



Education, Audiovisual and Culture Executive Agency

SMDTex - Sustainable Management and Design for Textiles

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• ERASMUS MUNDUS Program

Aims:

- enhance the quality of European higher education
- promote dialogue between people and cultures through mobility and academic cooperation with third countries

Action 1:

- Implement joint postgraduate programs (EMMC and EMJD)

Action 2:

- Mobility of research students and teachers for academic exchanges

Action 3:

- Enhancing the attractiveness of Europe as an educational destination and a centre of excellence at world level

• ERASMUS MUNDUS Program

Summary of the EMJD Programs (since 2009):

- 42 doctorate programs funded by the EACEA Agency
- Categories: agriculture, engineering, health, humanities and arts, sciences and computing, social sciences
- Engineering category: 11 programs funded (materials, environment, chemical eng., industrial eng., cognitive, energy, textile)
- SMDTex: one of the 9 projects selected in 2012 from 150 candidates, the unique EM project on textile engineering
- From 2014, selected under the Marie Curie Action (one part of EU' s Horizon 2020)

• SMDTex – an international PhD program

Aims:

- training PhD students from Europe and other parts of the world by carrying out international research cooperation on sustainable development oriented textile management and textile design
- Developing organizational solutions optimising the existing textile production , supply chain, transaction and product design, with respect to the criteria of environment, society and human factors

Consortium:

- Partners: ENSAIT, University of Boras, Technical University of Iasi, Politecnico di Torino, Soochow University
- Associate partners: AUTEX, Bureau Veritas CODDE, ASTRICO NE, Hongdu, Lindex, Nelly, more associated members?

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• SMDTex – an international PhD program

Recruitment and training:

- 8 PhD students (3 European (cat.B) and 5 non European students (cat.A))
- Recruitment conditions: masters or equivalences (5 year' s university studies after A-level) in textile, management engineering, information technology, industrial engineering, design engineering, chemical engineering
- Duration: 4 years (3 years in two European institutions, one year in Soochow)

Degrees:

- Three PhD degrees from the involved universities
- From 2016, a joint international doctorate degree to be developed

• SMDTex – an international PhD program

Funding:

- **Management: 50K euros/year – project manager, missions, devices, ...**
- **Student's salary: 2800 euros/month/student for 3 years – total 100.8Keuros**
- **The 4th year: Soochow University scholarship for international students**
- **Laboratory cost: 600 euros/month/student for 3 years – courses, devices, books, conferences, ...**
- **Mobility cost (Travels, installation, visa, ...): 7500 euros for each student of cat.A and 3000 euros for each student of cat.B if mobility to outside of Europe**
- **Total funding: 5 editions (2013-2017, 2014-2018, 2015-2019, 2016-2020, 2017-2021)**
- **Chinese scholarship from CSC and managed by the Mission of China to EU**

- **SMDTex – an international PhD program**

Research themes:

- **Theme 1: Risk/safety and resilience in the textile value chain**

Life cycle assessment (LCA), risk evaluation (environment, society, human), product tracking system for safety, ...

- **Theme 2: New organisation models for sustainable textile processes and supply chain**

Demand driven production, sourcing and marketing, green supply chain management, new production model, new supply chain model

- **Theme 3: Sustainability policies and sustainable consumption around the textile supply chain**

Reverse supply chain management, sustainable production strategy, sustainable fashion consumption model, sustainable brand strategy

- **SMDTex – an international PhD program**

Research themes:

- **Theme 4: Sustainable and innovative design processes and materials**

new, environmentally acceptable methods of producing textile fibres, source-reduction of the textile chain by designing for less material but more consumer value

- **Theme 5: Sustainable quality inspection and management in the textile supply chain**

New international quality management model, quality tracking model

- **Theme 6: Personalised and virtual reality-assisted textile design**

3D-virtual reality-based design, co-design process, fitting processes, fashion knowledge-based design

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- SMDTex – an international PhD program**

Teaching program (55 ECTS):

Partner	Keywords of the proposed courses
ENSAIT 30 ECTS	Sustainable development, information system and data mining, mass customisation, global supply chain systems, economic intelligence
Boras 47 ECTS	Fashion logistics, ethics, supply chain risk management, resilience, total quality, statistical quality control, quality management
TUIASI 26 ECTS	European new policy, REACH in textile, environmentally friendly textiles, chemicals impact on textile, strategy and organisation development, sustainable development value-based entrepreneurship, brand management and culture, comfort and protection
POLITO 36 ECTS	Analysis and optimisation of energy, renewable sources of energy, water processing, textile chemistry, chemical process design, thermal comfort
Soochow 17.5 ECTS	Textile materials, sensory evaluation, clothing manufacturing, colour measure and control, eco-dyeing, finishing technology, Chinese textile industry and its supply chain

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• SMDTex – an international PhD program

Training program (5 ECTS):

Training	Content	Teachers	Duration and ECTS
Integration workshop (at the starting of the PhD study)	Presentation of the joint doctorate programme and related issues	Members of the Coordination Committee	2 days (0.8 ECTS)
Seminar for Intercultural skills	Intercultural communication, international project management, textile import and export, textile industrial cultures in different countries	academic staff or industrial experts	2 days (0.8 ECTS)
Seminar for Complementary skills	Publication and thesis writing, personal organisation, oral presentation techniques	Co-supervisors of the students	1.5 day (0.6 ECTS)
Local language	French, Swedish, Italian, Romanian for beginners	Local language teachers	2h/week 2 ECTS
Career planning workshop (at the end of the 4 th year before their graduation)	Organisation and culture in enterprises. Communication techniques (CV writing, interviews, negotiation, ...). Enterprise creation (patent application, contracts, entrepreneurship, ...). Grant proposal writing (writing tools, information sources, budget estimation, ...).	Experienced instructors or consultants from industry.	2 days (0.8 ECTS)

- **Management and supervision boards:**

The Coordination Committee:

12 members (10 faculty members, 2 student delegates)

– annual meeting in October 2012, 2013, 2014, 2015, 2016 and 2017

– Organization of the integration workshops

The Supervision Committee:

12 members (6 representing associated partners, 6 external academic members)

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- **Actions taken in 2012 - 2013:**

October 2012: 1st consortium meeting, website creation

November to February 2013: definition of 8 research projects, information diffusion, program promotion, application, evaluation and selection of candidates

End of February 2013: Submission of the lists of selected candidates to the Agency

March 2013: Information to the non-selected candidates and appeal procedure

May 2013: Validation of the selected candidates by the Agency

June 2013: Arrival of the first prefinancing payment to ENSANT and the other partners

September 2013: the EMJDs start their activities

- **Agreements signed for the Edition 2013**

September 2012: Framework partnership agreement (5 years)

February 2013: consortium agreement

May 2013: specific grant agreement (Edition 2013)

September 2013: 1st employment contract

Agreements to be signed:

Agreement between the consortium and each associated partner

Doctorial candidate agreements

Minimal insurance agreements (1st period)

Chinese scholarship agreement

• **Student Selection for Edition 2013:**

➤ **Evaluation criteria (0 – worst, 5 – best) :**

- 1) **A: Relevancy of degree and speciality**
- 2) **B: Relevancy of research level**
- 3) **C: Scientific level**
- 4) **Professional career**
- 5) **Level of English**

➤ **Final evaluation score:**

$$(2A+2B+C+D+2E)/8$$

➤ **Selection of the final candidates (main list, reserve list):**

- 1) **Proportion of 5 candidates for Cat. A and 3 for Cat.B**

- 2) **Composition of the main list and reserve list**

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• Student selection for Edition 2013:

- 1) Reception of 75 applications => 58 eligible candidates from 21 nationalities (Asia: 33; Africa: 16; South America: 4; Europe: 5)
- 2) In the main list, 4 candidates are ranked 1st in terms of evaluation scores and the others 2nd or 3rd.
- 3) Final results: 7 from the main list and one from the reserve list

Ethiopia	Bangladesh	Iran	Pakistan	India	Brazil	China	Turkey	Nigeria	Egypt
7	7	6	12	2	2	3	1	2	3
Turkmenistan	Tunisia	Sweden	Myanmar	Colombia	Zimbabwe	Romania	Spain	Poland	Morocco
1	2	1	1	1	1	2	1	1	1
Equator									
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- **Research projects (Edition 2013):**

- **Abu Shaid (Cat A):**

Project number: **SMDTex-2013-01**

Project title:

Integrated approach to evaluate the sustainability of textile processes

Involved partners:

- **Technical University of Iasi (18 months)**
- **Politecnico di Torino (18 months)**
- **Soochow University (12 months)**

Concerned theme: **Theme 1**

- **Research projects (Edition 2013):**

- **Maria Kulińska (Cat B):**

Project number: **SMDTex-2013-02**

Project title:

Digital tools for developing customised co-design platform with integration of comfort and fashion

Involved partners:

- **University of Boras (18 months)**
- **ENSAIT (18 months)**
- **Soochow University (12 months)**

Concerned theme: **Theme 6**

- **Research projects (Edition 2013):**

- **Tove Agnhage (Cat B):**

Project number: **SMDTex-2013-03**

Project title:

Eco-design innovative methods for fabric finishing

Involved partners:

- **University of Boras (18 months)**
- **ENSAIT (18 months)**
- **Soochow University (12 months)**

Concerned theme: **Theme 4**

- **Research projects (Edition 2013):**

- **Adriana Pacheco Martins (Cat A):**

Project number: **SMDTex-2013-04**

Project title:

Fast fashion – forecast and sustainable fashion supply chain development

Involved partners:

- **University of Boras (18 months)**
- **ENSAIT (18 months)**
- **Soochow University (12 months)**

Concerned theme: **Theme 2**

- **Research projects (Edition 2013):**

- **Vijay Kumar (Cat A):**

Project number: **SMDTex-2013-05**

Project title:

A new DNA agent for textile: study of textile quality tracking system and product data management

Involved partners:

- **ENSAIT (18 months)**
- **University of Boras (18 months)**
- **Soochow University (12 months)**

Concerned theme: **Theme 5**

- **Research projects (Edition 2013):**

- **Hossein Rajabinejad (Cat A):**

Project number: **SMDTex-2013-06**

Project title:

Development of new protein or tissue fibres

Involved partners:

- **Technical University of Iasi (18 months)**
- **Politecnico di Torino (18 months)**
- **Soochow University (12 months)**

Concerned theme: **Theme 4**

- **Research projects (Edition 2013):**

- **Manuela Mihailiasa (Cat B):**

Project number: **SMDTex-2013-07**

Project title:

Thermal comfort study for garments: characterisation and human perception

Involved partners:

- **Politecnico di Torino (18 months)**
- **Technical University of Iasi (18 months)**
- **Soochow University (12 months)**

Concerned theme: **Theme 6**

- **Research projects (Edition 2013):**

- **Sohail Yasin (Cat A):**

Project number: **SMDTex-2013-08**

Project title:

LCA and eco-design of textile products

Involved partners:

- **ENSAIT (18 months)**
- **Politecnico di Torino (18 months)**
- **Soochow University (12 months)**

Concerned theme: **Theme 1**

- **Mission of the SMDTex students:**
 - 1) **The student should have at least one video-conference-based meeting every 6 months with his/her co-supervisors and maintain permanent contact with them during the study**
 - 2) **The student should contact his/her co-supervisors 3 months before the starting of the research mobility**
 - 3) **The student should publish two journal papers and two conference papers**
 - 4) **The student should make efforts for integration into each involved laboratory**
 - 5) **At the end of each mobility period, the student should submit a scientific report to his/her co-supervisors and give a oral presentation of the project**
 - 6) **The student should learn local languages and make a cultural seminar at the end of each mobility period**
 - 7) **The student should guarantee communications with other other students: facebook, alumni association in 2017, ...**

• Mission of the co-supervisors

- 1) The co-supervisors should have one meeting in the first year of co-supervision.**
- 2) The co-supervisors should jointly participate in the realisation of the two journal papers and two conference papers of their PhD students.**
- 3) The teaching subjects for each PhD student should be jointly selected by his/her co-supervisors from the proposed lists of the courses. These teaching subjects should be personalised, relevant to his/her research project, and complementary between the partners.**
- 4) The co-supervisors should supervise the training program and industrial internships.**
- 5) For the final examination, the co-supervisors should jointly select external examiners according to the rules of the involved universities.**
- 6) The co-supervisors should help the students to integrate into the life of the laboratory.**
- 6) The quality of the joint supervision for each SMDTex student will be evaluated by the Coordination Committee in its annual meeting.**

- **Accompaniment services from the partners**

International office:

3 months before arrival, at arrival, during stay, international day, buddy program

Research laboratory:

3 months before arrival: co-supervisors contact, timing and tasks, at arrival: office and computer facilities, during stay: meetings and seminars, academic and industrial events, newsletters, articles at the website of SMDTex, local language training – cultural seminar

Career prospect:

Job offer and CV publication, seminar on job funding, meeting organized by associated partners in the S/T transfer workshop, alumni association, a career planning workshop, Facebook