



Profile 9

PROFILE DESCRIPTION

HOST ORGANIZATION

Inviting Professor (name, e-mail, telephone number)	Olindo Corradini olindo.corradini@unimore.it 059-2058380
Inviting Professor Teaching Activity	Quantum Field Theory, Relativity
Department	Scienze Fisiche, Informatiche e Matematiche

VISITING PROFESSOR PROFILE REQUIRED

cientific Domain	Theoretical Physics
Teaching activity to be carry out in the host organization (teaching module and seminars- at least 30 hours) (teaching module and seminars- at least 30 hours)	Group Theory in Physics -- 30 hours <ul style="list-style-type: none"> ● Introduction: groups and symmetry ● Finite groups: characters, representations, Young tableaux. ● Lie groups: global and local structure, Lie algebras, classical groups. ● Representations: irreducible representations, invariants, tensor methods, Dinkin diagrams. ● Applications: orbitals in crystal potentials, selection rules and perturbation theory, isospin, quantum coherent states, Feynman diagrams and Molien series,... ● Spinors: Clifford algebra, relativity.
Master's Degree Course and PhD course where the teaching activity will be carried out	Master of Science degree in Physics
Relevant skills and competences of the visiting professor	Expertise on quantum field theory and general relativity. Specific competences on group theory and applications to physics
Proposed length of stay	a.y. 2016/2017 II semester, 3 full months