

Sylvain Leduc

Curriculum Vitae



CONTACT

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PERSONAL DETAILS

First name	Sylvain	Marital status	Married
Last name	Leduc	Children	Théodor, 11-07-2009
Nationality	French		Elvira, 14-03-2011
Date of birth	February 16, 1977		

EDUCATION

2009 Doctoral thesis, Luleå University of Technology, Luleå, Sweden.
Subject: Development of an Optimization Model for the Location of Biofuel Production Plants.

2004 Licentiate degree, Luleå University of Technology, Luleå, Sweden.
Subject: Study of the Reduction of Particle Emissions and Borate Black Liquor Gasification in Bioenergy Systems.

2000 Bachelor of science degree, École Supérieure de l'Énergie et des Matériaux, ESEM (High engineering school of energy and material), Orléans, France.
Subject: Modeling of the mixer in the T-pipe 321/327.

1996 Senior High school degree, Lycée Montesquieu, Le Mans, France.

LANGUAGES

French	Mother tongue
English	Fluent
Swedish	Fluent
German	Good knowledge

COMPUTING

Operative System	Windows, UNIX
Programming Software	Matlab, GAMS, Pascal, Fortran, C, HTML
	Computational Fluid Dynamics (CFD): FLUENT, CFX
	GIS: ArcMap
	Mechanical: I-deas
	Process Engineering: ASPENplus

PROFESSIONAL EXPERIENCE

- Aug 2007-on going Research scholar at the International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria.
- Mar 2002-Jul 2007 PhD student at the Division of Energy Engineering, Luleå University of Technology, Luleå, Sweden.
- Oct 2000-Feb 2002 Military service (Coopération pour le service militaire français), at the Division of Energy Engineering, Luleå University of Technology, Luleå, Sweden.
- Apr-Sep 2000 Engineer internship for the nuclear power plant at Sydkraft, Oskarshamn, Sweden. Luleå University of Technology, Luleå, Sweden.

ARTICLES IN PEER REVIEWED JOURNALS

1. Natarajan, K., **Leduc, S.**, Pelkonen, P., Tomppo, E., Dotzauer, E. (2011). Optimal locations for methanol and CHP production in Eastern Finland. *Bioenergy Research*, doi: 10.1007/s12155-011-9152-4.
2. Havlík, P., Schneider, U. A., Schmid, E., Bottcher, H., Fritz, S., Skalský, R., Aoki, K., DeCara, S., Kindermann, G., Kraxner, F., **Leduc, S.**, McCallum, I., Mosnier, A., Sauer, T., Obersteiner, M. (2011). Global land-use implications of first and second generation biofuel targets. *Energy Policy*, 39 (10): 5690-5702.
3. Schmidt, J., **Leduc, S.**, Dotzauer, E., Schmid, E. (2011). Cost-effective policy instruments for greenhouse gas emission reduction and fossil fuel substitution through bioenergy production in Austria. *Energy Policy*, 39 (6): 3261-3280.
4. Schmidt, J., **Leduc, S.**, Dotzauer, E., Kindermann, G., Schmid, E. (2010). Potential of biomass-fired combined heat and power plants considering the spatial distribution of biomass supply and heat demand. *International Journal of Energy Research*, 34 (11): 970–985.
5. Schmidt, J., **Leduc, S.**, Dotzauer, E., Kindermann, G., Schmid, E. (2010). Cost-effective CO2 emission reduction through heat, power and biofuel production from woody biomass: A spatially explicit comparison of conversion technologies. *Applied Energy*, 87 (7): 2128-2141.
6. **Leduc, S.**, Starfelt, F., Dotzauer, E., Kindermann, G., McCallum, I., Obersteiner, M., Lundgren, J. (2010). Optimal location of lignocellulosic ethanol refineries with polygeneration in Sweden. *Energy*, 35 (6): 2709–2716.
7. **Leduc, S.**, Lundgren, J., Franklin, O., Dotzauer, E. (2010). Location of a biomass based methanol production plant: A dynamic problem in northern Sweden. *Applied Energy*, 87 (1): 68–75.
8. **Leduc, S.**, Natarajan, K., Dotzauer, E., McCallum, I., Obersteiner, M. (2009). Optimizing Biodiesel Production in India. *Applied Energy*, 86 (1): 125-131.
9. Schmidt, J., **Leduc, S.**, Dotzauer, E., Kindermann, G., Schmid, E. (2009). Biofuel Production in Austria Considering the Use of Waste Heat: a Study on Costs and Potentials of Greenhouse Gas Reduction. *Jahrbuch der Österreichischen Gesellschaft für Agrarökonomie*, 18 (3): 107-116.
10. **Leduc, S.**, Schmid, E., Obersteiner, M., Riahi, K. (2009). Methanol Production by Gasification Using a Geographically Explicit Model. *Biomass and Bioenergy*, 33 (5): 745-751.
11. **Leduc, S.**, Schwab, D., Dotzauer, E., Schmid, E., Obersteiner, M. (2008). Optimal Location of Wood Gasification Plants for Methanol Production with Heat Recovery. *International Journal of Energy Research*, 32 (12): 1080-1091.
12. **Leduc, S.**, Fredriksson, C., Hermansson, R. (2006). Particle-tracking Option in Fluent Validated by Simulation of a Low-pressure Impactor. *Advanced Powder Technology*, 17 (1): 99-111.

OTHER PUBLICATIONS

1. **Leduc, S.**, Wetterlund, E., Dotzauer, E. Second generation biofuel potential in Europe. XIX International Symposium on Alcohol Fuels, 10-14 October 2011, Verona, Italy.
2. Natarajan, K., **Leduc, S.**, Pelkonen, P., Tomppo, E., Dotzauer, E. (2011). Optimizing liquid biofuel production in Eastern Finland. International Nordic Bioenergy Conference, 5-9 September 2011, Jyväskylä, Finland.
3. Kraxner, F., Aoki, K., **Leduc, S.**, Kindermann, G., Yang, J., Yamagata, Y., Il Tak, K., Obersteiner, M. BECCS in South Korea – An Analysis of Negative Emissions Potential for Bioenergy as a Mitigation Tool. World Renewable Energy Congress, 8-13 May 2011, Linköping, Sweden.
4. **Leduc, S.**, Wetterlund, E., Dotzauer, E. Biofuel Production in Europe – Potential from Lignocellulosic Waste. Third International Symposium on Energy from Biomass and Waste, 8-11 November 2010, Venice, Italy.
5. Wu, Y., **Leduc, S.** Bioenergy Production in the Forest Market of Southern US. International Energy Workshop (IEW), 21-23 June 2010, Stockholm, Sweden.
6. Schmidt, J., **Leduc, S.**, Dotzauer, E., Kindermann, G., Schmid, E. Potentials for Biomass fired Combined Heat and Power Plants considering the Spatial Distribution of Biomass Supply and Heat Demand: an Austrian Case Study. 10th IAEE European Conference Energy, Policies and Technologies for Sustainable Economies, 7-10 September 2009, Vienna, Austria.
7. Schmidt, J., **Leduc, S.**, Dotzauer, E., Kindermann, G., Greigeritsch, T., Schmid, E. Potentials of Bioenergy Production in the Austrian Forest Market. International Scientific Conference: The European Forest-based Sector: Bio-responses to Address New Climate and Energy Challenges? 6-8 November, 2008, Nancy, France.
8. Schmidt, J., **Leduc, S.**, Dotzauer, E., Kindermann, G., Schmid, E. Optimizing the Supply Chain of Biofuel Production Including the Use of Waste Heat: an Austrian Case Study. ÖGA Tagung 2008 - Österreichische Gesellschaft für Agrarökonomie, 18 - 19 September 2008, Vienna, Austria.
9. **Leduc, S.**, Schwab, D., Dotzauer, E., Schmid, E., Obersteiner, M. Optimal Location of Wood Gasification Plants under Poly-Production. IGEC-III, 3rd International Green Energy Conference, 18-20 June 2007, Västerås, Sweden.
10. Rametsteiner E., Nilsson S., Böttcher H., Havlik P., Kraxner F., **Leduc S.**, Obersteiner M., Ryzak F., Schneider U., Schwab D. and Willmore L. (2007) Study of the Effects of Globalization on the Economic Viability of EU Forestry. Final Report of the AGRI Tender Project: AGRI-G4-2006-06, EC Contract Number 30-CE-0097579/00-89, 291 pp. Available at: http://ec.europa.eu/agriculture/analysis/external/viability_forestry/index_en.htm.
11. **Leduc, S.**, Lundgren, J., Schmid, E., Dotzauer, E. Optimal Location for a Biomass Based Methanol Production Plant: Case Study in Northern Sweden. 15th European Biomass Conference and Exhibition, 7-11 May 2007, Berlin, Germany.
12. Obersteiner, M., **Leduc, S.** The Geography of 2nd Generation Biofuel Potentials in Africa. GFSE-6 Africa is Energizing Itself, 29 November - 1 December 2006, Vienna, Austria.
13. **Leduc, S.**, Wang, C., Westerberg, M. Sweden in the Forefront for a Green Society: a Review on Policy Activities for Greenhouse Gas Emission Reduction. GHGT-8, 8th International Conference on Greenhouse Gas Control Technologies, 19-22 June 2006, Trondheim, Norway.
14. **Leduc, S.**, Ji, X., Yan, J. A Feasibility Study of Black Liquor Booster Gasification with Borate Autocauticizing. ECOS 2005, 18th International Conference on Efficiency, Cost, Optimization, Simulation and Environmental Impact of Energy Systems, 20-22 June 2005, Trondheim, Norway.
15. Fredriksson, C., Hermansson, R., **Leduc, S.** Förbättrad Utformning av Sekundär Förbränningszon i Vedpanna. Technical Report 2002, TPS-02-46.