Pulp & Paper Centre at the University of Toronto

A Case History



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The Pulp & Paper Centre

- Founded in 1987
 - To facilitate collaboration with the pulp and paper industry
 - To stimulate university research related to pulp and paper
 - To strengthen university teaching related to pulp and paper

Seventeen years later...

- Successful research partnerships with industry, students and faculty
 - Support from 32 companies from 7 countries, NSERC and other funding agencies
 - ~ 160 researchers (46 supervising faculty, 56 graduate students, 17 undergraduate thesis students, 25 undergraduate summer students and 15 associated staff)
- Value-added student development programs to enhance skills in research, communication and teamwork
- Significant contribution to the technological advancement of the pulp and paper industry

Graduate Student Enrollment 1987-2004



Challenges

- Attract faculty interest and involvement
- Attract good students
- Attract industry support
 - Satisfy short-term industry needs while maintaining university interests

Challenges (cont'd)

- Produce skilled/experienced students
- Acquire needed information
 - In the form that the industry can use to improve processes, reduce operating costs and product variability, and increase productivity

Direction

- Continue to educate skilled/experienced students
- Focus on industrially relevant research
- Establish closer partnership with industry through
 - Company visits
 - Graduate student internship program
 - Plant design projects
 - Field studies in consortium research

The Research Consortium Methodology

- Participation in prioritizing and planning program
- First recipients of results
- Exceptional leverage of partner dollars (20 to 50X)
- Advantage with respect to intellectual property
- All partners equal
- First look at talented students, prospective employees
- Spacial relationships with investigators

Increasing the Focus of Research Consortia-

Clearer Questions to be Answered

- Why is this research needed?
- What are the deliverables?
- Who will benefit?
- What is the economic impact?
- What? Who? When? How much?

Current Research Groups



Current Research Consortia

- Increasing Energy and Chemical Recovery Efficiency in the Kraft Process (2004-2008)
- Towards Ecological Balance in Pulp and Paper Operations (2004-2007)
- Surface Science for Superior Paper in the Digital Era (2003-2005)
- Fibre Recovery and Microfibre Production Technology (2005?)

Energy & Chemical Recovery Research



Honghi Tran Pulp & Paper Centre University of Toronto

About the Group

- Established in 1987
- Successfully conducted 6 research consortia
 - 4 RB, 1 LK and 1 RB/LK
 - 3 years
- 32 companies from 5 countries
- NSERC and other funding agencies
- Focus on applied research and welleducated students

Support Obtained



Main Research Areas



Objectives

- Obtain FUNDAMENTAL information on evaporator, recovery boiler, causticizing plant and lime kiln operations
- Use the information to develop viable technologies and control strategies for increasing the chemical and energy efficiency in the kraft process

Why Academic Research?

- Fresh people
- Fresh ideas
- Great facilities
- Great leverage
- Effective Partnership

Thank You!



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