## Computer Science

### CS 591 Advanced Seminar  
credit: 0 TO 4 hours.

Seminar on topics of current interest as announced in the Class Schedule. Approved for S/U grading only. May be repeated in the same or separate terms if topics vary. Prerequisite: As specified for each topic offering, see Class Schedule or departmental course description.

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<thead>
<tr>
<th>CRN</th>
<th>Type</th>
<th>Section</th>
<th>Time</th>
<th>Days</th>
<th>Location</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>35941</td>
<td>Lecture-Discussion</td>
<td>ACT</td>
<td>ARRANGED</td>
<td>-</td>
<td>ARR - Siebel Center for Comp Sci</td>
<td>Adve, V Garzaran, M Padua, D</td>
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<tr>
<td>43832</td>
<td>Lecture-Discussion</td>
<td>BIO</td>
<td>10:00 AM - 10:50 AM</td>
<td>M</td>
<td>-</td>
<td>Peng, J Sinha, S Warnow, T</td>
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<tr>
<td>35943</td>
<td>Lecture-Discussion</td>
<td>CCR</td>
<td>05:00 PM - 06:20 PM</td>
<td>W</td>
<td>1304 - Siebel Center for Comp Sci</td>
<td>Campbell, R</td>
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<tr>
<td>46417</td>
<td>Lecture-Discussion</td>
<td>FM</td>
<td>03:30 PM - 04:20 PM</td>
<td>F</td>
<td>-</td>
<td>Gunter, E Viswanathan, M</td>
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<td>36448</td>
<td>Lecture-Discussion</td>
<td>GFX</td>
<td>ARRANGED</td>
<td>-</td>
<td>ARR - Siebel Center for Comp Sci</td>
<td>Hart, J</td>
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<td>35974</td>
<td>Lecture-Discussion</td>
<td>HCI</td>
<td>11:00 AM - 11:50 AM</td>
<td>T</td>
<td>ARR - Siebel Center for Comp Sci</td>
<td>Bailey, B Karahalios, K</td>
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</tbody>
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Credit Hours: 1 hours  
Advanced Compiler Technology  
Topic: Advanced Compiler Technology. Prerequisite: CS 426.

Credit Hours: 1 hours  
Topic: Readings and Research in Bioinformatics. This Course will meet in 3401 SC

Credit Hours: 1 hours  
Cloud Computing Research  
Topic: Cloud Computing Research.

Credit Hours: 1 hours  
Formal Methods Seminar  

Credit Hours: 1 hours  
Computer Graphics Seminar  
Topic: Research Topics in Computer Graphics.

Credit Hours: 1 hours  
Human-Computer Interaction  
Topic: Seminar in Human-Computer Interaction. Course restricted to PhD Students only.
**Course: Distributed Systems Seminar**

Credit Hours: 1 hours  
Distributed Systems Seminar  
Instructor Approval Required  
Topic: Advanced Seminar in Distributed Systems. Prerequisite: CS 598IG or CS 425 or any basic course on distributed systems.

**Course: Scientific Computing Seminar**

Credit Hours: 1 hours  
Scientific Computing Seminar  

**Course: PHD Orientation Seminar**

Credit Hours: 1 hours  
PHD Orientation Seminar  
Topic: Orientation for new PhD students.

**Course: Computer Architecture in the Era of Custom Accel**

Credit Hours: 1 hours  
Comp Arch Era of Custom Accel  
Restricted to Graduate - Urbana-Champaign.  
**TITLE:** Computer Architecture in the Era of Custom Accelerators  
The end of Moore’s Law scaling for chips is having a remarkable side effect: dramatic and rising interest in special-purpose computer architectures to accelerate difficult computing tasks. Said differently: we don’t just look at faster processors, or more cores, any longer. We are willing to look at ?novel? architectures. Examples abound. GPUs are now everywhere, from phones to supercomputers. The backend of the Microsoft Bing search engine runs on FPGAs. Intel has just purchased Altera, the world’s biggest FPGA company. IBM, Intel and Qualcomm have just launched research groups to explore custom architectures to implement Machine Learning (ML) tasks. One of the world’s fastest engines for protein folding was done entirely in custom silicon; the effort was led by a rather famous Wall Street hedge fund billionaire. Indeed, much of the action in high-frequency trading for computational finance happens on FPGAs, because competitive advantage is measured in fractions of a microsecond. Something BIG is happening here. In this course, we’re going to grab several of the key papers in this area, read them and discuss them.  
**LOGISTICS:** Monday, 4-5:30 (mostly); one or a few days, Monday 5-6:30. ROOM: 3403 Siebel Center

**Course: Security Reading Seminar**

Credit Hours: 1 hours  
Security Reading Seminar  
Topic: Security Reading Seminar. Prerequisite: A prior course in security or CS423 or consent of instructor.

**Course: Software Engineering Seminar**

Credit Hours: 1 hours  
Software Engineering Seminar  
The info about the seminar will be posted on http://wiki.cites.illinois.edu/wiki/display/SoftEng  
Please sign up for the soft-eng mailing list if interested in the seminar.
| Credit Hours: 1 hours  
Teaching Assistant Training  
Restricted to Graduate - Urbana-Champaign.  
Topic: TA Seminar; Teaching Assistant Training. |
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| Credit Hours: 1 hours  
Topics in Algorithms Seminar  
Class meetings in 4403 SC. Topic: Topics in Algorithms. Prerequisite: CS 573 or 579. |