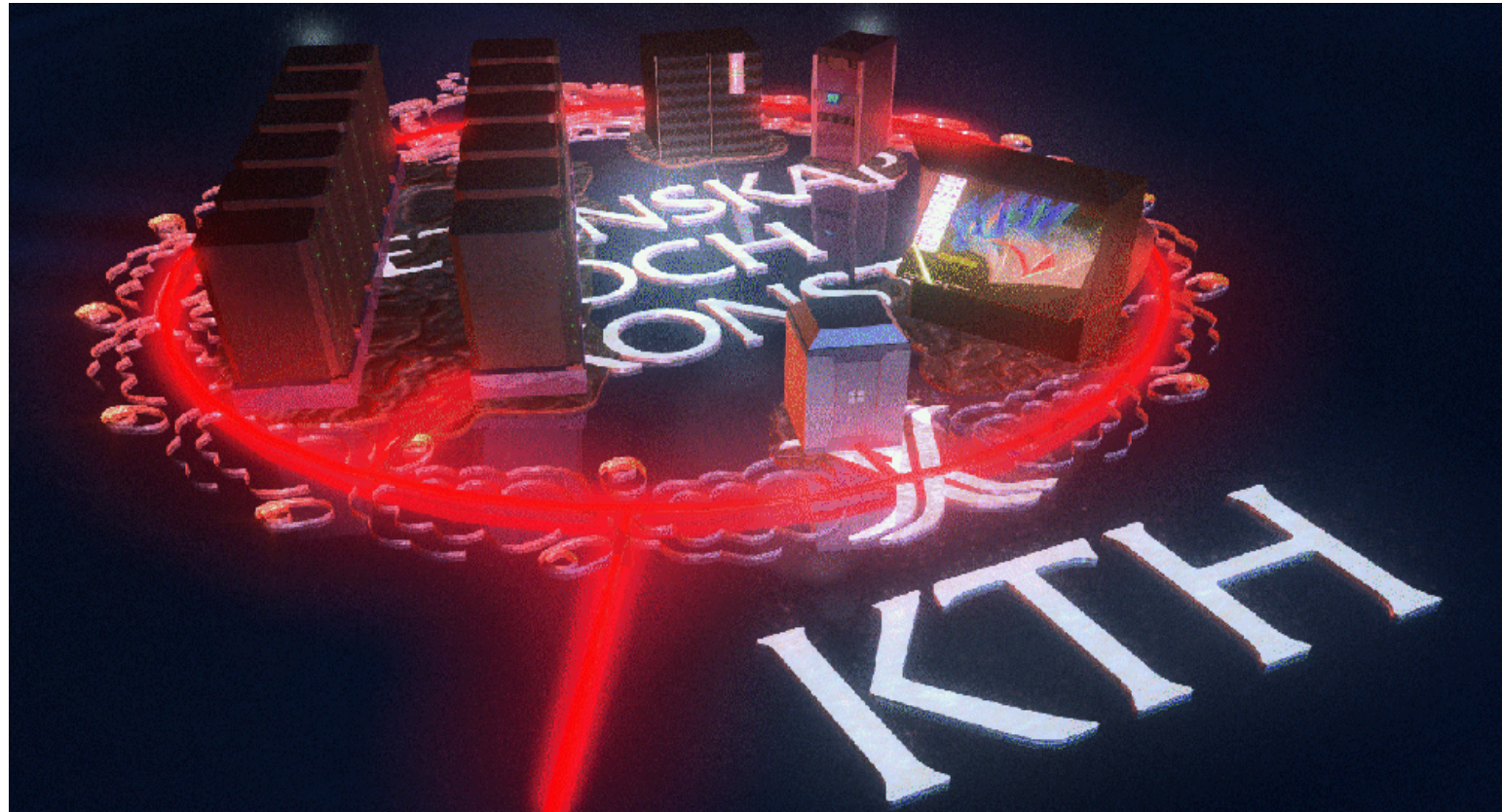


Parallell Dator Centrum



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- Ulf Andersson, ulfa@pdc.kth.se

The HPC summer school at PDC



Ulf Andersson, coordinator
(works as application expert at PDC)

<http://www.pdc.kth.se/training/2005/SummerSchool/>
summer—2005-info@pdc.kth.se

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Outline/Purpose

- Advertisement
- Interaction



<http://www.pdc.kth.se/training/2005/SummerSchool/>

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Course Parts

- 2 weeks lectures and labs (50/50)
 - Held in end of August.
 - Classes held in English.
- Project, 2 or 3 credits
 - Autumn, preferably.
 - Based on the students own research.
 - A performance model **MUST** be included in the report.
 - At least one tool should be used.
 - CyberChair used for project submission.
 - Each project has a Tutor (nine Tutors available).



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Schedule course part, Introduction to HPC



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- Day 1-2: Intro. + Num. Alg.
(Pick-nick, evening day 1)
- Day 3: Computer Architecture
- Day 4: Performance Engineering
- Day 5: Open MP

- Day 6-8: MPI (+Case studies)
- Day 9: Full day case study (Scott Baden 2005)
(summing-up dinner)
- Day 10: Performance tools (Phil Mucci 2005)
(+ grid)
(VR cube demo and PDC machine room tour)

- A total of 16 lecturers.

General info.

- Academic Fee, 2005
 - 1500 SEK
- Course Material, 2005
 - Binder with copies of presentations, lab descr. etc.
 - Compendium
 - (Dowd & Severance HPC book as recommended reading)
- Prerequisites
 - Basic Linear Algebra
 - Basic UNIX (being able to “install”, compile and run a Fortran or C/C++ program on a UNIX computer)



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Attendees

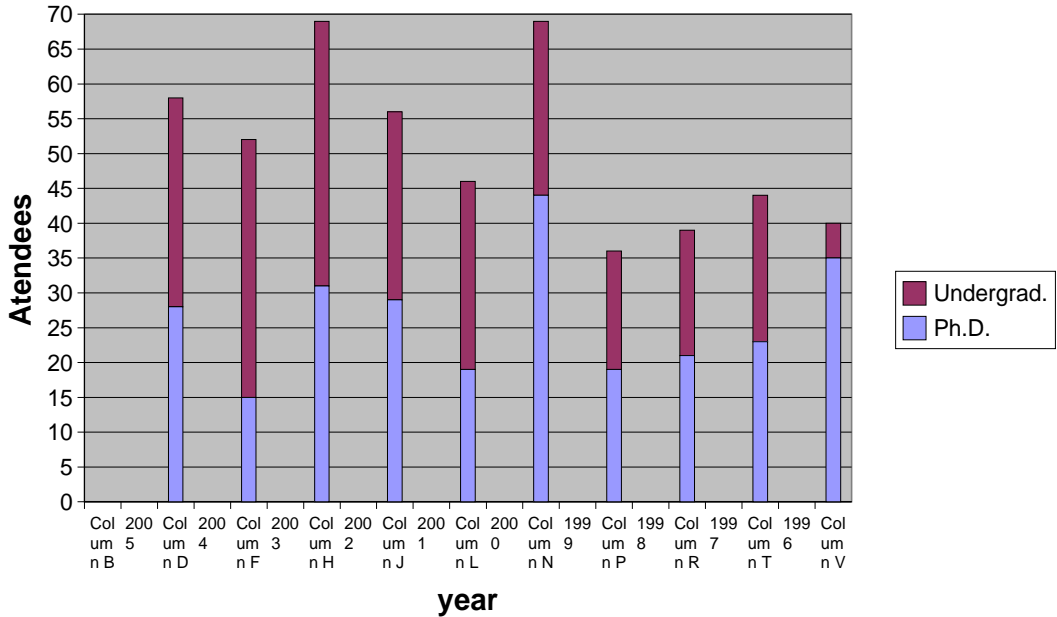
By Program

	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996
Attending										
Ph.D.	28	13	19	14	15	29	10	6	12	35
Full Grant					4	2		3	6	13
Partial Grant				7	1	12	5	1	6	7
Grant Denied				1	4					4
Lecture only				2	1	3	1			11
KCSE	3									
KTH/SU	10									
Non-KCSE	15	13	19	4	5	12	4	2		
Int. Masters	16	22	23	13	16	15	4	10	10	
NGSSC		1	9	15	2	14	7	15	11	
PSCI		1	3		2	1	2			
SU Masters	4									
KTH Teknolog	10	15	14	14	11	9	12	8	3	2
Full Paying			1			1	1		8	3
Total	58	52	69	56	46	69	36	39	44	40
Non-attending										
Ph.D.	2	3	6	2	3	2	0	0	1	6
Full Grant					1				1	5
Partial Grant				1						
Grant Denied					2	2				
Lecture only				1						1
KCSE										
KTH/SU										
Non-KCSE	2	3	6							
Int. Masters	5		2					6	1	
NGSSC			1		3		10		2	
PSCI					1	1				
SU Masters	4									
KTH Teknolog	11	12	7	8	2	2	6	7	2	
Full Paying	2									
Total	24	15	16	10	9	5	16	13	6	6



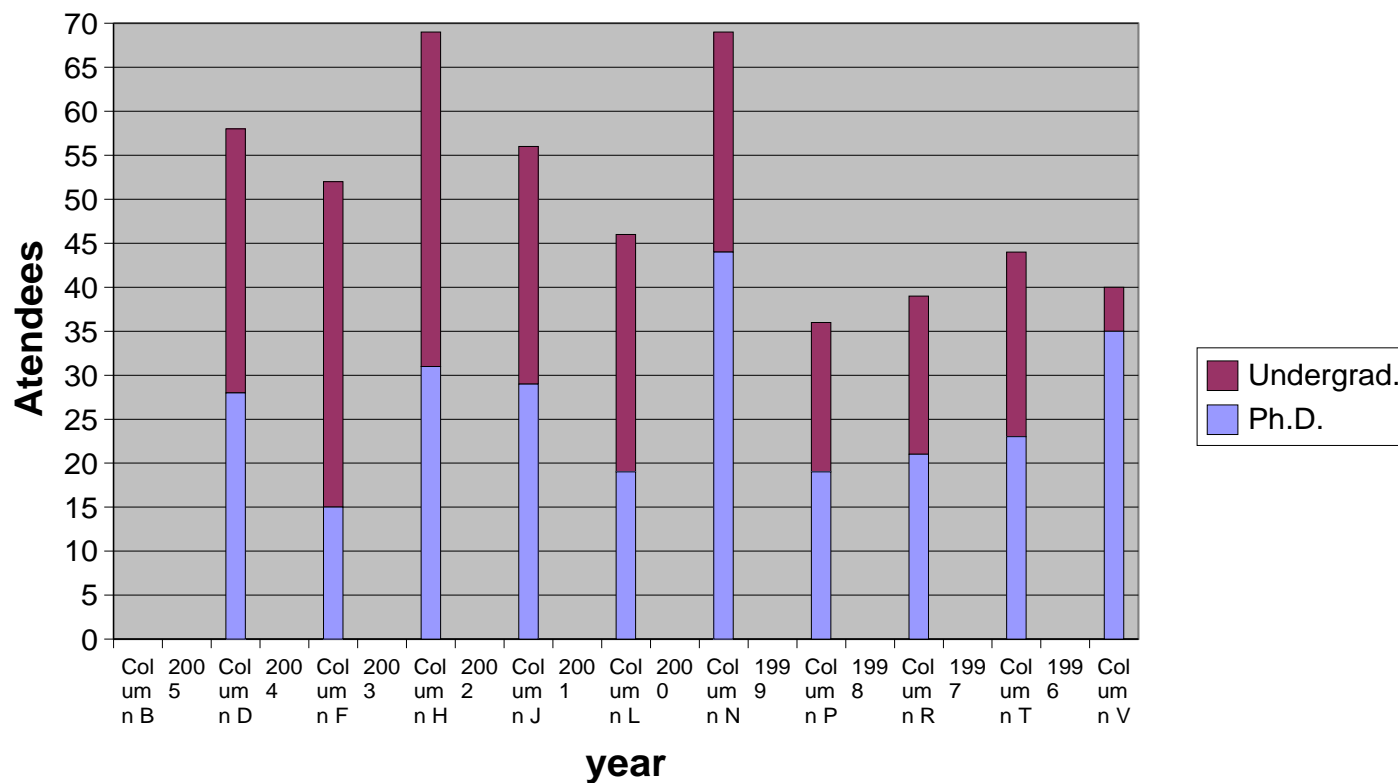
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Atendees



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Affiliation for Ph.D. students



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Things NOT included in the course



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- Visualization
- Data Storage
- HDF5 and netCDF
- Makefiles
- RCS/CVS, subversion
- Debugging (Totalview)
- ScaLAPACK, etc.
- (Grid)
- (Tools, hands on)

- HPF
- pthreads

Feedback, 2005



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- Average course grade was 3.5 on a scale from 1 to 4.
- Best lectures by Thomas Ericsson, Chalmers
- "The course was very well organized"
- "Excellent introductory course"
- "NOT a lot of redundant repetitions, as in many other courses with a lot of different teachers"
- "Too much information for two weeks"
- "There should be better prep. material"
- "A couple of more predefined projects would be appreciated"