

# CMU-Portugal Program

**Information and Communication  
Technologies Institute (ICTI)**

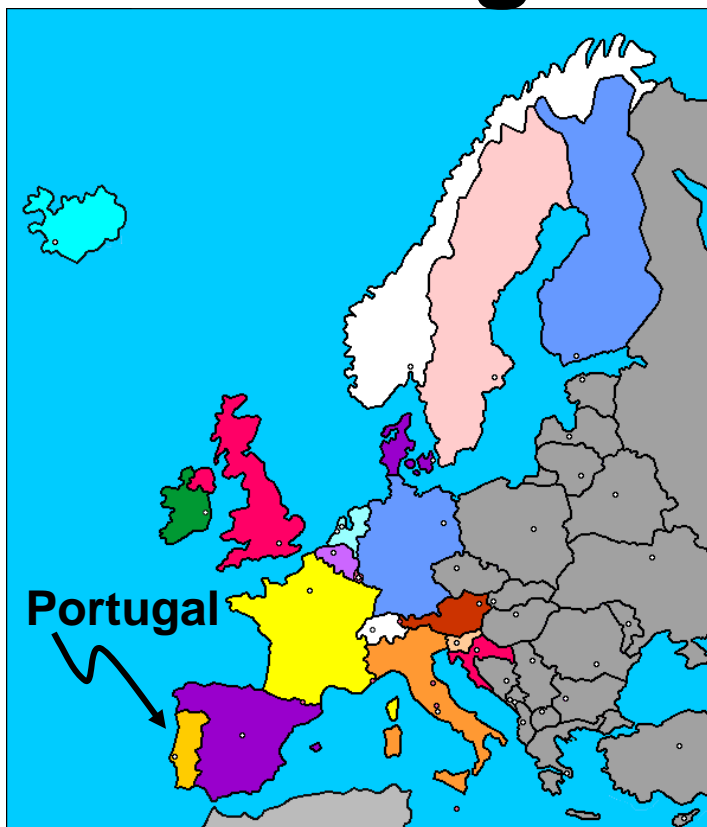
<http://www.icti.cmu.edu>

**José M. F. Moura**

**4<sup>th</sup> Annual CMU Conference on the Electricity Ind.**

**March 10/ 2008**

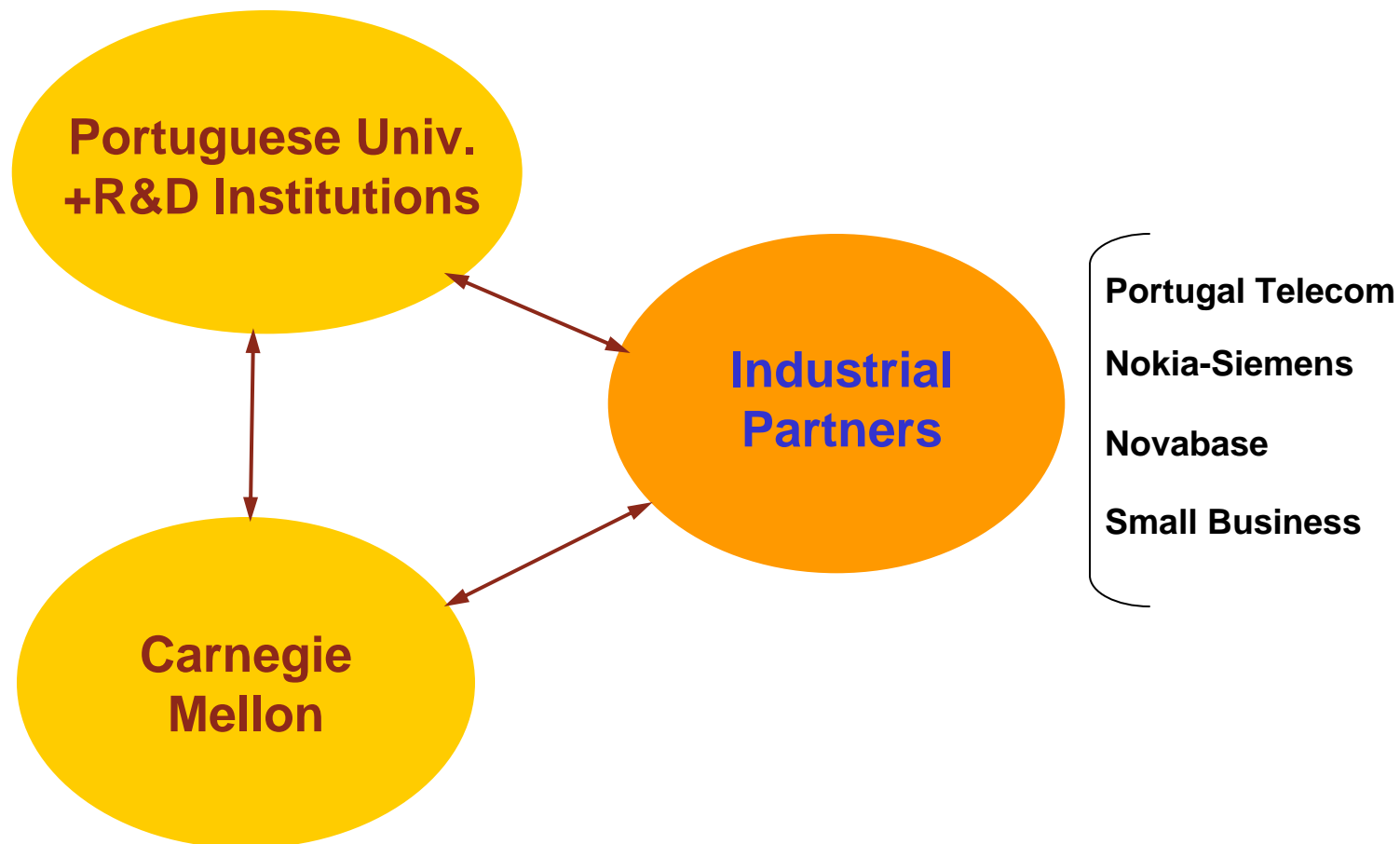
## CMU-Portugal Program



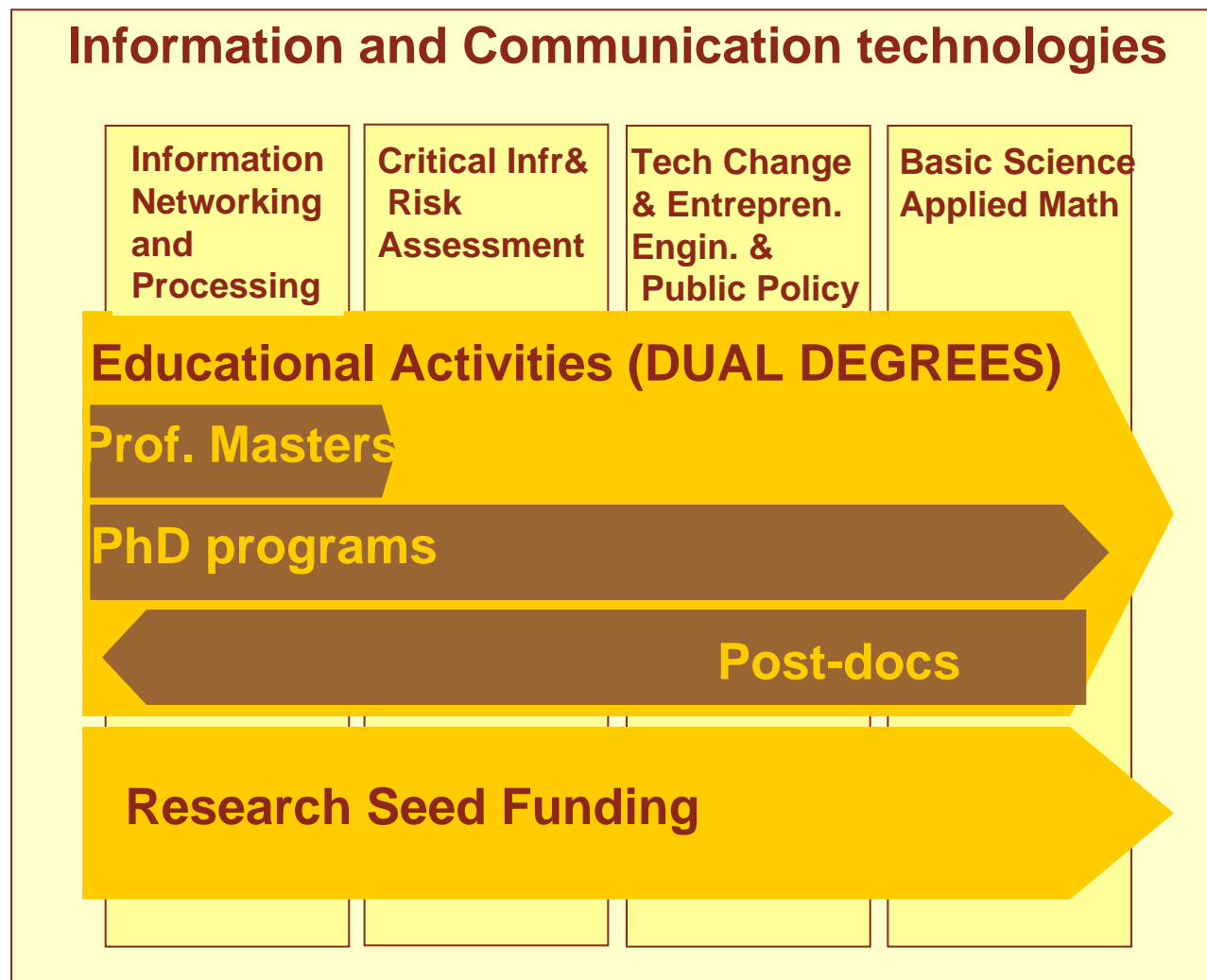
77 Million euros/ 5 years > 115 M\$/5y

6.5 Meuros industry ~ 10 M\$/5y

# A True Partnership



# CMU-Portugal Programs



# Dual PhD Degree in EPP: Networked Systems

- Desig, develop, implement & manage networked infrastructures, specialize in information and communication technologies (ICTs) policy and **energy policy**

<b>PhD in Engineering and Public Policy with concentration in Networked Infrastructures</b>	
1 <sup>st</sup> Year; Fall Term (in Portugal)	<b>Microeconomic</b> Theory* (12 units) (Type B) (Faculty: M. Gouveia, FCEE-UCP)
	<b>Quantitative Methods I*</b> (12 units) (Type C) (Faculty: J. Nicolau, ISEG-UTL)
	Theory and Practice of <b>Policy Analysis**</b> (12 units) (Type C) (Faculty: G. Morgan, EPP-CMU)
	Type A Course (12 units) ICTs: Engineering and Policy (Faculty: P. Ferreira, IST-UTL) or <b>Energy Systems Management</b> (Faculty: P. Ferrão, IST-UTL)
1 <sup>st</sup> Year; Spring Term (in Portugal)	<b>Industrial Organization*</b> (12 units) (Type B) (Faculty: F. Branco, FCEE-UCP)
	<b>Quantitative Methods II</b> (12 units) (Type C) (Faculty: J. Xavier, IST-UTL)
	Type A Elective (12 units) (Engineering course on ICTs or <b>Energy</b> )

<b>PhD in Engineering and Public Policy with concentration in Networked Infrastructures</b>	
2 <sup>nd</sup> Year; Fall Term (at CMU)	Workshop on Applied <b>Policy Analysis</b> (6 units) (Type C) (Faculty: G. Morgan, EPP-CMU)
	Type A Course (12 units) Telecom Tech., Management and Policy (Faculty: M. Sirbu, EPP-CMU) or Course on <b>Energy Management</b> (Faculty: E. Rubin, EPP-CMU)
	Type A Elective (12 units)** (Engineering course on ICTs or <b>Energy</b> )
End of 3 <sup>rd</sup> Semester	Presentation of Research Paper to Faculty (at CMU)
2 <sup>nd</sup> Year; Spring Term (at CMU)	Type A Elective (12 units) (Engineering course on ICTs or <b>Energy</b> )
	Type B Elective (12 units) (Course on Social Sciences)
End of 2 <sup>nd</sup> Year	Qualifier Examination (at CMU)
3 <sup>rd</sup> Year	Research in Portugal and at CMU
End of 3 <sup>rd</sup> Year	Presentation and Defense of Dissertation Proposal
4 <sup>th</sup> Year	Research in Portugal and at CMU
End of 4 <sup>th</sup> Year	Presentation and Defense of Final Dissertation

## Type A Electives Offered in Portugal

<b>ICTs Engineering and Policy</b>	<b>Energy Engineering and Policy</b>
<b>Network Security</b> (Faculty: C. Ribeiro, IST-UTL)	<b>Systems for Energy Conversion</b> (Faculty: T. Azevedo, IST-UTL)
<b>Communication Overlay Networks</b> (Faculty: R. Rodrigues, IST-UTL)	<b>Renewable Energy Resources</b> (Faculty: A. Falcão, IST-UTL)
<b>Modern Foundations for Computer Nets</b> (Faculty: J. Sobrinho, IST-UTL)	<b>Nuclear Energy</b> (Faculty: C. Varandas, IST-UTL)
	<b>Energy in Transportation Systems</b> (Faculty: T. Farias, IST-UTL)
	<b>Economics of Natural Resources</b> (Faculty: C. Barros, ISEG-UTL)
	<b>Energy Systems Modelling</b> (Faculty: A. Martins, ISEG-UTL)
	<b>Power Electronic Systems</b> (J. Santana, F. Silva, S. Pinto, IST-UTL)
	<b>Switching Power Processing</b> (Faculty: J. Silva, S. Pinto)
	<b>Electric Power Quality</b> (Faculty: F. Silva, IST-UTL)



## Type A Electives Offered at CMU

<b>ICTs Engineering and Policy</b>	<b>Energy Engineering and Policy</b>
<b>Polices of Wireless Systems (Faculty J. Peha, EPP-CMU)</b>	<b>Civil Systems Investment Planning Pricing (Faculty: S. Matthews, EPP-CMU)</b>
<b>Introduction to Security and Policy (Faculty: A. Perrig, EPP-CMU)</b>	<b>Engineering and Economics for the Changing Electric Power Industry: (Faculty: M. Ilic + L. Lave, EPP-CMU)</b>
<b>Privacy, Policy, Law and Techn. (Faculty: L. Cranor, EPP-CMU)</b>	<b>Introduction to Sustainability Engineering (Faculty: C. Davidson, EPP-CMU)</b>