Christian Bohm University of Stockholm, Sweden

	Cotundou 7th		Manday 06	Turn day 10th	Vodosalov 44th	Thursday 40th	Edday 196	Catuaday 4 Mb		Monday 406	Tuesday 476
	Saturday 7th Welcome		Monday 9th Introduction to	Tuesday 10th	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th	ш	Monday 16th	Tuesday 17th
8:30 - 9:00	about the school		readout, trigger and	Introduction to networks	High speed					Application of	
9:00 - 9:30	Lecturer and student		control architecture		signals, impedances,	Exercises	Exercises	Exercises		fundamental	Student
230 - 2.32	introduction Introduction to		From resistor to high	Unix Shell basics	reflections and grounding					physics in medicine	Presentations
9:30 - 10:00	IEEE NPSS		energy physics experiments		aragioanang						
10:00 - 10:30	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Teaor Coffee Break
10:30 - 11:00				An introduction							
11:00 - 11:30	Radiation detectors	-	HEP detectors overview	to the RCDAQ	Signal levels and BUS	Exercises	Exercises	Exercises		Detectors for	Student
1130 - 1130	past and future	PGA	and example	data acquisition system	standards					Astro-physics	Presentations
11:30 - 12:00		Ē.							E		
12:00 - 12:30	LUNCH	ogle	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Excursion	LUNCH	LUNCH
12:30 - 13:00									ũ		
13:00 - 13:30	Introduction to	n m able		Waveform		Introduction				Writing papers	
13:30 - 14:00	photo, gaseous and scintillation detectors	Yogramm	Silicon detectors	digitizing and signal processing	Raspberry Pi	to EasyPET				and preparing presentations – some hints	Open
14:00 - 14:30	311131313	Æ		processing		Exercises	Exercises	Exercises		- some minus	
14:30 - 15:00	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
15:00 - 15:30	Introduction to photo, gas work and world alternated for a confiner of		Instrumentation	Real-time data visualization							Giving out certificates and
			for harsh and severe	and control							rewards
15:30 - 16:00			environments	using modern Web	WE					_	Closing
16:00 - 16:30	Programmable logics – FPG As			technologies	Event	Exercises	Exercises	Exercises		Prepare presentations	
16:30 - 17:00	logics=1107d		Detectors for		1					,	
10.30 - 17.00			safety and security	Introduction to TimePix							
17:00 - 17:30											
17:30 - 18:00											
			DINNER	DINNER	DINNER	DINNER	DINNER			DINNER	
18:00 - 18:30	Dinner & Welcome							Dinner & Main			
18:30 - 19:00	party							party			
19:00 - 19:30		party			WIE Event						
19:30 - 20:00											

15 Instrumentation lectures

	Saturday 7th		Monday 9th	Tuesday 10th	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th		Monday 16th	Tuesday 17th
8:30 - 9:00 9:00 - 9:30	Welcome about the school Lecturer and student		Introduction to readout, trigger and control architecture	Introduction to networks	High speed signals, impedances,	Exercises	Exercises	Exercises		Application of fundamental	Student Presentations
9:30 - 10:00	introduction Introduction to IEEE NPSS		From resistor to high energy physics experiments	Unix Shell basics	reflections and grounding					physics in medicine	Presentations
10:00 - 10:30	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
10:30 - 11:00	Radiation			An Introduction							
11:00 - 11:30	detectors past and future	FPGA	HEP detectors overview andexample	to the RCDAQ data acquisition system	Signal levels and BUS standards	Exercises	Exercises	Exercises		Detectors for Astro-physics	Student Presentations
11:30 - 12:00				-,					5		
12:00 - 12:30	LUNCH	logie	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Exeuration	LUNCH	LUNCH
12:30 - 13:00		豊							-		
13:00 - 13:30	Introduction to	Ē	Silicon	Waveform digitizing and		Introduction to EasyPET				Writing papers and preparing	_
13:30 - 14:00	photo, gaseo us and scintillation detectors	Program mable	detectors	signal processing	Raspberry Pi		_			presentations - some hints	Open
14:00 - 14:30	Tea or Coffee	_	Tea or Coffee	Tea or Coffee	Tea or Coffee	Exercises Tea or Coffee	Exercises Tea or Coffee	Exercises Tea or Coffee		Tea or Coffee	Tea or Coffee
14:30 - 15:00	Break		Break	Break	Break	Break	Break	Break		Break	Break
15:00 - 15:30	Introduction to photos garantus and schillfall for deletions confinent		Instrumentation for harsh and	Real-time data visualization and control							Giving out certificates and rewards
15:30 - 16:00			severe environments	using modern Web	WIE Event	Exercises	Exercises	Exercises		5	Closing
16:00 - 16:30	Programmable logics – FPGAs			technologies	Lian	Exercises	Exercises	Exercises		Prepare presentations	
16:30 - 17:00			Detectors for safety and security	in troduction to TimePix							
17:00 - 17:30			2000,000 2000 1,	to Ilimerix							
17:30 - 18:00			DINNER	DINNER	DINNER	DINNER	DINNER			DINNER	
18:00 - 18:30	Dinner &		DINNELL	DIMITEIX	Dimiter	DIMITER	Dividen	Dinner &		Dilater	
18:30 - 19:00	Welcome party				WIE			Main party			
19:00 - 19:30					Event						
19:30 - 20:00											
				'		-	!		=		

4 Lectures introducing the exercises

	Saturday 7th		Monday 9th	Tuesday 10th	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th		Monday 16th	Tuesday 17th
8:30 - 9:00 9:00 - 9:30 9:30 - 10:00	Welcome about the school Lecturer and student introduction introduction to IEEE NPSS		Introduction to readout, trigger and control architecture From resistor to high energy physics experiments	Introduction to networks Unix Shell basics	High speed signals, impedances, reflections and grounding	Exercises	Exercises	Exercises		Application of fundamental physics in medicine	Student Presentations
10:00 - 10:30	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
10:30 - 11:30 11:30 - 12:30	Radiation detectors past and future	FPGA1	HEP detectors overview and example	An introduction to the RCDAQ data acquisition system	Signal levels and BUS standards	Exercises	Exercises	Exercises	_	Detectors for Astro-physics	Student Presentations
12:00 - 12:30 12:30 - 13:00	LUNCH		LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Exeuration	LUNCH	LUNCH
13:00 - 13:30 13:30 - 14:00 14:00 - 14:30	Introduction to photo, gaseo us and scintillation detectors	Programmable logies	Silicon detectors	Waveform digitizing and signal processing	Raspberry Pi	Introduction to EasyPET	Exercises	Exercises		Writing papers and preparing presentations - so me hints	Open
14:30 - 15:00	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
15:30 - 15:30 15:30 - 16:30	History bridge green as and a continued to the leaders continued to the		instrumentation for harsh and severe environments	Real-time data visualization and control using modern Web	WIE Event	Exercises	Exercises	Exercises		Precure	Giving out certificates and rewards Closing
16:30 - 17:30	logics – FPGAs		Detectors for	technologies						presentations	
17:00 - 17:30			safety and security	Introduction to TimePix							
17:30 - 18:00			DINNER	DINNER	DINNER	DINNER	DINNER			DINNER	
18:00 - 18:30	Dinner & Welcome			2/11/12/1		21111211		Dinner & Main			
18:30 - 19:00	party				WIE			party			
19:00 - 19:30				Event							
19:30 - 20:00											

FPGA workshop

- Masaharu Nomachi
- Zhen-An Lui

Maximum ~20 persons

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	Saturday 7th		Monday 9th	Tuesday 10th	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th		Monday 16th	Tuesday 17th
8:30 - 9:00 9:00 - 9:30 9:30 - 10:00	Welcome about the school Lecturer and student introduction Introduction to IEEE NPSS		Introduction to readout, trigger and control architecture From resistor to high energy physics experiments	Introduction to networks Unix Shell basits	High speed signals, impedances, reflections and grounding	Exercises	Exercises	Exercises		Application of fundamental physics in medicine	Student Presentations
10:00 - 10:30	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
10:30 - 11:00	Radiation		1000 44	An introduction							
11:00 - 11:30	detectors past and future	FPGAI	HEP detectors overview and example	to the RCDAQ data acquisition system	Signal levels and BUS standards	Exercises	Exercises	Exercises		Detectors for Astro-physics	Student Presentations
11:30 - 12:00		Ė		-,					E		
12:00 - 12:30	LUNCH	logies	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Exeuration	LUNCH	LUNCH
12:30 - 13:00		書							8		
13:00 - 13:30	Introduction to	Ē		Waveform		Introduction				Writing papers	
13:30 - 14:00	photo, gaseo us and scintillation detectors	Program	Silicon detectors	digitizing and signal processing	Raspberry Pi	to EasyPET				and preparing presentations - some hints	Open
14:00 - 14:30		Δ.				Exercises	Exercises	Exercises			
14:30 - 15:00	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
15:00 - 15:30	hit make to nite photos garanose and schalled for defeat or s continued		Instrumentation for harsh and	Real-time data visualization							Giving out certificates and rewards
15:30 - 16:00			severe environments	and control using modern Web	WIE Event	F	F	En contra c		_	Closing
16:00 - 16:30	Programmable logics – FPGAs			technologies	Event	Exercises	Exercises	Exercises		Prepare presentations	
16:30 - 17:00			Detectors for safety and security	Introduction to TimePix							
17:00 - 17:30											
17:30 - 18:00			DINNER	DINNER	DINNER	DINNER	DINNER			DINNER	
18:00 - 18:30	Dinner &		Dirtiteit	Diviver	Diviver	Director	Dividen	Dinner &		Director	
18:30 - 19:00	Welcome party				WIE			Main party			
19:00 - 19:30					Event						
19:30 - 20:00											

Control using modern Web technologies

- Stefan Ritt
- Raspberry Pi/RCDAQ
 - Martin Purschke

	Saturday 7th		Monday 9th	Tuesday 10th	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th		Monday 16th	Tuesday 17th
9:30 - 9:30 9:30 - 10:00	Welcome about the school Lecturer and student introduction introduction to IEEE NPSS		Introduction to readout, trigger and control architecture	Introduction to networks Unix Shell basics	High speed signals, impedances, reflections and grounding	Exercises	Exercises	Exercises		Application of fundamental physics in medicine	Student Presentations
10:00 - 10:30	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
10:30 - 11:30 11:30 - 11:30 11:30 - 12:30	Radiation detectors past and future	- FPGA:	HEP detectors overview and example	An introduction to the RCDAQ data acquisition system	Signal levels and BUS standards	Exercises	Exercises	Exercises	E	Detectors for Astro-physics	Student Presentations
12:00 - 12:30 12:30 - 13:00	LUNCH	ile logics	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Exeuration	LUNCH	LUNCH
13:30 - 13:30 13:30 - 14:30 14:30 - 14:30	Introduction to photo, gaseous and scintillation detectors	Program mable logics	Silicon defectors	Waveform digitizing and signal processing	Raspberry Pi	Introduction to EasyPET	Exercises	Exercises		Writing papers and preparing presentations – some hints	Open
14:30 - 15:00	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
15:00 - 15:30	Introduction of opticity, gas worst and solutill about which for continue of		Instrumentation for harsh and	Real-time data visualization							Giving out certificates and
15:30 - 16:00 16:00 - 16:30	Programmable		severe environments	and control using modern Web technologies	WIE Event	Exercises	Exercises	Exercises		Prepare presentations	rewards Closing
16:30 - 17:00	logics = FPG As		Detectors for	In troduction						presentations	
17:00 - 17:30			safety and security	to TimePix							
17:30 - 18:00			DINNER	DINNER	DINNER	DINNER	DINNER			DINNER	
18:00 - 18:30	Dinner & Welcome							Dinner & Main			
18:30 - 19:00	party				WIE			party			
19:30 - 19:30 19:30 - 20:00					Event						
12.20 - 10.00						l					

- Stefan Ritt
- HV-control
 - Masaharu Nomashi
 - Martin Purschke
- TimePix
 - Michael Holik
 - Vladimir Vicha
- EasyPet
 - Martin Grossmann

	Saturday 7th		Monday 9th	Tuesday 10th	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th		Monday 16th	Tuesday 17th
9:30 - 9:30 9:30 - 10:30	Welcome about the school Lecturer and student introduction introduction to IEEE NPSS		Introduction to readout, trigger and control architecture From resistor to high energy physics experiments	Introduction to networks Unix Shell basics	High speed signals, impedances, reflections and grounding	Exercises	Exercises	Exercises		Application of fundamental physics in medicine	Student Presentations
10:00 - 10:30	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
10:30 - 11:00	Radiation		HEP detectors	An introduction	Signal levels						
11:00 - 11:30	detectors past and future	FPGA	overview and example	to the RCDAQ data acquisition system	and BUS standards	Exercises	Exercises	Exercises		Detectors for Astro-physics	Student Presentations
11:30 - 12:00		Ē		23200111					۶		
12:00 - 12:30	LUNCH	Program mable logies	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Excursion	LUNCH	LUNCH
12:30 - 13:00		*							ū		
13:00 - 13:30	Introduction to photo, gaseous	E E		Waveform		Introduction to EasyPET				Writing papers	
13:30 - 14:00	and scintillation detectors	engo	Silicon detectors	digitizing and signal processing	Raspberry Pi	IU Easyr E1				and preparing presentations – some hints	Open
14:00 - 14:30	Or se Color	Æ		processing		Exercises	Exercises	Exercises		- some mins	
14:30 - 15:00	Tea or Coffee Break		Tea or Coffee Break	Teaor Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
15:00 - 15:30	Introduction to pitoto, gas wors and solntill alto notates for a continue of		Instrumentation for harsh and	Real-time data visualization							Giving out certificates and
15:30 - 16:00			severe environments	and control using modern Web	WE						rewards Closing
16:00 - 16:30	Programmable logics – FPG As			technologies	Event	Exercises	Exercises	Exercises		Prepare presentations	
16:30 - 17:00			Detectors for safety and security	In troduction to TimePix							
17:00 - 17:30				to timerix							
17:30 - 18:00			DINNER	DINNER	DINNER	DINNER	DINNER			DINNER	
18:00 - 18:30	Dinner &			211111111		211111111		Dinner &		211111211	
18:30 - 19:00	Welcome party				WE			Main party			•
19:00 - 19:30					Event						
19:30 - 20:00											

Women In Engineering

 An event devoted discussions about mentoring, networking and professional development of women in Science, Technology, Engineering and Mathematics (STEM)

	Saturday 7th		Manufact Otto	Tours day 4 Oth	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th		Monday 16th	Tuesday 17th
	-		Monday 9th	Tuesday 10th	vednesday 11th	Thursday 12th	Friday 15th	Saturday 14th		Monday 16th	luesday 17 m
9:00 - 9:30 9:30 - 10:00	Welcome about the school Lecturer and student introduction Introduction to		Introduction to readout, trigger and control architecture - From resistor to high energy physics		High speed signals, impedances, reflections and grounding	Exercises	Exercises	Exercises		Application of fundamental physics in medicine	Student Presentations
	Tea or Coffee		experiments Tea or Coffee	Tea or Coffee	Tea or Coffee	Tea or Coffee	Tea or Coffee	Tea or Coffee		Tea or Coffee	Tea or Coffee
10:00 - 10:30	Break		Break	Break	Break	Break	Break	Break		Break	Break
10:30 - 11:00	Radiation			An introduction	Signal levels						
11:00 - 11:30	detectors past and future	FPGA	HEP detectors overview and example	to the RCDAQ data acquisition system	and BUS standards	Exercises	Exercises	Exercises		Detectors for Astro-physics	Student Presentations
11:30 - 12:00		Ē		2723011					5		
12:00 - 12:30	LUNCH	Program mable logics	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Excursion	LUNCH	LUNCH
12:30 - 13:00		÷							ш		
13:00 - 13:30	Introduction to photo, gaseous	E		Waveform		Introduction to EasyPET				Writing papers	
13:30 - 14:00	and scintillation detectors	og.	Silicon detectors	digitizing and signal processing	Raspberry Pi	10 Easyr E1				and preparing presentations – some hints	Open
14:00 - 14:30		Æ		,		Exercises	Exercises	Exercises			
14:30 - 15:00	Tea or Coffee Break		Tea or Coffee Break	Teaor Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
15:00 - 15:30	Interduction for the to, gas work and softfill also nothing tors continue d		Instrumentation for harsh and	Real-time data visualization							Giving out certificates and rewards
15:30 - 16:00			severe environments	and control using modern Web	WIE Event						Closing
16:00 - 16:30	Programmable logics – FPG As			technologies	Event	Exercises	Exercises	Exercises		Prepare presentations	
16:30 - 17:00			Detectors for safety and security	Introduction to TimePix							
17:00 - 17:30			,	30 IIIINFIX							
17:30 - 18:00			DINNER	DINNER	DINNER	DINNER	DINNER			DINNER	
18:00 - 18:30	Dinner &		DIMMER	DIMMER	DIMNER	DIMMER	DIMMEN	Dinner &		DIMMER	
18:30 - 19:00	Welcome party				WE			Main party			_
19:00 - 19:30	pary				Event						
19:30 - 20:00											

Two Parties: Welcome Party Main Party

	Saturday 7th		Monday 9th	Tuesday 10th	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th		Monday 16th	Tuesday 17th
8:30 - 9:00 9:00 - 9:30 9:30 - 10:00	Welcome about the school Lecturer and student introduction Introduction to		Introduction to readout, trigger and control architecture - From resistor to high energy physics	Introduction to networks Unix Shell basics	High speed signals, impedances, reflections and grounding	Exercises	Exercises	Exercises		Application of fundamental physics in medicine	Student Presentations
10:00 - 10:30	Tea or Coffee Break		experiments Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
10:30 - 11:00			Dieak	An introduction		Dieak	Dieak	Dieak		Dieak	DIGAR
11:00 - 11:30	Radiation detectors past and future	FPGA	HEP detectors overview and example	to the RCDAQ data acquisition system	Signal levels and BUS standards	Exercises	Exercises	Exercises		Detectors for Astro-physics	Student Presentations
11:30 - 12:00		Ė		29200111					E		
12:00 - 12:30	LUNCH	able logics	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Excursion	LUNCH	LUNCH
12:30 - 13:00		â							ш		
13:00 - 13:30	Introduction to pho to, gaseous	E	Silicon	Waveform		Introduction to EasyPET				Writing papers	
13:30 - 14:00	and scintillation detectors	Programm	detectors	digitizing and signal processing	Raspberry Pi	10 Easyr E1				and preparing presentations – some hints	Open
14:00 - 14:30	50000000	Æ		processing		Exercises	Exercises	Exercises		- some mins	
14:30 - 15:00	Tea or Coffee Break		Tea or Coffee Break	Teaor Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
15:00 - 15:30	Index durable in to principle, gas would and sound!! also not what for a continue of		Instrumentation for harsh and	Real-time data visualization							Giving out certificates and rewards
15:30 - 16:00			severe environments	and control using modern Web	WE Event	E	*			_	Closing
16:00 - 16:30	Programmable logics – FPG As			technologies	Event	Exercises	Exercises	Exercises		Prepare presentations	
16:30 - 17:00			Detectors for safety and security	in troduction							
17:00 - 17:30			salety and security	to TimePix							
17:30 - 18:00			DINNER	DINNER	DINNER	DINNER	DINNER			DINNER	
18:00 - 18:30	Dinner &			Diriter		- IIIII	Difficult	Dinner & Main			
18:30 - 19:00	Welcome party				WE			party			
19:00 - 19:30					Event						
19:30 - 20:00											

Student presentations

8 groups

Agree on which of the 6 exercises to report on

Jointly develop the presentation

Elect one presenter

	Saturday 7th		Monday 9th	Tuesday 10th	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th		Monday 16th	Tuesday 17th
9:30 - 9:30 9:30 - 10:00	Welcome about the school Lecturer and student introduction introduction to IEEE NPSS		Introduction to readout, trigger and control architecture From resistor to high energy physics experiments	Introduction to networks Unix Shell basks	High speed signals, impedances, reflections and grounding	Exercises	Exercises	Exercises		Application of fundamental physics in medicine	Student Presentations
10:00 - 10:30	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
10:30 - 11:00	Radiation		HEP detectors	An Introduction	Signal levels						
11:00 - 11:30	detectors past and future	FPGAI	overview and example	to the RCDAQ data acquisition system	and BUS standards	E xercis es	Exercises	Exercises		Detectors for Astro-physics	Student Presentations
11:30 - 12:00		Ë							8		
12:00 - 12:30	LUNCH	able logics	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Exeuration	LUNCH	LUNCH
12:30 - 13:00		=							ш		
13:00 - 13:30	Introduction to photo, gaseous	Yogram mab	Silicon	Waveform digitizing and		Introduction to EasyPET				Writing papers and preparing	
13:30 - 14:00	and scintillation detectors	Ē	detectors	signal	Raspberry Pi	to Easy, Es				presentations	Open
14:00 - 14:30	Generalors	Æ		processing		Exercises	Exercises	Exercises		- some hints	
14:30 - 15:00	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
15:00 - 15:30	introduction to photo, gas work and exhibit also noteles for a continue of		Instrumentation for harsh and	Real-time data visualization							Givingout certificates and
15:30 - 16:00			severe environments	and control using modern Web	WE						rewards Closing
16:00 - 16:30	Programmable logics – FPG As			technologies	Event	Exercises	Exercises	Exercises		Prepare presentations	
16:30 - 17:00			Detectors for safety and security	Introduction to TimePix							
17:00 - 17:30			,	10 IIINFIX							
17:30 - 18:00			DINNER	DINNER	DINNER	DINNER	DINNER			DINNER	
18:00 - 18:30	Dinner &		SHITTER	DIMITER	21111111	J		Dinner & Main			
18:30 - 19:00	Welcome party				WE			party			
19:00 - 19:30					Event						
19:30 - 20:00											

•	Distribution of
	certificates and
	rewards

• Closing the school

	Saturday 7th		Monday 9th	Tuesday 10th	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th		Monday 16th	Tuesday 17th
8:30 - 9:00 9:00 - 9:30 9:30 - 10:00	Welcome about the school Lecturer and student introduction introduction to IEEE NPSS		Introduction to readout, trigger and control architecture From resistor to high energy physics experiments	Introduction to networks Unix Shell basits	High speed signals, impedances, reflections and grounding	Exercises	Exercises	Exercises		Application of fundamental physics in medicine	Student Presentations
10:00 - 10:30	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
10:30 - 11:00 11:00 - 11:30	Radiation detectors past and future	A:	HEP detectors overview	An introduction to the RCDAQ data acquisition	Signal levels and BUS standards	Exercises	Exercises	Exercises		Detectors for Astro-physics	Student Presentations
11:30 - 12:00	past and loane	- FPGA1	and example	system	Salidatos				E		
12:00 - 12:30	LUNCH	able logics	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Exeuration	LUNCH	LUNCH
12:30 - 13:00		÷									
13:00 - 13:30	introduction to photo, gaseous	E	Silicon	Waveform digitizing and		Introduction to EasyPET				Writing papers and preparing	
13:30 - 14:00	and scintillation detectors	Programm	detectors	signal processing	Raspberry Pi	to casy, c.				presentations - some hints	Open
14:00 - 14:30		Æ		processing		Exercises	Exercises	Exercises		- 30112111113	
14:30 - 15:00	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
15:00 - 15:30	Interduction to photo, gas wors and southill about the long continued		Instrumentation for harsh and	Real-time data visualization							Giving out certificates and
15:30 - 16:00			severe environments	and control using modern Web	WE						rewards Closing
16:00 - 16:30	Programmable logics – FPG As			technologies	Event	Exercises	Exercises	Exercises		Prepare presentations	
16:30 - 17:00			Detectors for safety and security	Introduction to TimePix							
17:00 - 17:30				so timera.							
17:30 - 18:00			DINNER	DINNER	DINNER	DINNER	DINNER			DINNER	
18:00 - 18:30	Dinner &		Diititeit	BiititEit	Dilliter	Direction	Direction	Dinner &		Difficult	
18:30 - 19:00	Welcome party				WIE			Main party			
19:00 - 19:30				Event							
19:30 - 20:00											

Lecturer:

Patrick Ledu, IPN Lyon, France



	Contrador 7th		Monday Oth	Tours day 10th	Vode cades dille	Thomas days 4 24th	Existent 49 fb	Controval and 4 fills		Manday 10th	Torondor (75)
	Saturday 7th		Monday 9th	Tuesday 10th	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th		Monday 16th	Tuesday 17th
8:30 - 9:00 9:00 - 9:30	Welcome about the school Lecturer and student		Introduction to readout, trigger and control architecture		High speed signals, impedances,	Exercises	Exercises	Exercises		Application of fundamental	Student
9:30 - 10:00	introduction introduction to IEEE NPSS		From resistor to high energy physics	Unix Shell basics	reflections and grounding					physics in medicine	Presentations
10:00 - 10:30	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
10:30 - 11:00	Radiation			An Introduction	Clause I laure la						
11:00 - 11:30	detectors past and future	FPGAI	HEP detectors overview andexample	to the RCDAQ data acquisition system	Signal levels and BUS standards	Exercises	Exercises	Exercises		Detectors for Astro-physics	Student Presentations
11:30 - 12:90				2,236111					5		
12:00 - 12:30	LUNCH	mable logies	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Excursion	LUNCH	LUNCH
12:30 - 13:00		=							ш		
13:00 - 13:30	Introduction to pho to, gaseous	Ë	Silicon	Waveform digitizing and		Introduction to EasyPET				Writing papers and preparing	Open
13:30 - 14:00	and scintillation detectors	Program	detectors	signal processing	Raspberry Pi	Formula	Formula	En contra c		presentations - some hints	Open
14300 - 14330						Exercises	Exercises	Exercises			
14:30 - 15:00	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
15:00 - 15:30	Introduction to pitch, gas work and spindli allowables for a continue di		Instrumentation for harsh and	Real-time data visualization and control							Giving out certificates and rewards
15:30 - 16:00			severe environments	using modern Web	WIE Event	Exercises	Exercises	Exercises		Premire	Closing
16:00 - 16:30	Programmable logics – FPG As			technologies	Link	Exercises	E Xel Cis es	Exercises		presentations	
16:30 - 17:00			Detectors for safety and security	Introduction to TimePix							
17:30 - 18:00											
18:00 - 18:30	Dinner &		DINNER	DINNER	DINNER	DINNER	DINNER	Dinner &		DINNER	
18:30 - 19:00	Welcome party				Liver			Main party			ı
19:00 - 19:30					WIE Event						
19:30 - 20:00											

Lecturer:

Abdallah Lyoussi, CEA Cadarache, France



	Saturday 7th		Monday 9th	Tuesday 10th	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th		Monday 16th	Tuesday 17th
9:00 - 9:30 9:30 - 10:00	Welcome about the school Lecturer and student introduction Introduction to		Introduction to readout, trigger and control architecture - From resistor to high energy physics	Introduction to networks Unix Shell basics	High speed signals, impedances, reflections and grounding	Exercises	Exercises	Exercises		Application of fundamental physics in medicine	Student Presentations
9:30 - 10:00	IEEE NPSS		experiments								
10:00 - 10:30	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
10:30 - 11:00				An introduction							
11:00 - 11:30	Radiation detectors past and future	FPGA	HEP detectors overview andexample	to the RCDAQ data acquisition	Signal levels and BUS standards	Exercises	Exercises	Exercises		Detectors for Astro-physics	Student Presentations
11:30 - 12:00			aroexample	system							
12:00 - 12:30	LUNCH	mable logics	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Exeuration	LUNCH	LUNCH
12:30 - 13:00		å							ū		
13:00 - 13:30	introduction to photo, gaseous	E		Waveform		Introduction to EasyPET				Writing papers	
13:30 - 14:00	and scintillation detectors	Program	Silicon detectors	digitizing and signal processing	Raspberry Pi	10 Easyr E1				and preparing presentations – some hints	Open
14:00 - 14:30		~				Exercises	Exercises	Exercises			
14:30 - 15:00	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
15:00 - 15:30	Introduction to pitoto, gas work and spiritifiate natives for a continue of		Instrumentation for harsh and	Real-time data visualization							Giving out certificates and rewards
15:30 - 16:00			severe environments	and control using modern Web	WIE Event	Exercises	Exercises	Exercises		P	Closing
16:00 - 16:30	Programmable logics – FPG As			technologies	Event	Exercises	E xer dis es	Exercises		Prepare presentations	
16:30 - 17:00			Detectors for safety and security	Introduction to TimePix							
17:00 - 17:30											
17:30 - 18:00			DINNER	DINNER	DINNER	DINNER	DINNER			DINNER	
18:00 - 18:30	Dinner & Welcome							Dinner & Main			
18:30 - 19:00	Welcome party				WE			party			
19:00 - 19:30					Event						
19:30 - 20:00											

Lecturer:

Masaharu Nomachi, Osaka University, Japan



- FPGA workshop
- HV-control

	Control of the	_	Maria de Cara	T	47 - 4 4 4 4 4 b	75	E-2-4	Control of the		11	7
	Saturday 7th		Monday 9th	Tuesday 10th	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th		Monday 16th	Tuesday 17th
8:30 - 9:00 9:00 - 9:30	Welcome about the school Lecturer and student		Introduction to readout, trigger and control architecture	Introduction to networks	High speed signals, impedances.	Exercises	Exercises	Exercises		Application of fundamental	Student
9:30 - 10:00	introduction Introduction to		From resistor to high energy physics	Unix Shell basics	reflections and grounding					physics in medicine	Presentations
10:00 - 10:30	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
10:30 - 11:00	Radiation			An introduction							
11:00 - 11:30	detectors past and future	FPGAI	HEP detectors overview and example	to the RCDAQ data acquisition system	Signal levels and BUS standards	Exercises	Exercises	Exercises		Detectors for Astro-physics	Student Presentations
11:30 - 12:00				-,					5		
12:00 - 12:30	LUNCH	mable logies	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Exeuration	LUNCH	LUNCH
12:30 - 13:00		=							ш		
13:00 - 13:30	Introduction to photo, gaseous	Ē	Silicon	Waveform digitizing and		Introduction to EasyPET				Writing papers and preparing	_
13:30 - 14:00	and scintillation detectors	Program	detectors	signal processing	Respherry Pi	·				presentations - some hints	Open
14:00 - 14:30		<u></u>				Exercises	Exercises	Exercises			
14:30 - 15:00	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
15:00 - 15:30	Interdication to pitchs, gas work and world also nations for continue d		Instrumentation for harsh and	Real-time data visualization and control							Giving out certificates and rewards
15:30 - 16:00			severe environments	using modern Web	WIE Event	Exercises	Exercises	Exercises			Closing
16:00 - 16:30	Programmable logics – FPG As			technologies	E vent	E xercises	e xer dis es	exercises		Prepare presentations	
16:30 - 17:00			Detectors for safety and security	Introduction to TimePix							
17:00 - 17:30											
17:30 - 18:00	Diamer 0		DINNER	DINNER	DINNER	DINNER	DINNER	Dinner &		DINNER	
18:30 - 19:00	Dinner & Welcome party							Main party			l
19:00 - 19:30	pai ty				WIE Event			party			
19:30 - 20:00											

Lecturer:

Martin Purschke, BNL, USA



- Raspberry Pi/RCDAQ
- HV-control

I	Saturday 7th		Monday 9th	Tuesday 10th	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th		Monday 16th	Tuesday 17th
	-			Tuesday 10th	vednesday 11th	Thursday 12th	Friday 15th	Saturday 14th		Monday 16th	luesday 17 th
9:00 - 9:00 9:00 - 9:00	Welcome about the school Lecturer and student introduction		Introduction to readout, trigger and control architecture From resistor to high	networks Unix Shell	High speed signals, impedances, reflections	Exercises	Exercises	Exercises		Application of fundamental physics in medicine	Student Presentations
9:30 - 10:00	Introduction to IEEE NPSS		energy physics experiments	basics	and grounding						
10:00 - 10:30	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
10:30 - 11:00	Radiation			An introduction	Signal levels						
11:00 - 11:30	detectors past and future	FPGAI	HEP detectors overview and example	to the RCDAQ data acquisition system	and BUS standards	Exercises	Exercises	Exercises		Detectors for Astro-physics	Student Presentations
11:30 - 12:00				system					5		
12:00 - 12:30	LUNCH	mable logics	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Exeuration	LUNCH	LUNCH
12:30 - 13:00		鲁							<u></u>		
13:00 - 13:30	Introduction to	E		Waveform		Introduction				Writing papers	
13:30 - 14:00	photo, gaseous and scintillation detectors	Program	Silicon detectors	digitizing and signal processing	Raspberry Pi	to EasyPET				and preparing presentations – some hints	Open
14:00 - 14:30		Æ				Exercises	Exercises	Exercises			
14:30 - 15:00	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
15:00 - 15:30	Interduction of a pitchs, gas work and solution all other detectors continue of		Instrumentation for harsh and	Real-time data visualization							Giving out certificates and
15:30 - 16:00			severe environments	and control using modern Web	WIE						rewards Closing
16:00 - 16:30	Programmable logics – FPG As			technologies	Event	Exercises	Exercises	Exercises		Prepare presentations	
16:30 - 17:00			Detectors for safety and security	Introduction to TimePix							
17:00 - 17:30				SO THINE IS.							
17:30 - 18:00			DINNER	DINNER	DINNER	DINNER	DINNER			DINNER	
18:00 - 18:30	Dinner & Welcome							Dinner & Main			
18:30 - 19:00	party				WIE			party			
19:00 - 19:30					Event						
19:30 - 20:00											

Lecturer:

Christian Bohm, Stockholm University, Sweden



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	Saturday 7th		Monday 9th	Tuesday 10th	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th		Monday 16th	Tuesday 17th
9:30 - 9:30 9:30 - 9:30	Welcome about the school Lecturer and student introduction		Introduction to readout, trigger and control architecture From resistor to high		High speed signals, impedances, reflections and grounding	Exercises	Exercises	Exercises		Application of fundamental physics in medicine	Student Presentations
9:30 - 10:00	Introduction to IEEE NP88		energy physics experiments								
10:00 - 10:30	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
10:30 - 11:00	Radiation		HEP detectors	An introduction	Signal levels						
11:00 - 11:30	detectors past and future	FPGAI	overview and example	to the RCDAQ data acquisition system	and BUS standards	Exercises	Exercises	Exercises		Detectors for Astro-physics	Student Presentations
11:30 - 12:00				a parami					등		
12:00 - 12:30	LUNCH	able logics	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Exeuriton	LUNCH	LUNCH
12:30 - 13:00		å									
13:00 - 13:30	introduction to photo, gaseous	E		Waveform		Introduction to EasyPET				Writing papers	
13:30 - 14:00	and scintillation detectors	Program	Silicon detectors	digitizing and signal processing	Raspberry Pi	to Easyr E1				and preparing presentations – some hints	Open
14:00 - 14:30		Δ.				Exercises	Exercises	Exercises			
14:30 - 15:00	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
15:00 - 15:30	Interduction to pitch; gas work and scintill also nations for a so eliminal		Instrumentation for harsh and	Real-time data visualization							Giving out certificates and
15:30 - 16:00			severe environments	and control using modern Web	WE						rewards Closing
16:00 - 16:30	Programmable logics – FPG As			technologies	Event	Exercises	Exercises	Exercises		Prepare presentations	
16:30 - 17:00			Detectors for safety and security	Introduction to TimePix							
17:00 - 17:30											
17:30 - 18:00			DINNER	DINNER	DINNER	DINNER	DINNER			DINNER	
18:00 - 18:30	Dinner & Welcome							Dinner & Main			
18:30 - 19:00	party				WE			party			
19:00 - 19:30					Event						
19:30 - 20:00											

Lecturer:

Cinzia Da Via, Manchester University, UK



• Women In Engineering

	Saturday 7th		Monday 9th	Tuesday 10th	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th		Monday 16th	Tuesday 17th
8:30 - 9:00 9:00 - 9:30 9:30 - 10:00	Welcome about the school Lecturer and student introduction Introduction to IEEE NPSS		Introduction to readout, trigger and control architecture From resistor to high energy physics experiments	Introduction to networks Unix Shell basits	High speed signals, impedances, reflections and grounding	Exercises	Exercises	Exercises		Application of fundamental physics in medicine	Student Presentations
10:00 - 10:30	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
10:30 - 11:00	Radiation detectors	=	HEP detectors	An introduction to the RCDAQ data acquisition	Signal levels and BUS	Exercises	Exercises	Exercises		Detectors for Astro-physics	Student Presentations
11:30 - 12:00	past and future	FPGA	an d example	system	standards				c	,	T No Serinat D 113
12:00 - 12:30	LUNCH	- Iogle I	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Exeuriton	LUNCH	LUNCH
13:00 - 13:30	Introduction to photo, gaseous	am mable	Silicon	Waveform digitizing and		Introduction to EasyPET				Writing papers and preparing	Open
13:30 - 14:00 14:00 - 14:30	and scintillation detectors	Programm	detectors	signal processing	Raspberry Pi	Exercises	Exercises	Exercises		presentations - some hints	Open
14:30 - 15:00	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
15:00 - 15:30	Index durable of a pitteria, gas wound and spandill also excluded for a six ellinanid		Instrumentation for harsh and	Real-time data visualization and control							Giving out certificates and rewards
15:30 - 16:00	Programmable		severe environments	using modern Web	WIE Event	Exercises	Exercises	Exercises		Premare	Closing
16:00 - 16:30	logics - FPG As		Detectors for	technologies						presentations	
17:00 - 17:30			safety and security	Introduction to TimePix							
17:30 - 18:00			DINNER	DINNER	DINNER	DINNER	DINNER			DINNER	
18:00 - 18:30	Dinner &		DIMMER	DIMMER	DIMMER	DIMMER	DIMMER	Dinner &		DIMMER	
18:30 - 19:00	Welcome party				WIE			Main party			•
19:00 - 19:30					Event						
19:30 - 20:00											

Lecturer:

Stefan Ritt, PSI, Switzerland



- Control using modern Web technologies
- Waveform capture

	Saturday 7th		Monday 9th	Tuesday 10th	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th		Monday 16th	Tuesday 17th
9:00 - 9:30	Welcome about the school Lecturer and student introduction Introduction to		Introduction to readout, trigger and control architectus - From resistor to high energy physics	Introduction to networks Unix Shell basics	High speed signals, impedances, reflections and grounding	Exercises	Exercises	Exercises		Application of fundamental physics in medicine	Student Presentations
9:30 - 10:00	IEEE NP 88		experiments		, ,						
10:00 - 10:30	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
10:30 - 11:00	Radiation			An introduction	Signal levels						
11:00 - 11:30	detectors past and future	FPGA1	HEP detectors overview and example	to the RCDAQ data acquisition system	and BUS standards	Exercises	Exercises	Exercises		Detectors for Astro-physics	Student Presentations
11:30 - 12:00		Ē		2/2/8/11					등		
12:00 - 12:30	LUNCH	able logics	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Excursion	LUNCH	LUNCH
12:30 - 13:00		2							<u> </u>		
13:00 - 13:30	Introduction to	E		Waveform		in troduction				Writing papers	
13:30 - 14:00	photo, gaseous and scintillation detectors	Programm	Silicon detectors	digitizing and signal processing	Raspberry Pi	to EasyPET				and preparing presentations – some hints	Open
14:00 - 14:30		<u>~</u>		,		Exercises	Exercises	Exercises			
14:30 - 15:00	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
15:00 - 15:30	Inho dustrent op hote, gas wars and wantil allo nations have continued		Instrumentation for harsh and	Real-time data visualization							Giving out certificates and
15:30 - 16:00			severe environments	and control using modern Web	WIE						rewards Closing
16:00 - 16:30	Programmable logics – FPG As			technologies	Event	Exercises	Exercises	Exercises		Prepare presentations	
16:30 - 17:00			Detectors for safety and security	Introduction to TimePix							
17:00 - 17:30				SO THEFT IS							
17:30 - 18:00			DINNER	DINNER	DINNER	DINNER	DINNER			DINNER	
18:00 - 18:30	Dinner & Welcome		Diffic	Dilliter		Z II II I Z I I		Dinner & Main		Dittielt	
18:30 - 19:00	party				WIE			party			
19:00 - 19:30					Event						
19:30 - 20:00											

Lecturer:

Michael Holik, IEAP CTU, Czech Republic

and

Vladimir Vicha, IEAP CTU, Czech Republic

• TimePix

	Saturday 7th		Monday 9th	Tuesday 10th	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th		Monday 16th	Tuesday 17th
9:00 - 9:30 9:30 - 10:00	Welcome about the school Lecturer and student introduction Introduction to		Introduction to readout, trigger and control architecture - From resistor to high energy physics	and the second second	High speed signals, impedances, reflections and grounding	Exercises	Exercises	Exercises		Application of fundamental physics in medicine	Student Presentations
10:00 - 10:30	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
10:30 - 11:00	Radiation		HEP detectors	An introduction	Signal levels	Dieux	Dieux	Dieak			
11:00 - 11:30	detectors past and future	FPGAI	overview andexample	to the RCDAQ data acquisition system	and BUS standards	Exercises	Exercises	Exercises		Detectors for Astro-physics	Student Presentations
11:30 - 12:00									5		
12:00 - 12:30	LUNCH	Program mable logics	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Exeuriton	LUNCH	LUNCH
12:30 - 13:00		言									
13:00 - 13:30	introduction to photo, gaseous	E	Silicon	Waveform digitizing and		Introduction to EasyPET				Writing papers and preparing	
13:30 - 14:00	and scintillation detectors	Togo.	detectors	signal processing	Raspberry Pi					presentations - some hints	Open
14:00 - 14:30	7					Exercises	Exercises	Exercises			
14:30 - 15:00	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
15:00 - 15:30	Introductional opticitis, gas work and school also notelectors continue d		Instrumentation for harsh and	Real-time data visualization and control							Giving out certificates and rewards
15:30 - 16:00			severe environments	using modern Web	WE						Closing
16:00 - 16:30	Programmable logics – FPG As			technologies	Event	Exercises	Exercises	Exercises		Prepare presentations	
16:30 - 17:00			Detectors for safety and security	Introduction							
17:00 - 17:30			salety and security	to TimePix							
17:30 - 18:00			DINNER	DINNER	DINNER	DINNER	DINNER			DINNER	
18:00 - 18:30	Dinner &							Dinner & Main			
18:30 - 19:00	Welcome party				WIE			party			
19:00 - 19:30					Event						
19:30 - 20:00											

Lecturer:

Zhen-An Liu, HEP, China



FPGA workshop

	Saturday 7th		Monday 9th	Tuesday 10th	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th		Monday 16th	Tuesday 17th
9:00 - 9:30 9:30 - 10:00	Welcome about the school Lecturer and student introduction Introduction to		Introduction to readout, trigger and control architecture - From resistor to high energy physics		High speed signals, impedances, reflections and grounding	Exercises	Exercises	Exercises		Application of fundamental physics in medicine	Student Presentations
10:00 - 10:30	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
10:30 - 11:00	Radiation			An Introduction	Signal levels						
11:00 - 11:30	detectors past and future	FPGA	HEP detectors overview and example	to the RCDAQ data acquisition system	and BUS standards	Exercises	Exercises	Exercises		Detectors for Astro-physics	Student Presentations
11:30 - 12:00				-,					등		
12:00 - 12:30	LUNCH	Program mable logics	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Exeuration	LUNCH	LUNCH
12:30 - 13:00		÷									
13:00 - 13:30	Introduction to photo, gaseous	E	Silicon	Waveform digitizing and		Introduction to EasyPET				Writing papers and preparing	_
13:30 - 14:00	and scintillation detectors	Yogna	detectors	signal processing	Raspberry Pi	·				presentations - some hints	Open
14:00 - 14:30		_				Exercises	Exercises	Exercises			
14:30 - 15:00	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
15:00 - 15:30	Introduction to photo, gas work and solntill alto noteins for a continue of		Instrumentation for harsh and	Real-time data visualization and control							Giving out certificates and rewards
15:30 - 16:00	Programmable		severe environments	u sing modern Web	WIE Event	Exercises	Exercises	Exercises		Premire	Closing
16:00 - 16:30	logics - FPG As			technologies	21011	Exercises	Exercises	Exercises		presentations	
16:30 - 17:00			Detectors for safety and security	Introduction to TimePix							
17:00 - 17:30											
17:30 - 18:00			DINNER	DINNER	DINNER	DINNER	DINNER			DINNER	
18:00 - 18:30	Dinner & Welcome							Dinner & Main			
18:30 - 19:00	party				WIE			party			
19:00 - 19:30					Event						
19:30 - 20:00											

Lecturer:

Martin Grossmann, PSI, Switzerland



EasyPET

	Saturday 7th		Monday 9th	Tuesday 10th	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th		Monday 16th	Tuesday 17th
9:30 - 9:00 9:00 - 9:30 9:30 - 10:00	Welcome about the school Lecturer and student introduction Introduction to IEEE NPSS		Introduction to readout, trigger and control architecture From resistor to high energy physics experiments		High speed signals, impedances, reflections and grounding	Exercises	Exercises	Exercises		Application of fundamental physics in medicine	Student Presentations
10:00 - 10:30	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
10:30 - 11:00	Radiation		HEP detectors	An introduction to the RCDAQ	Signal levels						
11:00 - 11:30	detectors past and future	FPGA	overview and example	data acquisition system	and BUS standards	Exercises	Exercises	Exercises		Detectors for Astro-physics	Student Presentations
11:30 - 12:00		E							E		
12:00 - 12:30	LUNCH	mable logics -	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Exeuriton	LUNCH	LUNCH
12:30 - 13:00		=							ш		
13:00 - 13:30	introduction to photo, gaseous	E E	Silicon	Waveform		Introduction to EasyPET				Writing papers	
13:30 - 14:00	and scintillation detectors	Program	detectors	digitizing and signal processing	Raspberry Pi					and preparing presentations – some hints	Open
14:00 - 14:30		_				Exercises	Exercises	Exercises			
14:30 - 15:00	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
15:00 - 15:30	and solvill alloyedness for solvillness of		Instrumentation for harsh and	Real-time data visualization and control							Giving out certificates and rewards
15:30 - 16:00			severe environments	using modern	WE						Closing
16:00 - 16:30	Programmable logics – FPG As			Web technologies	Event	Exercises	Exercises	Exercises		Prepare presentations	
16:30 - 17:00			Detectors for safety and security	Introduction to TimePix							
17:00 - 17:30				SO THIRD IX							
17:30 - 18:00			DINNER	DINNER	DINNER	DINNER	DINNER			DINNER	
18:00 - 18:30	Dinner &							Dinner &			
18:30 - 19:00	Welcome party				WIE			Main party			-
19:00 - 19:30					Event						
19:30 - 20:00											

Lecturer:

Colafrancesco Sergio, Wits University, SA



	Saturday 7th		Monday 9th	Tuesday 10th	Vednesday 11th	Thursday 12th	Friday 13th	Saturday 14th		Monday 16th	Tuesday 17th
9:30 - 9:00 9:00 - 9:30 9:30 - 10:00	Welcome about the school Lecturer and student introduction Introduction to IEEE NPSS		Introduction to readout, trigger and control architecture From resistor to high energy physics experiments	Introduction to networks Unix Shell basics	High speed signals, impedances, reflections and grounding	Exercises	Exercises	Exercises		Application of fundamental physics in medicine	Student Presentations
10:00 - 10:30	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
10:30 - 11:00	Radiation		HEP detectors	An introduction	Signal levels						
11:00 - 11:30	detectors past and future	FPGA	overview and example	to the RCDAQ data acquisition system	and BUS standards	Exercises	Exercises	Exercises		Detectors for Astro-physics	Student Presentations
11:30 - 12:00		Ľ.		·					E		
12:00 - 12:30 12:30 - 13:00	LUNCH	able logics	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	Exeuration	LUNCH	LUNCH
13:00 - 13:30	Introduction to	E		Waveform		Introduction				Writing papers	
13:30 - 14:00	photo, gaseous and scintillation detectors	Program	Silicon detectors	digitizing and signal	Raspberry Pi	to EasyPET				and preparing presentations – some hints	Open
14:00 - 14:30	General	Æ		processing		Exercises	Exercises	Exercises		- SOME MINS	
14:30 - 15:00	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break	Tea or Coffee Break		Tea or Coffee Break	Tea or Coffee Break
15:00 - 15:30	Introduction to pito to, gas work and solvett alloyedness tork continue d		Instrumentation for harsh and	Real-time data visualization and control							Giving out certificates and rewards
15:30 - 16:00			severe environments	u sing modern Web	WIE Event	Exercises	Exercises	Exercises		Premire	Closing
16:00 - 16:30	Programmable logics – FPG As			technologies	Liun	E ACTUISES	E ABI CIS ES	Exercises		presentations	
16:30 - 17:00			Detectors for safety and security	Introduction to TimePix							
17:00 - 17:30				SO THINKS IS.							
17:30 - 18:00			DINNER	DINNER	DINNER	DINNER	DINNER			DINNER	
18:00 - 18:30	Dinner &							Dinner &			
18:30 - 19:00	Welcome party				WIE			Main party			
19:00 - 19:30					Event						
19:30 - 20:00											