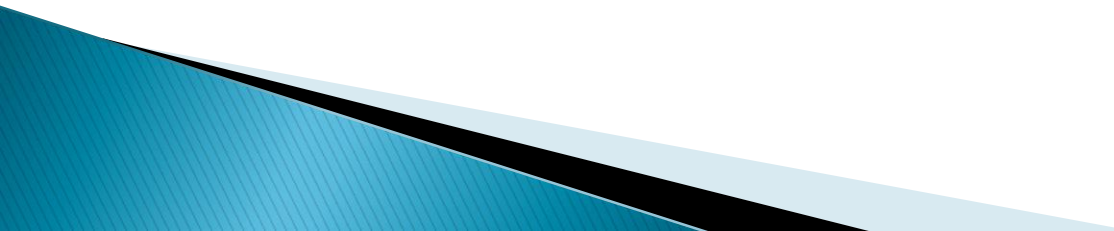# Ioannis Malamos (ER @ IFIC, Valencia)
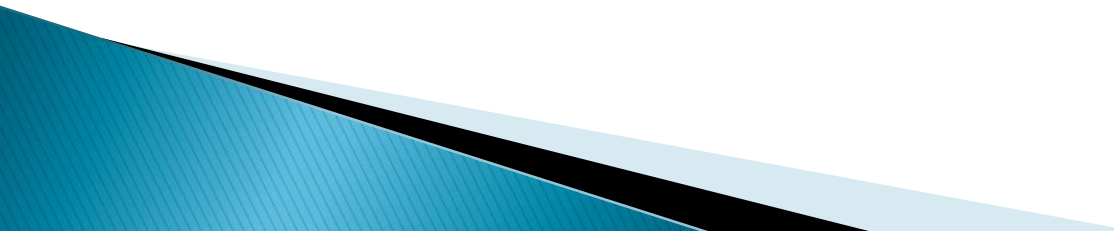

Ravello, LHCphenonet midterm meeting, 19/09/2012

LHCphenOnet
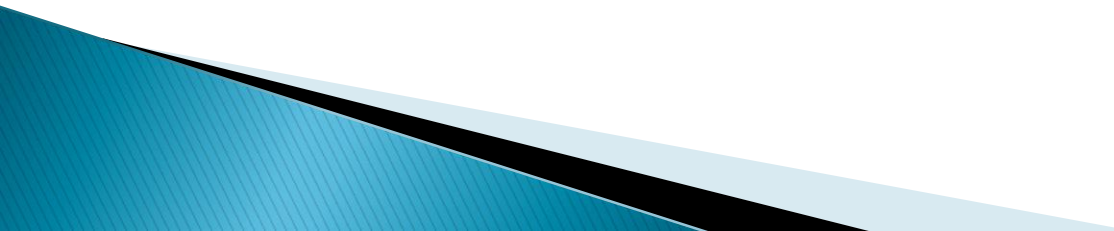
Background

- Born in Athens, Greece (24/08/1979)
- Diploma of Physics, University of Athens, Physics Department
- MSc in Nuclear and Particle Physics, University of Athens, Physics Department
- PhD in Theoretical and High Energy Physics, Radboud University, Nijmegen, The Netherlands (under the supervision of prof. R. Kleiss)
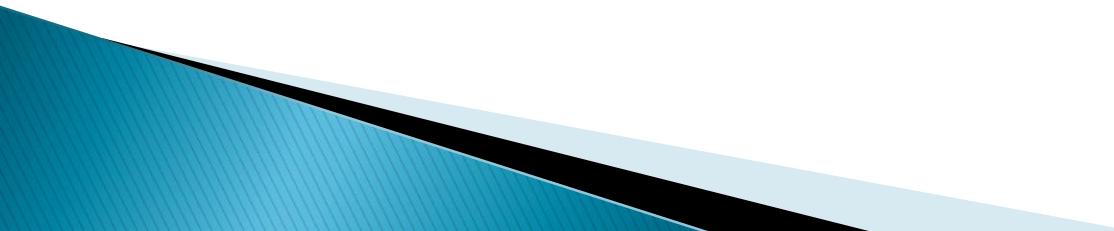
Position in the Network

- Experienced researcher (ER) since 1/03/2012
- Instituto de Fisica Corpuscular (IFIC)– Valencia
- Under the supervision of G.Rodrigo, S.Catani

Research project(s)

- Task M4.1
- Determining the IR/UV structure of multiloop scattering amplitudes by using recursion relations and the loop-tree duality
- Extension of the tree-loop duality method towards the inclusion of multiple poles at the two loop level and beyond
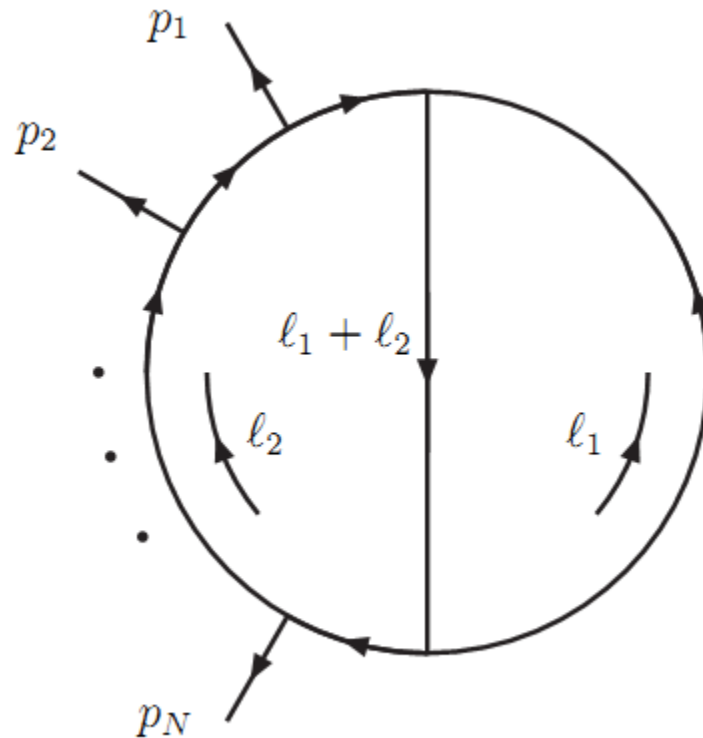- Generalised reduction methods at higher orders

Publications (within the Network)

- Counting to one: Reducibility of one and two-loop amplitudes at the integrand level (R.Kleiss, I.M., C.G.Papadopoulos, R.Verheyen)
- Tree-loop duality beyond single poles (I.Bierenbaum, S.Buchta, S.Catani, P.Draggiotis, G.Rodrigo- to appear soon)
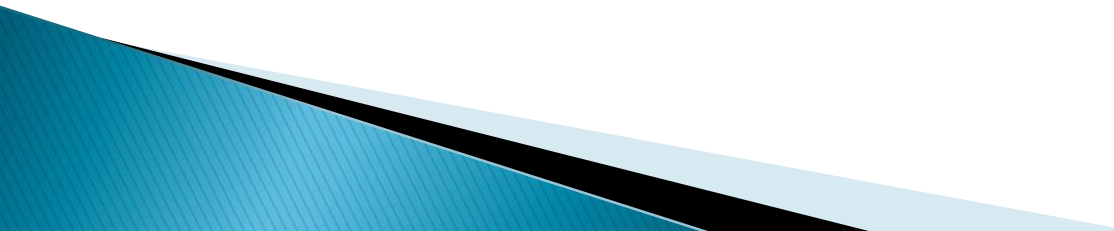- Starting working on the third part/ continue "counting"

Find a basis for Feynman Integrals (OPP method)

$$A_n^{(1)} = C_4 \;\;\square\;\; + C_3 \;\;\triangleright\!\!\!<\;\; + C_2 \;\;\bigcirc\!\!<$$

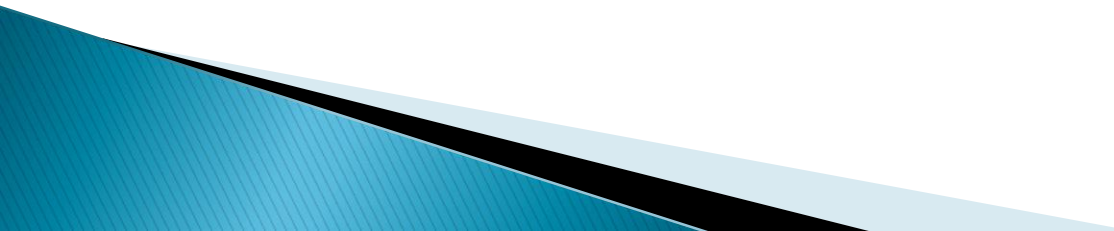$$+ C_4^{[4]} \;\;\mu^4\;\; + C_3^{[2]} \;\;\mu^2\;\; + C_2^{[2]} \;\;\mu^2\;\;$$
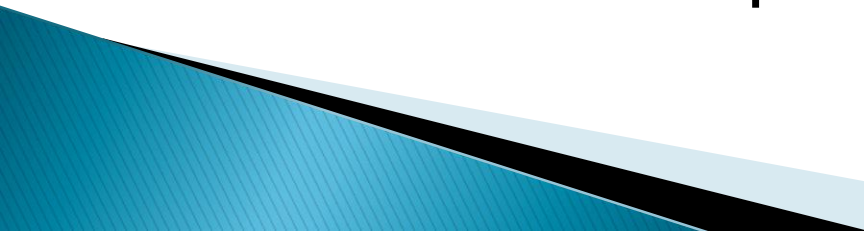
Remove multipoles

Visiting other places for collaborations

- Link between Spain– Greece– The Netherlands
- LHCphenonet provides the opportunity to expand that kind of links (important for science)
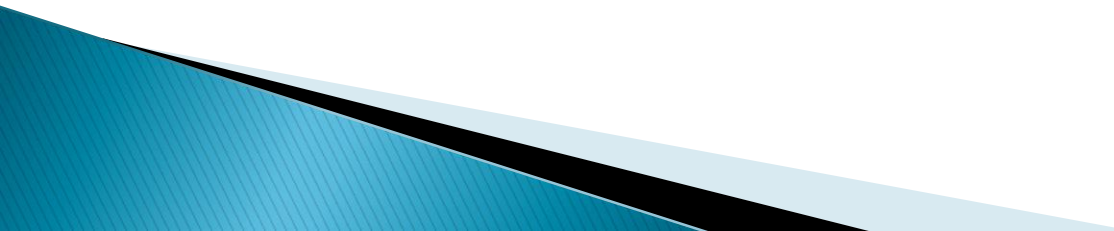- New collaborations with Germany–Italy

Supervision of students

- While in the Netherlands/Spain co-supervised (with prof. R.Kleiss) the following bachelor students:
- Rob Verheyen (Reduction of two loop Feynman Integrals)
- Giel van Bergen (Counting independent tensor structures in dimensions d>2)
- Marco Weijenborg (Reduction of 3 loops)

Schools-Workshops-Conferences

- Ravello, 16-20/09/2012, LHCphenonet midterm meeting
- New methods for Field theory Amplitudes, Munich, 10-14/09/2012
- HP2, Munich, 4-7/09/2012
- LHCphenonet school on Integration, summation and special functions in QFT,Linz, 9-13 /07/2012
- Durham, 19-22/03/2012, LHCphenonet annual workshop

Talks

- LHC annual meeting (Durham)
- Seminar in Valencia
- Ravello, midterm meeting

Complementary skills

- Open horizons with more and international collaborations
- Besides collaborations, meetings help contact people that work in similar stuff
- Organisation/ Supervision skills
- Programming, Language