



CURRICULUM VITAE (September 2008)



Michel LANG

Born the 19th of November 1961 ; French Nationality ; Married, two childrens

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Diploma

Diploma in Civil Engineering (ENTPE, 1984)

Ph. D in hydrology (Université J. Fourier, Grenoble, 1995)

Research accreditation on « flood frequency analysis for flood risk mitigation » (Grenoble University, 2000)

Abilities

Hydrology, hydraulics, database management \approx main research topic : flood frequency analysis using additional information (rainfall distribution, historical floods, regional flood analysis)

Fluent English ; Use of scientific languages for computer (Fortran, C, SQL)

Professional experience

1986-1991 *Head of the Hydrological Centre of Lille (12 people), Public Work Ministry*

1991-1995 *Ph. D at Cemagref, Hydrology-Hydraulics Research Unit, Lyon*

1995-2000 *Researcher-Engineer at Cemagref, Hydrology-Hydraulics Research Unit, Lyon*

2000-2006 *In charge of the coordination of hydrological groups at Cemagref, Hydrology-Hydraulics Research Unit, Lyon*

2007- *Head of Hydrology-Hydraulics Research Unit, Lyon (34 people) Cemagref Lyon*

Teaching activities

? Flood risk management : short communications of 3h since 1993 (Engref Paris ; Enges Strasbourg ; Ensa Rennes ; Ecole Centrale Lyon ; Dess Univ. Dijon, et Mulhouse ; Dea Mega Lyon ; Ecole doctorale Géosciences et Ressources Naturelles, Jussieu) ;

? Statistical Hydrology: in charge of hydrological courses, both at Entpe Lyon (30h), and Master of Fluid mechanics, Lyon (30h).

Member of associations

? French Association for Natural Hazard Mitigation, since 2002 :

<http://perso.orange.fr/gerard.brugnot/>

? Hydrotechnic Society of France : member of the flood section, since 2003 ; referee of the French Journal La Houille Blanche, since 2006 ; member of the Henri Milon French Hydrological award since 2007 ; <http://www.shf.asso.fr/>

? French Comity of Hydrological Sciences, since 2004 : <http://www.oieau.fr/cnfsh/>

? International Association of Hydrological Sciences. Associated Editor of Hydrological Science Journal, since 2006 : <http://www.cig.ensmp.fr/~iahs/>

Expertises

- ? *Azores Islands (Concelho de Povoação, St Miguel Island, 23-28 April 1997)*. Catastrophic flood event on 14th december 1996. This report gives several explanations about the flooding process.
- ? *Hydrological and hydraulics study on the Chassezac river (SIDET, Ardèche, 1999-2000)*. Expertise advice on a flood risk study
- ? *Design hydrographs of Genissiat dam (National Company of the Rhône river, 1999-2000)*.
- ? *Hydrological study on the Rhône river (Institution Interdépartementale des Bassins Rhône-Saône, IRS, 2000)*. Member of a group of experts, in charge of the validation of new general study on Rhone river (made by SAFEGE), to assess design floods on the whole catchment of the Rhône river.
- ? *Historical analysis of the Montendry torrent, a small tributary of the Isere river at Chamoux-sur-Gelon (Société d'Aménagement de Savoie, 2005)*.
- ? *Review on the discharge estimate of the December 2003 Flood on Rhone river (National Company of the Rhône river, 2005)*.
- ? *Critical analysis of the design flood assessment on Rhins basin, by Ginger/Environnement and Hydratec (DDE du Rhône, 2005)*.

Selection of scientific publications

- Barriendos M., Cœur D., Lang M., Llasat M.C., Naulet R., Lemaitre F., Barrera T., 2003.** Stationarity analysis of historical flood series in France and Spain(14th-20th centuries). *Natural Hazard and Earth System Science*, 3 (6), 583-592.
- Benito G., Lang M., Barriendos M., Llasat M.C., Francés F., Ouarda T., Thorndycraft V., Enzel Y., Bardossy A., Coeur D., Bobée B., 2004.** Use of Systematic, Palaeoflood and Historical data for the improvement of flood risk estimation. Review of scientific methods. *Natural Hazards, Special Issue on Strategies and applications in Natural Hazard Research Using Historical Data*. Ed. Glade T. and Lang M., Kluwer Academic Publishers, 31 (3), March, 623-643.
- Bernardara P., Lang M., Sauquet E., Schertzer D., Tchiguirinskaia I., 2007.** Analyse multifractale en hydrologie. Application aux séries temporelles. Multifractal analysis in hydrology. Application to time series. Editions Quae, Coll. Update Sciences & Technologies, ISBN 978-2-7592-0067-2, Nov., 232p.
- Bernardara P., Schertzer D., Lang M., Tchiguirinskaia I., Sauquet E., 2008.** Flood probability distribution tail: how heavy is it ? *Stochastic Environmental Research and Risk Assessment*, 22(1), 107-122
- Delrieu, G., V. Ducrocq, E. Gaume, J. Nicol, O. Payrastre, E. Yates, P.-E. Kirstetter, H. Andrieu, P. A. Ayrat, C. Bouvier, J. D. Creutin, M. Livet, A. Anquetin, M. Lang, L. Neppel, C. Obled, J. Parent-du-Chatelet, G. M. Saulnier, A. Walpersdorf, and W. Wobrock, 2005.** The catastrophic flash-flood event of 8-9 September 2002 in the Gard region, France: a first case study for the Cévennes-Vivarais Mediterranean Hydro-meteorological Observatory. *Journal of Hydrometeorology*, 6, 34-52.
- Glade T., Lang M., 2004.** Preface. *Natural Hazards, Special Issue on Strategies and applications in Natural Hazard Research Using Historical Data*. Ed. Glade T. and Lang M., Kluwer Academic Publishers, 31 (3), March, 585-586.
- Glaser R., Stangl H., Lang M., 2004.** Floods in Central Europe since AD 1300 and their regional context. *La Houille Blanche*, n°5, 43-49.
- Javelle P., Ouarda T., Lang M., Bobée B., Galéa G., Grésillon J.M., 2002.** Development of regional flood-duration-frequency curves based on the index-flood method, *Journal of Hydrology* (258)1-4, 249-259.
- Lang M., 1999.** Theoretical discussion and Monte-Carlo Simulations for a Negative Binomial Process Paradox. *Stochastic Environmental Research and Risk Assessment* . 13, 183-200.
- Lang M., Glade T., 2003.** Special Issue: Historical Data Collection on Natural Hazard and Climate Variability. Preface. *Natural Hazard and Earth System Sciences* , 3 (6), 581.
- Lang M., Ouarda T., Bobée B., 1999.** Towards operational guidelines for over-threshold modelling. *Journal of Hydrology*, 225, 103-117.
- Muller A., Bacro J.N, Lang M., 2008.** Bayesian comparison of different rainfall depth-duration-frequency relationships. . *Stochastic Environmental Research and Risk Assessment* . 22(1), 33-46
- Naulet R., Lang M., Ouarda T., Coeur D., Bobée B., Recking A., Moussay D., 2005.** Flood frequency analysis on the Ardèche river using French documentary sources from the two last centuries. *Journal of Hydrology*, Special Issue "Applications of palaeoflood hydrology and historical data in flood risk analysis », Guest Editors G. Benito, T.B.M.J. Ouarda and A. Bárdossy , 312, 58-78.
- Renard B., Garreta V., Lang M., 2006.** An application of Bayesian analysis and Markov chain Monte Carlo methods to the estimation of a regional trend in annual maxima. *Water Resour. Res.*, 42, W12422, doi:10.1029/2005WR004591, 17p.
- Renard B., Lang M., 2006.** Use of a Gaussian copula for multivariate extreme value analysis: some case studies in hydrology. *Advances in Water Resources*. 30, 897-912, doi: 10.1016/j.advwatres.2006.08.001
- Renard B., Lang M., Bois P., 2006.** Statistical analysis of extreme events in a non-stationary context via a Bayesian framework : case study with peak-over-threshold data. *Stochastic Environmental Research and Risk Assessment* . 21 (2), 97-112.

- Renard, B., M. Lang, P. Bois, A. Dupeyrat, O. Mestre, H. Niel, E. Sauquet, C. Prudhomme, S. Parey, E. Paquet, L. Neppel, and J. Gailhard, 2008.** Regional methods for trend detection: assessing field significance and regional consistency, *Water Resour. Res.*, doi:10.1029/2007WR006268, 44, W08419, 17p + auxiliary material 7p.
- Sheffer N. A., Enzel Y., Benito G., Grodek T., Poart N., Lang M., Naulet R., Cœur D., 2003.** Paleofloods and historical floods of the Ardèche river, France. *Water Resources Research* , 39 (12), 1376, 13p.