

**CIS/EE 794R/694R: Applied Enterprise Distributed Computing for Engineers and Scientists**

The Ohio State University  
Departments of Computer Science and Engineering and Electrical and Computer Engineering

**Distributed:** Monday, Mar 29.

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**Class:** Mon/Wed/Fri, 10:30 – 11:18 am, DL 266.

**Instructor:** Dr. Paul Sivilotti

**Office:** 695 Drees Labs

**Office Hours:** Tuesday 1:30 – 2:30 pm and Friday 8:30 – 9:30 am, or by appointment.

**Email:** paolo@cis.ohio-state.edu

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**Short Description:** An applied course introducing technologies and middleware for distributed computing, in particular CORBA, Java RMI, EJB, Javaspaces, Jini, XML, and Web Services.

**Prerequisites:** CIS/EE 768 and CIS 760. It is recommended that you take CIS 763 as a corequisite, although this will not be strictly enforced.

**Objectives:** Upon successful completion of this course, the student should:

1. Have been exposed to the fundamental elements of building distributed systems using CORBA, Java RMI, and Web Services
2. Have experience in designing, implementing, and deploying client-server and peer-to-peer distributed systems using CORBA and Java RMI
3. Be familiar with the use of XML for structuring data in Web-based computing.
4. Understand the principles behind several specific classes of distributed algorithms for solving particular problems.

**Textbooks:** There is no “required” book for the course, although the following references are recommended, useful sources of information:

1. “Advanced Concepts in Operating Systems”, M. Singhal and N. Shivaratri, McGraw Hill, 1994.
2. “Java and XML”, Brett McLaughlin, O’Reilly, 2000.
3. “Core Jini”, Keith Edwards, Prentice Hall 1999.

4. "Professional XML Web Services", Patrick Cauldwell et al, Wrox Press Ltd, 2001.

**Grading:** Labs 40%, Peer Evaluation 5%, Minute Quizzes 10%, Midterms 20%, Final 25%.

A class participation penalty of up to 10% will be assessed if I can not easily match your name and face by the end of the quarter.

Note: The lab assignments are done in pairs, while all other parts of the course (minute quizzes, midterms, final exam) are done individually. There are two Midterm Quizzes, each worth 10%.

**Late Penalties:** Assignments are turned in at the beginning of class on their due date. Assignments will be accepted up to 24 hrs late with a 25% penalty and up to 48 hrs late with a 50% penalty.

**Grading Assistant:** Greg Buehrer

**office:** DL 674

**office hours:** TBA

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**Web Page:** The following URL will contain class announcements, handouts, assignments, and other useful resources:

<http://www.cis.ohio-state.edu/~paolo/teaching/794R>

**Important Dates:**

**Minute Quizzes:** Randomly scattered through term.

**Midterm 1:** Mon April 26th, in class.

**Midterm 2:** Mon May 17th, in class.

**Holiday:** Mon May 31st (Memorial Day, no lecture).

**Final:** Mon June 7th, 9:30 - 11:18.

**Course Outline:**

<u>Lectures</u>	<u>Topics</u>
2	Motivation & Overview
2	Java sockets and remote class loading
2	OMG's CORBA (IDL, Architecture, IIOP)
4	Java RMI
2	EJB
2	Jini
2	Javaspaces
3	XML
1	XSL and Schemas
3	SOAP
1	WSDL
1	UDDI
1	.NET
1	Review