TUESDAY, 12

ORAL PRESENTATIONS AND SYMPOSIA

2PM-4PM

ICT and Multi-Media in Physics Education		
ROOM A		
Chair: Prof. Dr. JOSE ANDRE PERES ANGOTTI (UFSC) - BRAZIL		
Authors	**Title**	**CODE**
Akizo Kobayashi, Fumiko Okiharu	Historical Study of Active Learning Physics Education and Modern ICT-based-Reconstructions through Research of Students' Notes in Meiji Era in Japan	OP2-A-1 2:00
Danielle Regina Rocha, Arnaldo de Moura Vaz da Silva	Classroom Response Systems: Mapping the Researchers' Objects of Interest	OP2-A-2 2:20
Gerd Kortemeyer	It's all in the data - but what is it? Learning analytics and data mining of multimedia physics courses	OP2-A-3 2:40
JOSE ANDRE PERES ANGOTTI	ICT, Open Educational Resources and the Teaching of Physics: appropriations and group contributions.	OP2-A-4 3:00
JOSE CARLOS TENORIO DA SILVA; Sá Martins, J.S.	DISTANCE EDUCATION AS A COMPLEMENT TO REGULAR PHYSICS CLASSES IN PUBLIC SCHOOLS OF RIO DE JANEIRO	OP2-A-5 3:20

ORAL PRESENTATION 2 (TUESDAY) - 2PM-4PM		
ROOM B		
International Perspectives (IP) AND Physics Curriculum (PC)		
Chair: Prof. Dr. MARIA INES MARTINS (PUC) - BRAZIL		
Authors	**Title**	**CODE**
Eliane de Souza Cruz	Terminological "Tower of Babel" or communities in boxes (Physics, Physics educators and Physics educators´ researchers)	OP2-B-1 2:00
André Noronha	Considerations about the presence of Nature of Science in official educational documents: a comparison between DCN (Brazil) and NGSS (USA)	OP2-B-2 2:20
MARIA INES MARTINS; HOSOUME, H	Physics at the ENEM and Education for Life established by the DCNEM	OP2-B-3 2:40
Renan Milnitsky	The Role of Epistemological Formation: Between Curriculum Theory and the Need for Contemporary Science	OP2-B-4 3:00

ORAL PRESENTATION 2 (TUESDAY) - 2PM-4PM		
ROOM C		
History and Philosophy of Physics		
Chair: Prof. Dr. Thaís Forato (UNIFESP) - BRAZIL		
Authors	**Title**	**CODE**
Aennder Ferreira de Sousa; Moura, Breno	Film language and the evil side of Science in movies	OP2-C-1 2:00
João Batista Siqueira Harrers; DENARDIN, L.O. ; ROCHA FILHO, J.B.; LAGRECA, M.C.B.; SAMUEL, L.R.S.	Views of the Nature of Science: The perspective of high school teachers on the CERN Teachers Programme	OP2-C-2 2:20
Marcia Tiemi Saito, Ivan Gurgel	"Quantum healing": science, popular science, pseudoscience or myth? An analysis based on Ludwik Fleck	OP2-C-3 2:40
Rúbia de Fátima Antunes Martins Fernandes; PIRES, F.F.; FORATO, Thais C. M.; SILVA, J. A.	Salvador Dalí and Quantum Mechanics: A Proposal for Physics Education	OP2-C-4 3:00
Sofia Guilhem Basilio; Gurgel, Ivan	Epistemological conflicts in the development of Ether Theories	OP2-C-5 3:20

ORAL PRESENTATION 2 (TUESDAY) - 2PM-4PM		
ROOM D		
University Physics		
Chair: Prof. Dr. Marlon Caetano Ramos Pessanha (UFSCar) - BRAZIL		
Authors	**Title**	**CODE**
Manjula Sharma, Helen Georgiou	On the use of concept inventories: How can we tell if active learning approaches are working?	OP2-D-1 2:00
Nathan Willig Lima, Claudio Cavalcanti, Fernanda Ostermann	A Critical Review of University Textbooks Presentation of Photoelectric Effect Under a Sociocultural Approach	OP2-D-2 2:20
Tobias Espinosa de Oliveira; Araujo, I. S. ; Veit, E. A.	PHYSICS LEARNING AND SELF-EFFICACY BELIEFS: A CASE STUDY WHIT TEAM-BASED LEARNING METHOD IN AN INTRODUCTORY ELECTROMAGNETISM COURSE	OP2-D-3 2:40
Victor Travagin Sanches; COSTA, G.G.G.; SANTOS, J.M.F.; Catunda, T	Analysis of an inquiry-based Electricity laboratory for undergraduate students.	OP2-D-4 3:00

ORAL PRESENTATION 2 (TUESDAY) - 2PM-4PM		
ROOM E		
Laboratory Activities in Physics Education		
Chair: Prof. Dr. Cristiano Mattos (USP) - BRAZIL		
Authors	**Title**	**CODE**
Henrique Alves de Oliveira; Rodrigues, A.M.; Gomes, F. A. Q.	Physics laboratory courses: A survey on students conceptions, motivations and attitudes of the Physics Institute from University of Sao Paulo	OP2-E-1 2:00
Ives Solano Araujo, Leonardo Heidemann, Eliane Veit	Modeling Episodes: designing experimental activities focused on didactic-scientific modeling in undergraduate physics courses	OP2-E-2 2:20
Cristiano Mattos, Juliano Camillo	Practical Work and its Objectives in Physics Education: A Cultural-Historical Activity Theory (CHAT) Perspective	OP2-E-3 2:40
Walter Pichi Jr, D.C. Gatti 1, M. L. P. Silva	Team interactions and devices development favoring the understanding of nontrivial subjects: fluid mechanics as a case study	OP2-E-4 3:20

ORAL PRESENTATION 2 (TUESDAY) - 2PM-4PM		
ROOM F		
Secondary School Physics		
Chair: Prof. Dr. Maria Regina D. Kawamura (USP) - BRAZIL		
Authors	**Title**	**CODE**
Cassiano Rezende Pagliarini; Almeida, Maria José P. M. de	Production Processes of Science Based on Reading a Text on some of the Earliest Notions of Quantum Physics	OP2-F-1 2:00
Euclydes Marega Junior	The Brazilian Physics Olympiad	OP2-F-2 2:20

ORAL PRESENTATION 2 (TUESDAY) - 2PM-4PM		
ROOM G		
Socio-cultural Issues (SCI)		
Chair: Prof. Dr. KATEMARI ROSA (UFCG) - BRAZIL		
Authors	**Title**	**CODE**
Jucivagno Francisco Cambuhy Silva; RODRIGUES; MATTOS	The process of building concepts: Moon phases in deaf education	OP2-G-1 2:00
Katemari Rosa	African Brazilians in the Physical Sciences	OP2-G-2 2:20
Lucio Campos Costa, Graciella Watanabe, Giselle Watanabe, Eduardo de Morares Gregores, Marcelo Gameiro Munhoz, Pedro Galli Mecadante	Exploring new dimensions of symbolic exchanges in a science communication event: the case of CERN Masterclass	OP2-G-3 2:40
Thandryus Augusto Guerra Bacciotti Denardo	LGBT climate at IF-USP and IAG-USP	OP2-G-5 3:00

ORAL PRESENTATION 2 (TUESDAY) - 2PM-4PM		
ROOM H		
Teacher Professional Development		
Chair: Prof. Dr. Alice Pierson (UFSCar) - BRAZIL		
Authors	**Title**	**CODE**
Marina Valentim; Marcelo Barros	Enunciative strategies used by teachers in training when using peer instruction in an educational sequence of Quantum Physics	OP2-H-1 2:00
Matheus Monteiro Nascimento; Ostermann F. ; Cavalcanti C. J. H.	THE ROLE OF THEORETICAL FRAMEWORKS IN THE DEVELOPMENT OF EDUCATIONAL PRODUCTS DESIGNED IN THE CONTEXT OF A PROFESSIONAL MASTER'S DEGREE IN PHYSICS EDUCATION	OP2-H-2 2:20
Nilva Lúcia Lombardi Sales, Cristina Leite	The Three Pedagogical Moments in a continuing education of physics teachers: a dialogue from Modern and Contemporary Physics	OP2-H-3 2:40
Rodrigo Amarante Colpo; Machado, AF ; Lopes, TJ; Carvalho, M	A preliminary study on the goals defined by the Professional Master's degree regulatory ordinance that are being achieved and neglected	OP2-H-4 3:00
Waldemir de Paula Silveira; TEIXEIRA, O.P.B.	EXPERIMENTAL ACTIVITIES AND TRAINING/PRACTICE TEACHING: WHAT RESEARCH OF PHYSICS EDUCATION AREA HAVE TO SAY	OP2-H-5 3:20

ORAL PRESENTATION 2 (TUESDAY) - 2PM-4PM		
ROOM I		
Teaching Physics Concepts		
Chair: Prof. Dr. EIZO OHNO (HU) - JAPAN		
Authors	**Title**	**CODE**
Annalize Ferreira	Reflections on the process of designing a teaching sequence on Newtonian mechanics: Successes and pitfalls	OP2-I-1 2:00
David Anzules, Jorge Flores	The Effect of Teaching with Multiple External Representations and its Incidence on the Students' Performance and their self-efficacy in the Concept of Work	OP2-I-2 2:20
Eizo Ohno	Partially Ordered Structure in Physics Textbooks and Lesson Plans: Its Mathematical Representation and Application	OP2-I-3 2:40
Elsa Lombard	An argument for using the net force to mass ratio approach to improve conceptual understanding of acceleration	OP2-I-4 3:00
Glauco Cohen Ferreira Pantoja, Moreira M A	A study on meaningful learning processes occurring in a Potentially Meaningful Teaching Unit on the concept of Field in Physics: possible Schemas and Mental Models developed by Engineering students	OP2-I-5 3:20

SYMPOSIA (TUESDAY) - 2PM-4PM

ROOM J

Teaching and Learning Quantum Mechanics: Assessments, curriculum development, learning difficulties and teaching strategies.

Chair: Prof. Dr. Homeyra Sadaghiani (California State Polytechnic University) - USA

Authors	Title	code
Homeyra Sadaghiani	Quantum Mechanics Concept Assessment (QMCA): Development and Validation Study	S-J-1 2:00
P H H Smeets	Context based assessment of Quantum Physics in Central Exams in the Netherlands.	S-J-2 2:20
Kim Krijtenburg - Lewerissa, Henk Pol, Wouter van Joolingen	Towards a research-based quantum physics curriculum for secondary schools	S-J-3 2:40