regression Prediction of Fault-proneness in Software Modules](#), Proceedings of the International Conference on Telecommunications and Information of MIPRO 2012, pp. 813-818
- ◉ Galinac Grbac T., Huljenic, D., **Defect Detection Effectiveness and Product Quality in Global Software Development**, Lecture Notes in Computer Science, Vol. 6759, 2011, pp. 113-127
- ◉ Galinac, T., **Empirical Evaluation of Selected Best Practices in Implementation of Software Process Improvement**, Information and Software Technology, Vol. 51, No. 9, 2009, pp. 1351-1364
- ◉ Galinac, T., Car, Ž., **Software Verification Process Improvement Proposal Using Six Sigma**, Lecture Notes in Computer Science, Vol. 4589, 2007, pp. 51-64

STUDENT PROJECTS

- Software development for telecommunication services
 - Mobile applications(Android)
 - Services for mobile, Internet and next generation networks
- Topics: social inclusion,
- Application of modern technologies
 - World Wide Web Consortium (W3C)
 - Web Services Interoperability Organization (WS-I)
 - Organization for the Advancement of Structural Information Standards (OASIS)
 -
- Experience software development lifecycle, teamwork, software quality issues, etc.
- Use of open source IDE
 - Eclipse, NetBeans

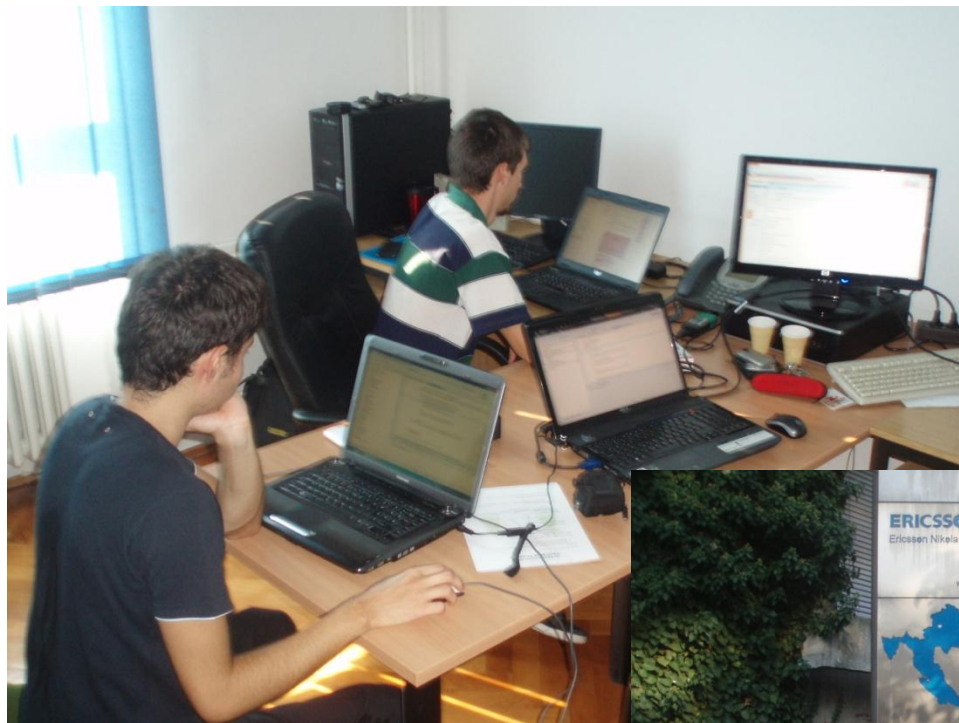


OUR COLLABORATORS

- ◉ So far we have formal collaboration with
 - Ericsson Nikola Tesla
 - Malardalen University, Sweeden
 - Fakultet elektrotehnike i računarstva, Sveučilište u Zagrebu - FER



SUMMER SCHOOL - INDUSTRY COLLABORATION



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QUESTIONS?

