



## Participating organisation



**Grup LEPAMAP**

**Universitat de Girona**

**Campus Montilivi**

**Edifici Politècnica-I**

**17071 Girona**

**LEPAMAP Group**

*(Laboratory of Paper Engineering  
and Polymeric Materials)*

**University of Girona**

**Spain**

**[seceqata@eps.udg.es](mailto:seceqata@eps.udg.es)**



## Organisation's details



### Grup de recerca LEPAMAP, Universitat de Girona, Spain



**Services/Products:**

**Education, training and research**

**Total number of employees:**

**943** (education) + **495** (services)

**Employees in E48 related areas:**

**3**

**Number of students (03/04):**

**15.007** (graduates and postgraduates)

**1891** students finishing their graduate studies

**Ownership structure:**

**state owned**



## Organisation's details



### Grup de recerca LEPAMAP, Universitat de Girona, Spain



<b>Services/Products:</b>	<b>Education, training and research</b>
<b>Total number of employees:</b>	<b>14</b>
<b>Employees in E48 related areas:</b>	<b>2</b>
<b>Number of students (Ph'D students):</b>	<b>7</b>
<b>Ownership structure:</b>	<b>state owned</b>



## E48 representative's presentation (I)



### Àngels Pèlach

Professor Dr.  
Escola Politècnica Superior  
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Campus Montilivi, Edifici P-I  
17071 Girona, Spain

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**Academic background:**

Chemist (1989)  
PhD in chemistry (1998)  
Professor (UdG, 2001)

**Areas of expertise:**

Paper recycling  
Paper technology



**Function in COST E48:**  
Member of WG1



## E48 representatives presentation (I)



### Àgels Bach

#### Most relevant publications in the field of E48:

- M.A. Pèlach, J. Puig, F. Vilaseca, P. Mutjé, “Influence of Chemicals on Deinkability of Wood-Free Fully Coated Fine Paper”, *Journal of Pulp and Paper Science*, 27(10), 353-358 (2001).
- M.A. Pèlach, J. Puig, F. Vilaseca, P. Mutjé, “Ink particle interactions in a flotation deinking process”, *Appita Journal*, 55(1), 54-59 (2002).
- M.A. Pèlach, J.F. Pastor, J. Puig, F. Vilaseca, P. Mutjé, “Enzymatic deinking of old newspapers with cellulose”, *Process Biochemistry*, 38(7), 1063-1067 (2003).
- M.A. Pèlach, J. Puig, J.C. Roux, F. Vilaseca, P. Mutjé, “The use of cationic surfactants to enhance the deinking of coated fine papers”, *Appita Journal*, 56(5), 351-354 (2003).
- E. Fuente, A. Blanco, C. Negro, M.A. Pèlach, P. Mutjé, J. Tijero, “Study of Filler Flocculation Mechanisms and Floc Properties Induced by Polyethylenimine”, *Industrial and Engineering Chemical Research* (2005).



## Own expectations in E48



- **Identification of potential technological limits of paper recycling**
- **Strategies to improve paper & board products' recyclability**
- **Establishment of a European research network in paper recycling within a Paper Technology Platform (PTP)**
- **Generation of European projects related with research needs in Paper Recycling**
- **Generation of an European academic network in the field of Paper Technology**



## Own contributions to E48



### Current projects in the area of E48:

- Project 1: Detrimental material in recycled paper production. Elimination of stickies and detrimental material by means of flotation
- Project 2 : Development and optimisation of new process for pulp production. IV-Simulation and optimisation of global process from point of view technique, economic and environmental

### Projects submitted or planned during the duration of E48

- Not planned

### Specific tools (equipment/software) relevant for E48 objectives

- Recycling and deinking laboratory equipment
- Simulation software



## Brief description of own finished or ongoing research projects in the area



### **Project 1: Detrimental material in recycled paper production. Elimination of stickies and detrimental material by means of flotation**

#### **➤ ABSTRACT:**

The use of secondary fibres as raw material in papermaking has many environmental and economic advantages, but also presents serious disadvantages, due to the contaminants that the raw materials introduce to the process (detrimental material). One of the main problems is the formation of the adherent deposits (stickies). The deposit formation has an important economic impact in the papermaking process. Therefore, it is necessary to characterize the deposits along the process stages in order to select the most adequate control and/or removal method to minimize the adverse effects. Until now, there is not a methodology to characterize all kind of stickies (macrostickies, microstickies and secondary stickies), that produce different problems and in different stages of the process, depending on their size and their physic-chemical characteristics.

➤ Objectives of Subproject 1: Development of a methodology to characterize totally (quantitative and qualitative) all kind of stickies contained in a pulp suspension and their industrial application. Selection of the removal and/or control stage of the contaminants and the most adequate treatment for its control. (UCM, Madrid)

➤ Objectives of Subproject 2: Removal of the different stickies by a flotation system. Analysis of the behaviour of the deposits respect to the air bubbles and the chemical conditions. Consolidation of the flotation stage in the deinking process as an effective stage for the removal of the different kinds of inks (offset, flexo, toner) and stickies, by the application of the adequate chemical formulations. (UdG, Girona)



## Organisation of E48 events



**My organisation has the personal and logistic facilities to organise major E48 events and would particularly be prepared to host (please tick box)**

- specific (separate) MC or WG meetings
- parallel or consecutive meetings of both MC and WGs
- a workshop (up to 50 participants)
- an international conference (more than 50 participants)



## External contributions to E48



I believe that the following external organisations or experts could make valuable contributions to E48 events:

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Name	Organisation	Expertise
N.N.		
N.N.		
N.N.		
N.N.		
N.N.		
N.N.		



## Expectations and offers concerning STSMs



**My organisation is prepared to host young academics from foreign organisations in the frame of STSMs. We could offer colaboration in:**

- **Hydrodynamics in flotation**
- **Recycling and deinking of different printed papers**

**My organisation is interested in sending young academics to foreign research organisations in the frame of STSMs.**

**We would particularly be interested in learning more about**

- **Bleaching of recycled fibres**
- **Comparison of different quantification methods of ink particles**